

Annual Monitoring Report 2021





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Foreword

With Covid-19 restrictions still in place, 2021 proved to be a challenging year for London Luton Airport and the wider aviation sector. The sharp decline in passenger numbers persisted across the year, as pandemic guidelines, extensive testing, quarantine measures and the closure of international borders made air travel unachievable for most.



Undeniably, the resulting impact on the airport and businesses across the entire supply chain was tough. However, throughout the pandemic we planned effectively to protect the airport and ensure that our strategy would accelerate recovery once travel restrictions were lifted and the demand for air travel returned. In partnership with the airport freeholder Luton Rising, we also put in place a joint investment package to support the airport's recovery.

A key pillar of our strategy is sustainable growth, which is the driving force behind our work to progress our application to secure increased capacity and meet future demand by increasing the annual passenger cap from 18 to 19 million per year. Whilst this application won't require any major construction work, it will importantly support the future of our airport; in both boosting the number of jobs on offer for people in the local community, and the opportunities for our business partners.

While passenger numbers remained low in 2021, we continued to move forward by improving efficiency in our airspace, securing vital policy decisions and funding from the UK Department for Transport (DfT).

In partnership with local community groups, LLA welcomed a DfT announcement in March which committed the Government to provide funding to get the UK's Airspace Modernisation Strategy back on track. The commitment saw £5.5 million made available to ensure that LLA, and other airports across the UK, continue to develop and assess new ways of upgrading the current airspace structure and route network, to deliver quicker, quieter, and cleaner journeys and bringing benefits for our customers, the wider industry and the local environment.

In November, airspace improvements continued. The Civil Aviation Authority (CAA) approved changes to

our arrival routes, following an extensive public consultation which received feedback from more than 2,400 respondents. The joint consultation, co-sponsored by LLA and the UK's principal air traffic services provider NATS, simplified and modernised the arrival routes for flights into the airport, segregating them from Stansted's to ensure continued safety for all.

While 2021 presented many challenges, we're proud of the work we've been able to progress, which has not only brought about operational improvements but also ensured we can build the foundations for recovery as we emerged from the pandemic.

The pandemic also highlighted the huge importance of supporting our neighbouring communities. From the creation of employment opportunities for local people and suppliers, to staff volunteering and charitable giving, we continually look to create positive social impact in the local community. Approximately 10,000 local people benefitted from our Community Trust Fund in 2021 with over £200,000 grants donated to community projects, whilst fundraising by staff and passengers provided a further £20,000 in donations to our two charity partners Luton Foodbank and East Anglian Air Ambulance.

Moving forward, we will look to maintain our path to sustainable growth, supporting our local community, creating social value and championing responsible business in everything that we do.

Neil Thompson

*Operations Director
London Luton airport*

A handwritten signature of Neil Thompson in black ink, written in a cursive style.

Key Monitoring Indicators

Parameter		2021	2020
Total Aircraft Movements	↓	61,560	63,593
Day Movements (07:00 - 23:00)	↓	54,647	55,929
Night Movements (23.00 – 07.00)	↓	6,913	7,664
Early Morning Movements (06.00 – 07.00)	↓	2,423	2,525
Total Scheduled Passengers	↓	4,561,920	5,457,201
Total Charter Passengers	↑	23,953	15,585
Total Passengers	↓	4,585,873	5,472,786
Number of Destinations	↓	129	140
Number of New Airlines	-	0	0
Number of New Routes	↑	6	0
Westerly/Easterly Runway Split (%)	-	68/32	72/28
Night Quota Used (3,500 Limit)	↓	1276.50	1650.00
Average Ratio of Aircraft movements % (day/night)	-	89/11	88/12
Track Violations	↑	23	11
Departure Noise Infringements (Day)	↑	6	2
Departure Noise Infringements (Night)	-	0	0
Fines transferred into Community Trust Fund	↑	£31,000	£14,000
24hr Continuous Decent Approach (% achievement)	↑	89%	88%
No. Departures Recorded at ≥ 85 dB(A) during Day (Night)	↑	3 (0)	0 (0)
No. Departures Recorded at ≥ 76 dB(A) during Day (Night)	↑	1,460 (214)	1,345 (206)
No. Departures Recorded at ≥ 70 dB(A) during Day (Night)	↓	16,306 (2,374)	16,714 (2,505)
Night Noise Contour Area (48 dB L _{Aeq, 8h})	↓	23.9km ²	28.8km ²
Population within Night Noise Contour (48 dB L _{Aeq, 8h})	↓	10,400	14,800
Dwellings within Night Noise Contour (48 dB L _{Aeq, 8h})	↓	4,550	6,350
Noise Complaints	↑	12,432	4,489
Complainants	↓	289	395
Number of New Complainants	↓	123	165
Largest Source of Complaints	-	Deps. West	Deps. West
Number of PM ₁₀ exceedances	-	0	0

Air Traffic Data

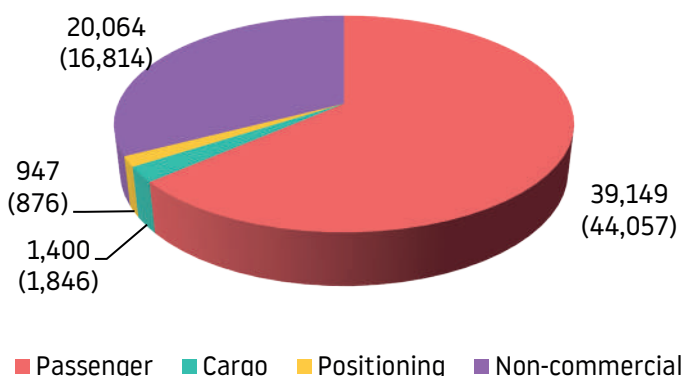
Aircraft movements

LLA handled a total of 61,560 aircraft movements during 2021, an decrease of 3% compared to 2020. An aircraft movement is the take-off or landing of any aircraft from the airport.

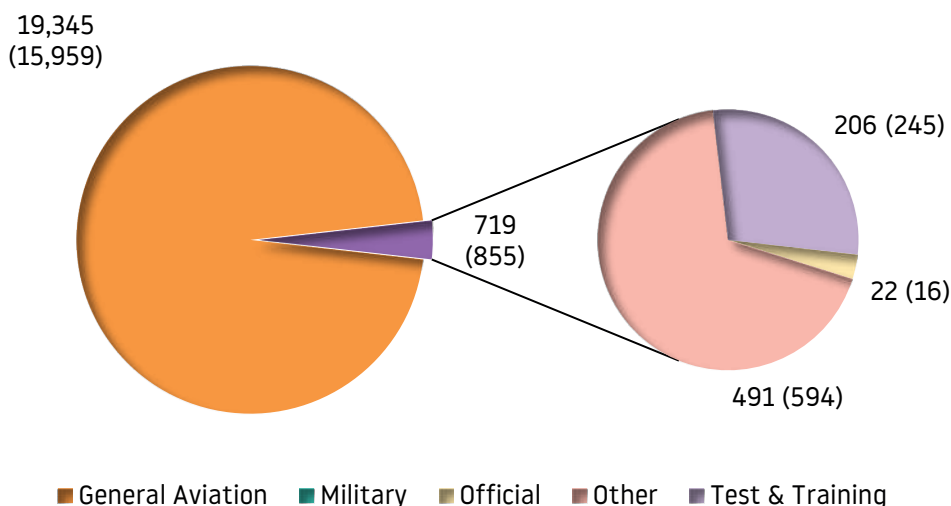
The majority of aircraft movements were passenger flights at 39,149 movements. This includes commercial flights by executive aircraft (compared with 44,057 in 2020). Other movements included cargo, positioning flights and non-commercial flights.

For comparison purposes 2020 data is shown in brackets.

Aircraft Movements



Non-Commercial Aircraft Movements



Movement Classification

Commercial – operating for hire or reward and includes cargo, passenger and positioning flights

Non-Commercial – not operating for hire and reward

Cargo – aircraft movements which are solely for freight. It should be noted that freight can also be carried on aircraft in other categories

General Aviation – private aircraft, helicopters and business jets not operating for hire or reward

Passenger – commercial passenger flights, including executive aircraft

Positioning – typically empty flights to/from other airports

Military – flights on military business

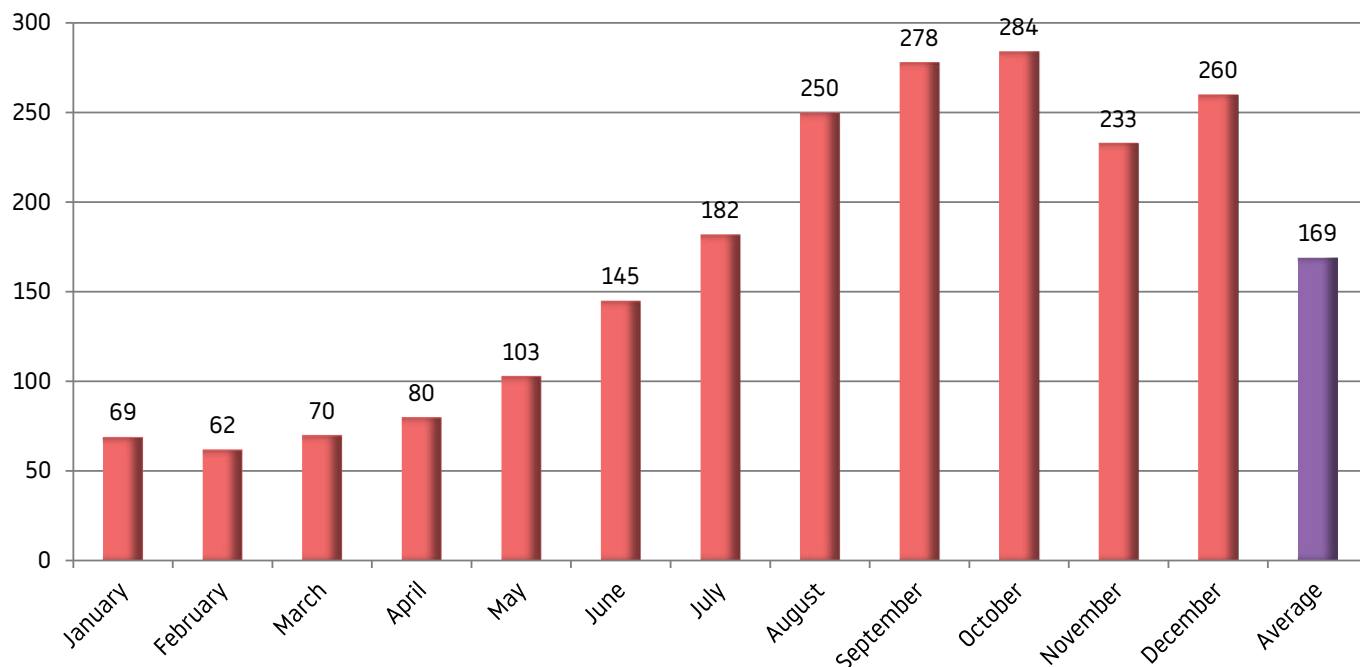
Official – flights solely for official purposes by British or foreign civil government departments

Other – flights coming for maintenance and or departing aircraft that have made an unscheduled return to base

Test & Training – training flights involving aircraft and also flights following or during aircraft maintenance

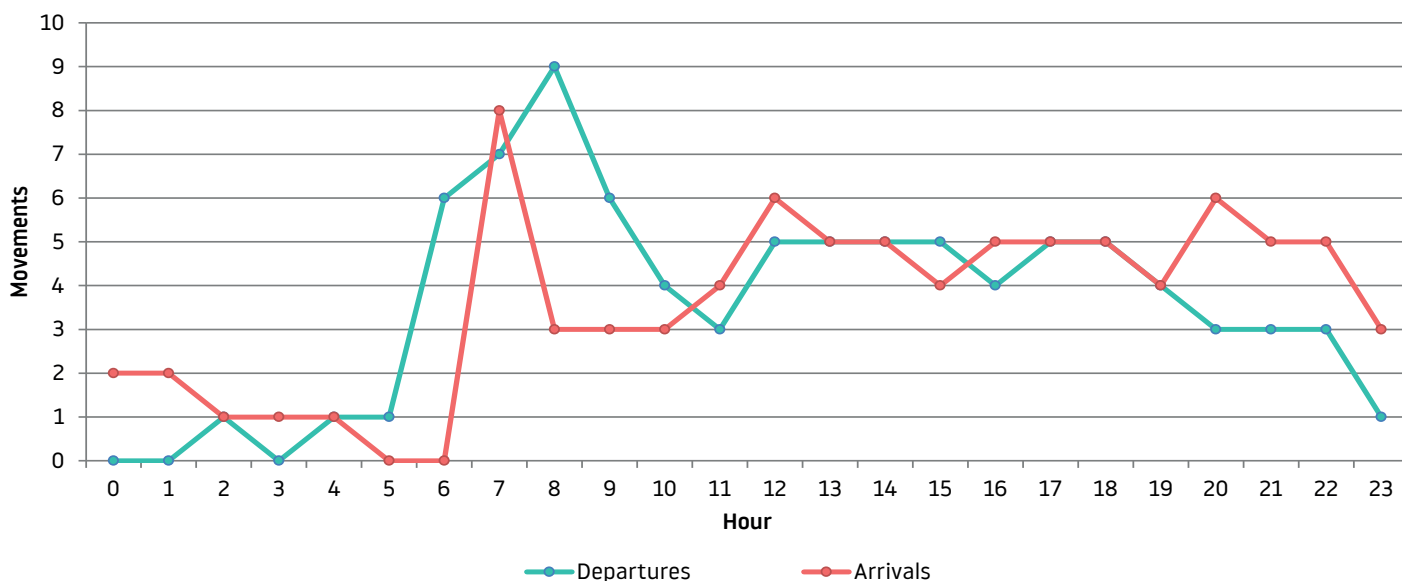
The graph below illustrates that the busiest month of year was October. **Our busiest day of the year was 17th December with 378 aircraft movements.** In comparison, February was the quietest when national lockdown and travel restriction were in place in the UK. On average there were 169 movements per 24 hours (compared to 174 movements in 2020).

Annual Average Daily Movements



The busiest time on average for departing aircraft was 08:00-09:00am during 2020. The average busiest time for arrivals was 07:00-08:00am. The graph also highlights a low level of average movements during 00:00-06:00 am.

Annual Average Hourly Movements



Passenger data

Scheduled	Charter	Total
<ul style="list-style-type: none"> • 4,561,920 passengers • 16% decrease compared with 2020 • 117 average passengers per flight 	<ul style="list-style-type: none"> • 23,953 passengers • 54% increase compared with 2020 • 126 average passengers per flight 	<ul style="list-style-type: none"> • 4,585,873 passengers • 16% decrease compared with 2020 • 117 average passengers per flights



Charter flights are flights in which the aircraft has been chartered (or leased) by a company, typically a tour operator or an executive customer. Charter seats are typically not sold directly by the airline. Scheduled flights are regular flights organised by the company which owns the aircraft.

A total of 4,585,873 passengers used LLA during 2021; 4,561,920 on scheduled flights (99.5%) and 23,953 on charter flights (0.5%). This represents an decrease in passengers of 16% compared with 2020.

Domestic	EU	Non-EU	Total
<ul style="list-style-type: none"> • 529,655 • 42% increase compared with 2020 	<ul style="list-style-type: none"> • 3,330,955 • 8% increase compared with 2020 	<ul style="list-style-type: none"> • 725,263 • 64% decrease compared with 2020 	<ul style="list-style-type: none"> • 4,585,873 • 16% decrease compared with 2020



Cargo

Cargo operations represented 3.3% of all air transport movements at London Luton Airport in 2021. Night movements accounted for 65% of total cargo movements. These were primarily postal flights or intra-European express delivery services moving time sensitive and perishable freight such as fresh food, medication and urgently needed technical equipment vital to supporting and sustaining economic growth. The flights carrying more general, less time-sensitive cargo already operate outside of the night-time period. This would include Formula 1 cars, live animals, clothing, machine parts and more.

We are still seeing similar commodities being shipped however in 2020 and 2021 we had shipments of NHS and private sector PPE supplies, and COVID-19 testing equipment being shipped owing to the pandemic. These related shipments had dropped in 2021 compared with the start of the pandemic in 2020. Moreover, the year on year reduction from 2020 to 2021 was due to slots became available at neighbouring airports.

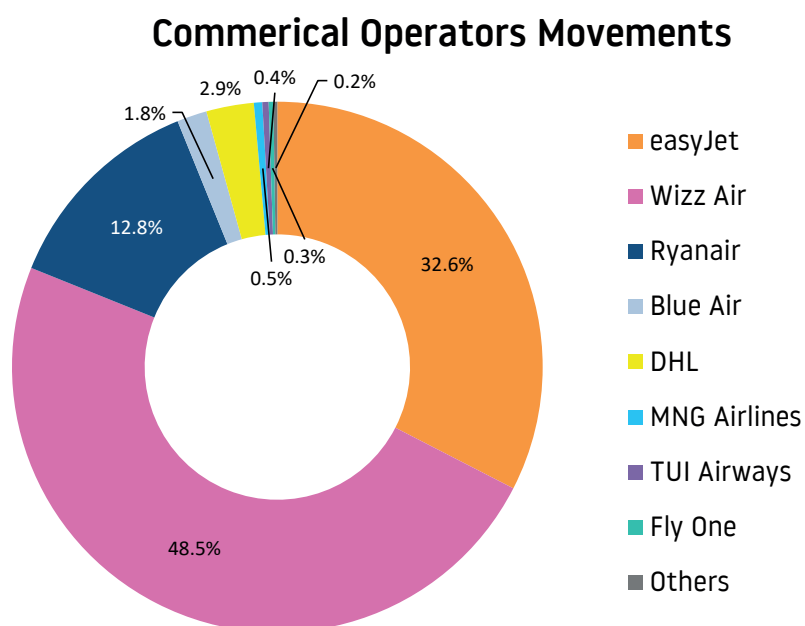
Operator	Movements			Tonnes
	Day Movements	Night Movements	Total	Total
2021	709	1,317	2,026	26,430
2020	819	1,609	2,428	32,693
2021/2020 comparison	-13%	-18%	-17%	-19%



Airlines

London Luton Airport works very closely with its airline partners. The table below provides the movement statistics by commercial operators.

Operator	Movements
easyJet	13,201
Wizz Air	19,682
Ryanair	5,178
Blue Air	740
DHL Air	1,174
MNG Airlines	206
TUI Airways	156
Fly One	116
Others	96
TOTAL	40,549



N.B This table includes movements for both passenger & cargo aircraft but excludes positioning flights and air-taxis.



Movements by aircraft type

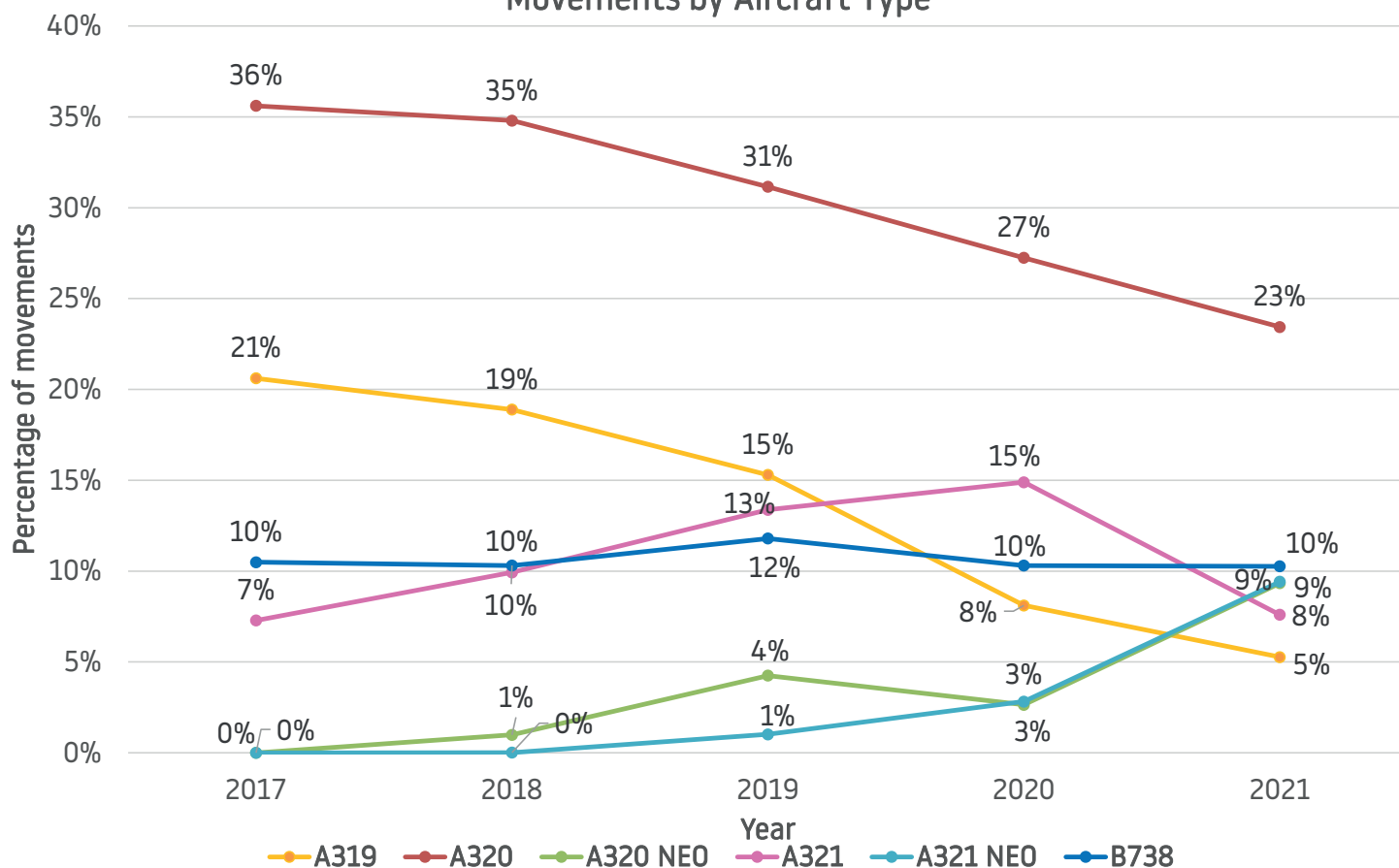
Aircraft Type	Movements	% of Total movements
A306	890	1.4%
Airbus A319	3,242	5.3%
Airbus A320	14,426	23.4%
Airbus A320 NEO	5,746	9.3%
Airbus A321	4,679	7.6%
Airbus A321 NEO	5,798	9.4%
Airbus A330	92	0.1%
Boeing B737-300	6	-
Boeing B737-400	240	0.4%
Boeing B737-500	6	-
Boeing B737-700	112	0.2%
Boeing B737-800	6,319	10.3%
Boeing B737-900	30	-
Boeing B737 Max 8	72	0.1%
Boeing B757	828	1.3%
Boeing B767	4	-
Boeing B777	0	-
Boeing B787	32	0.1%
Canadair Global Express GLEX	2,671	4.3%
Cessna Citation Excel C56X	2,025	3.3%
Cessna Citation Jet C680 series	843	1.4%
Canadair Challenger CL30	1,031	1.7%
Canadair Challenger CL60	838	1.4%
Dassault Falcon FA7X	530	0.9%
Embraer Legacy 450-650 series	1,095	1.8%
Gulfstream 3,4 & 400 series GLF3/GLF4	480	0.8%
Gulfstream 5 and 500 series GLF5	605	1.0%
Gulfstream 650 GLF6	964	1.5%
Helicopter	170	0.3%
Other aircraft	7,786	12.6%
TOTAL	61,560	100%

The aim of this section is to provide the number of movements for a specific aircraft type. The groups are conditional, assuming that these are the typical aircraft types used for passengers, cargo and general aviation movements. As a result the number quoted here within this section will differ from those within the Aircraft Movements Section.

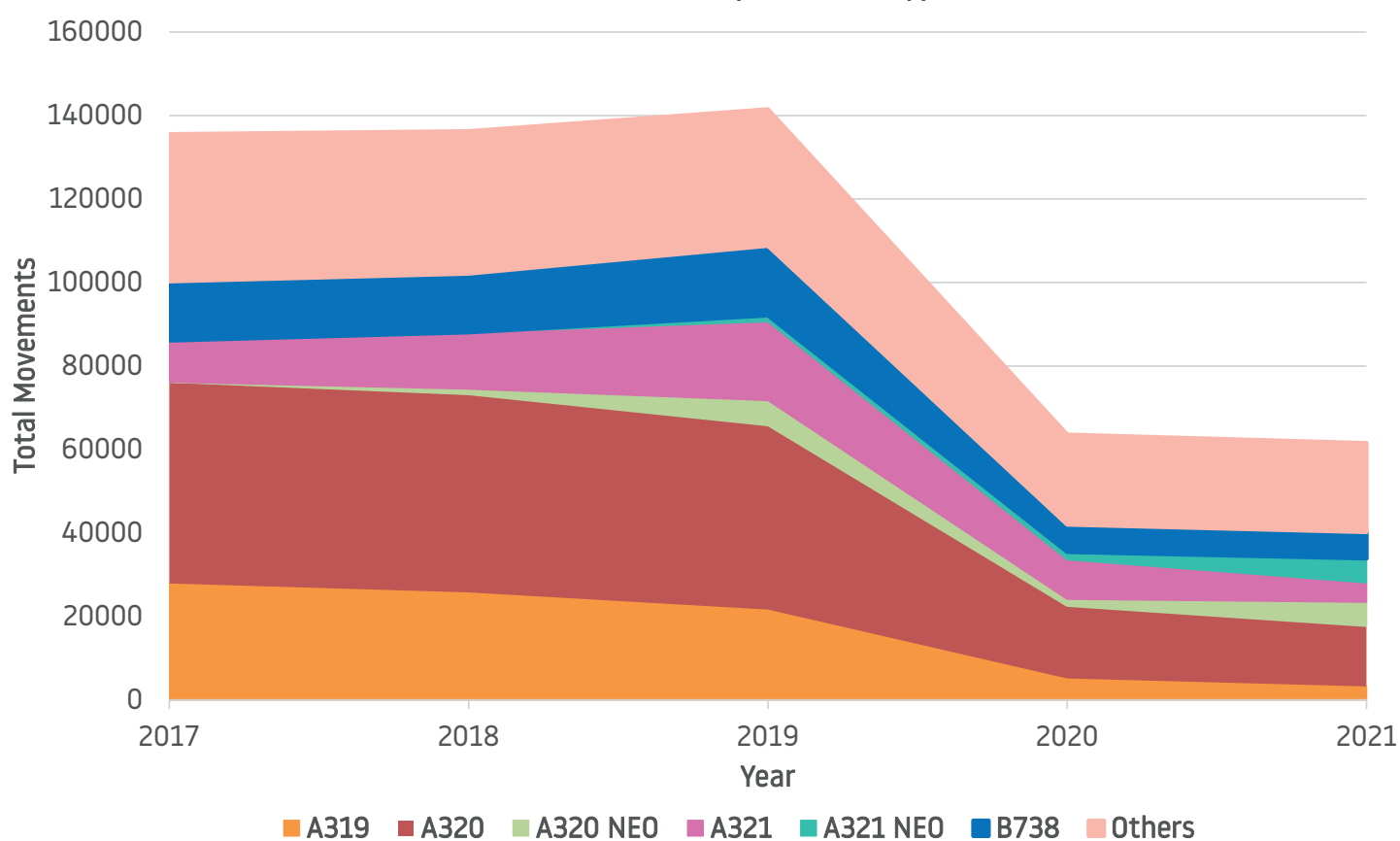
¹ - Winglets and sharklets are small aerodynamic surfaces mounted almost vertically at the wingtips. There is no difference between winglets and sharklets; the term sharklet is just the name used by Airbus for the winglets fitted to their aircraft.

The graphs below show the most popular type of movements by aircraft type at LLA. The data goes back five years for data comparison purposes.

Movements by Aircraft Type



Total Movements by Aircraft Type



Destinations

In 2021, London Luton Airport saw a decrease in both passengers and movements due to the Coronavirus (COVID-19) pandemic. During the year, there were changing government restrictions on travel which impacted LLA.

As a result of the pandemic the slot guidelines were changed for airlines during the summer period. The normal rule (known as the 80:20 rule) is that an airline must operate at least 80% of their allocated slots during the season, if they do not the airlines loses its right to that slot the next season. During 2021, this rule was lifted to allow operators to respond to the changing government restrictions and capacity levels, therefore avoiding the need to run empty services in order to maintain slots. As a result of this some operators cancelled their summer and winter programmes. The routes cancelled by airlines during 2021 are not classified as routes ending, but are classified as postponed until normal market conditions resume.

Despite the pandemic, during 2021 our airlines fly to 129 destinations across 39 different countries.

Top 10 destinations by movement

Destination	Number of Movements
Bucharest-Otopeni	1,496
Malaga	1,462
Edinburgh	1,325
Belfast	1,312
Sofia	1,259
Budapest	1,200
Glasgow	1,134
Faro	1,130
Krakow	1,108
Nice	1,101

More information about our destinations can be found on the airport's website: <http://www.london-luton.co.uk/inside-lla/destination-map>



Runway usage

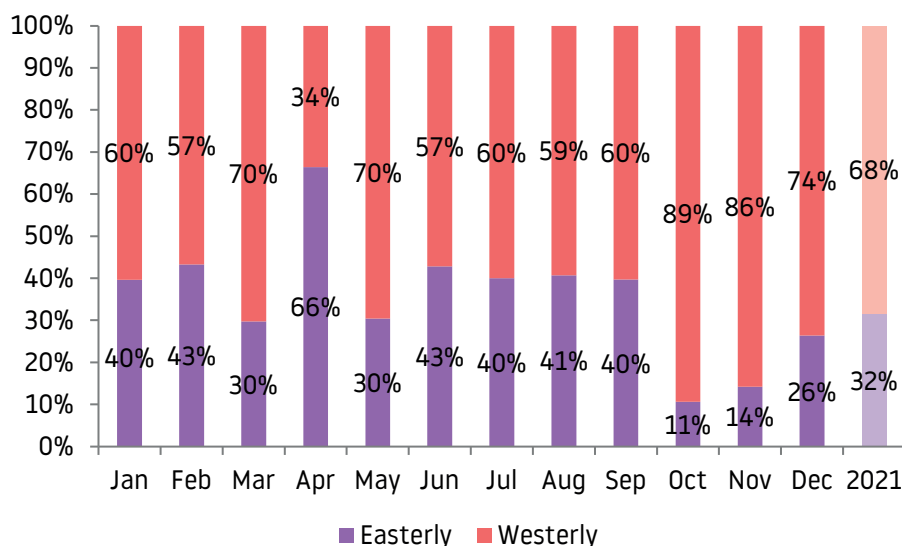
Aircraft need to land and take off into the wind and therefore the prevailing wind direction determines the direction of airfield operation. South westerly and westerly winds prevail for much of the year, typically around 70 per cent of the time.

Wind speeds and directions recorded at higher altitudes can vary considerably from those recorded at ground level. The position of the wind is under constant review by NATS which is why the operation can change direction more than once in a day. However it is also not unusual for the runway to operate in the same direction for several weeks.

A monthly breakdown is shown, highlighting the increased usage of westerly runway in Q4 2021.



Runway Usage



Year	Easterly	Westerly
2021	32%	68%
2020	19%	81%
2019	30%	70%
2018	37%	63%
2017	21%	79%
Average	28%	72%

The runway split during 2021 was 32% easterly and 68% westerly (compared to 19% / 81% in 2020). A breakdown of runway usage over the last five years is also shown in the table, giving a historical split of 28% easterly and 72% westerly.

Night Flights

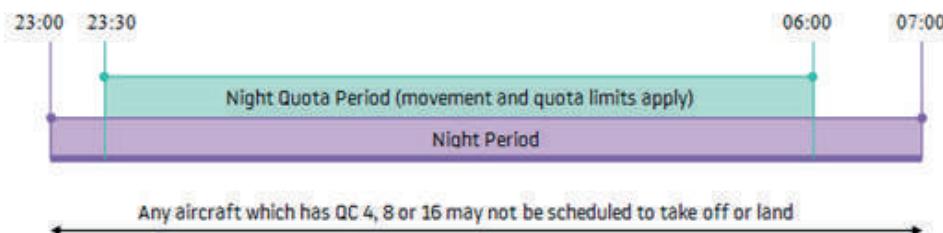


Night Flying Restrictions

As from 1st April 2015 London Luton Airport introduced new night restrictions as part of the planning conditions imposed by Luton Borough Council.

These restrictions have been put in place to limit and mitigate noise disturbance from aircraft operating at night, to prohibit aircraft of certain types from operating, as well as limiting the number of occasions on which aircraft may take off or land.

The night flying restrictions contain a 12 month period aircraft movement limit and a 12 month period quota count limit. 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.



The table overleaf records the QC bands identified by the certified noise levels, and gives some typical example aircraft, some of which operate from LLA.

The 'Night Quota Period'

The 'Night Quota Period' is from 23:30 to 06:00 hours local, during which period aircraft movements (take-off or landing) are restricted by a limit on the number of movements with noise quotas as an additional measure.

Aircraft are certificated by the International Civil Aviation Organisation (ICAO) according to the noise they produce during specific certification tests conducted by the manufacturer. They are classified separately for both take off and landing. The points are then allocated to different aircraft types according to how noisy they are.

The 'Early Morning Shoulder Period'

The 'Early Morning Shoulder Period' is 06:00 to 07:00 hours local. During this period aircraft movements (take-off or landing) are restricted by a limit on the number of movements (the same as the Night Quota Period).

Aircraft movement and quota count limits (per 12 month period)

Condition 9(iii) requires that for the Night Quota Period (2330 - 0600) the following limits shall not be exceeded:

- Total annual movements by aircraft per 12 month period shall be limited to 9,650;
- The total annual noise quota in any 12 month period shall be limited to 3,500.

Certificated noise level (EPNdB)	Typical aircraft	Quota Count
93 to 95.9	B772, A306, A332	QC 2
90 to 92.9	A320/A321, some B738, B752, B788	QC 1
87 to 89.9	A319/A320, some B734, B738, B788	QC 0.5
84 to 86.9	A319/A320, GLEX, FA7X/F900/F2TH	QC 0.25
81 to 83.9	A320 NEO, A321 NEO	QC 0.125
Less than 84	Challenger series (eg CL60), ATP & C525/C550	QC 0

Condition 9(iv) requires that for the Early Morning Shoulder Period (0600 - 0700) the total annual movements by aircraft in any 12 month period shall be limited to 7,000.

The table below provides total aircraft annual movements and noise quota per 12 month period and compares those against the limits set by planning conditions.

	Night Quota Period (2330 - 0600)		Early Morning Shoulder (0600 - 0700)
	Movements Limited to 9,650	Quota Count Limited to 3,500	Movements Limited to 7,000
Jan 2021	224	96.00	66
Feb 2021	150	78.50	45
Mar 2021	193	91.75	56
Apr 2021	203	87.75	68
May 2021	217	83.25	92
Jun 2021	197	94.50	169
Jul 2021	242	104.75	200
Aug 2021	389	125.50	385
Sep 2021	358	113.75	362
Oct 2021	478	131.00	406
Nov 2021	374	120.75	285
Dec 2021	454	149.00	289
Total for preceding 12 months	3,479	1276.50	2,423

There was one aircraft movement in 2021 during the night time period that has been treated as QC2. It was a departure by an Airbus A321 aircraft. Certification data for this specific aircraft was not available and therefore a worst case assumption was made. There were no night time aircraft movements with a QC value of greater than 2 in 2021.

Marginally Compliant Chapter 3 aircraft

Taking the year as a whole, there were 60,452 movements where Chapter 3 categorisation is applicable, none are known to be marginally compliant. There were no movement by an aircraft with unknown classification.



Day/Night ratio of movements

There were 6,913 night movements during 2021 (compared to 7,664 in 2020, a decrease of 10%), an average of 19 movements per night (compared to 21 last year). Arriving aircraft accounted for

49% of total night movements, relating primarily to the last rotation of Luton based passenger aircraft scheduled to land back at the airport at night, between 23:00 hrs and midnight. 64% of total

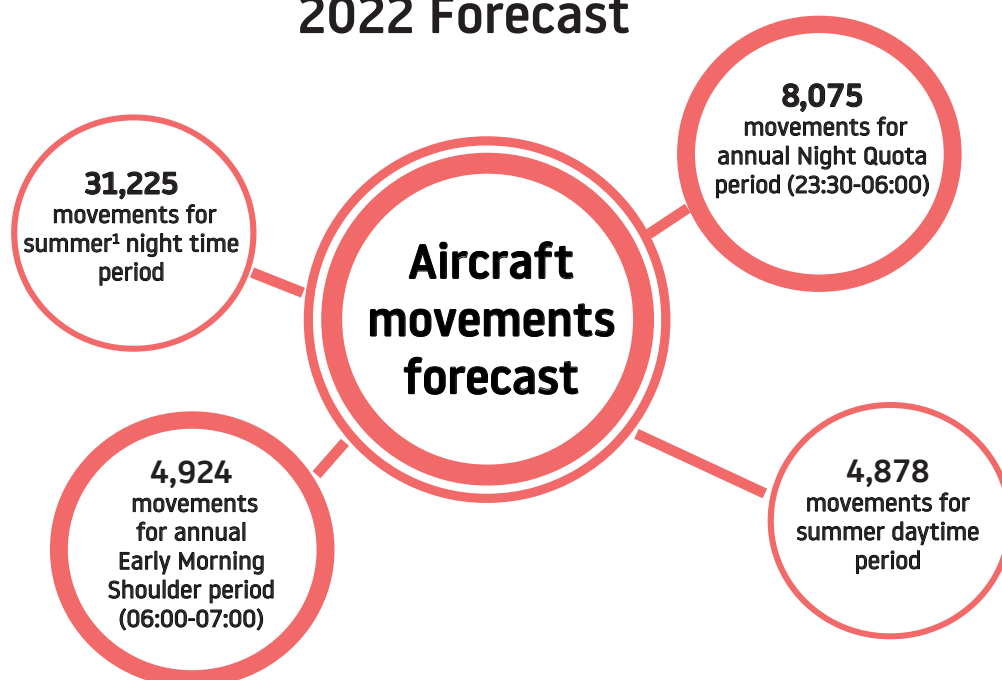
night departures took off between 0600 - 0700 in the morning.

The average ratio of total aircraft movements during 2021 was 89% day / 11% night (same as 2020 and 2019).

2021	Day Movements (0700 - 2259)	Night Movements (2300 - 0659)		
	Day Movements	Night Quota Period (2330 - 0559)	Early Morning Shoulder (0600 - 0659)	Total Night Movements (2300 - 0659)
Departures	27,225	1,036	2,291	3,554
Arrivals	27,422	2,443	132	3,359
TOTAL	54,647	3,479	2,423	6,913

The figure below shows forecast aircraft movements for 2022, separated into daytime and night time periods. As a result of COVID-19 forecasts are uncertain and forecasts change based on the number of COVID cases in other countries and the UK Foreign and Commonwealth Office's advice.

2022 Forecast



¹ - Summer time covers period from 16th June until 15th September

Departing Aircraft

All propeller-driven aircraft with Maximum Take Off Mass (MTOM) over 5,700kg and all jet aircraft leaving London Luton Airport are required to follow specific departure routes known as Noise Preferential Routes (NPRs). These are established by consultation with the Safety and Airspace Regulatory Group (SARG) at the CAA and the London Luton Airport Consultative Committee, and they are designed to avoid flying over built-up areas wherever possible.

There are four Standard Instrument Departure (SID) routes for each runway – OLNEY, COMPTON, MATCH and DETLING.

Associated with each NPR is a swathe of airspace extending 1.5km (1km for RNAV) each side of the NPR centre line, within which aircraft concentrate and are considered to be flying on track. Aircraft must follow the NPR controls applicable to the runway in use at that time.

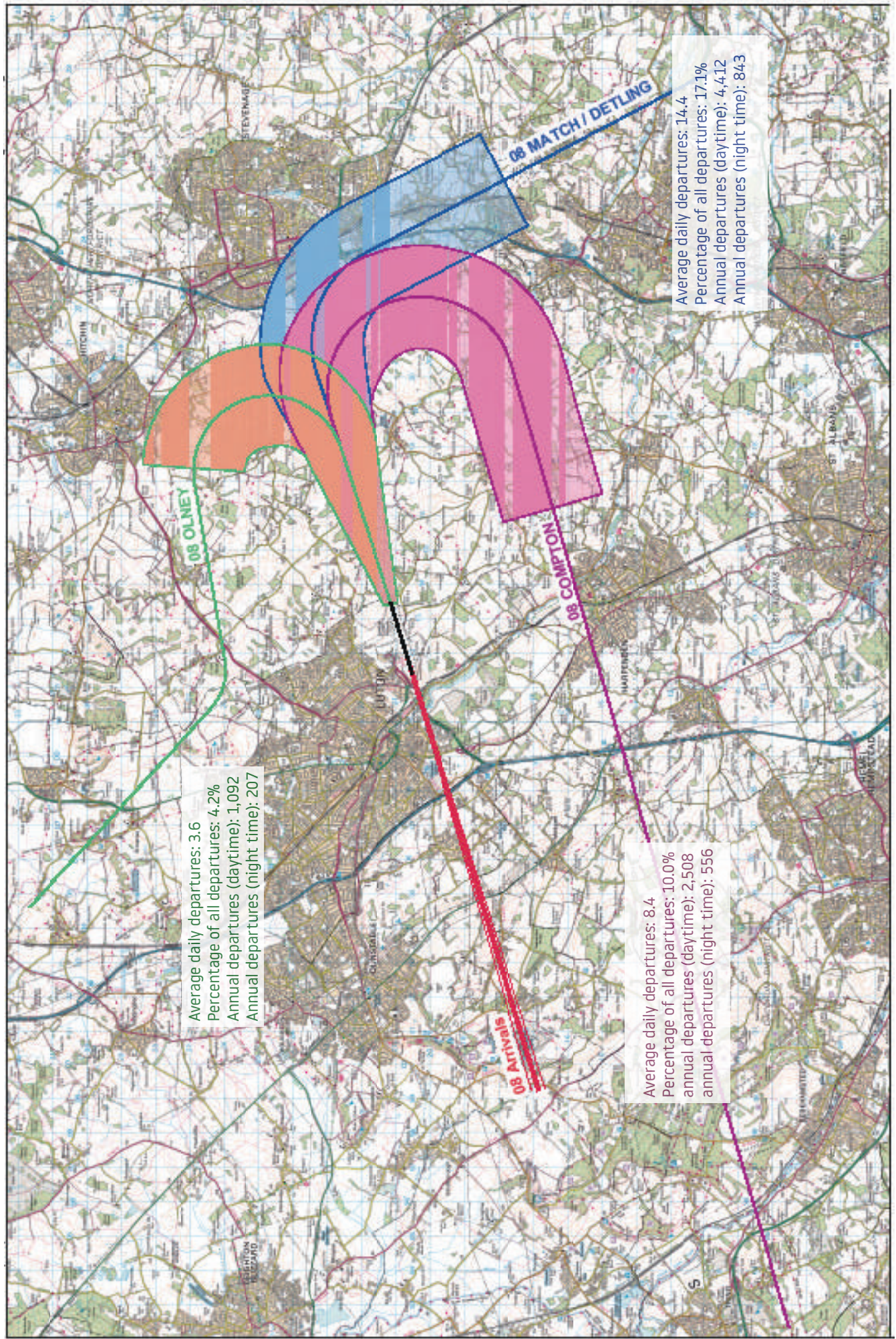
In the UK, the obligations of Noise Preferential Routings for aircraft following conventional SIDs cease when a height of 3,000ft (between 07:00hrs to 22:59hrs local time) and 4,000ft (during night time, 23:00hrs to 06:59hrs local time) has been reached. The obligations of the RNAV NPR ceases when a height of 4,000ft has been reached at all times.

Once aircraft have reached the NPR restricted altitude they will be considered no longer on the Noise Preferential Route. At that stage the aircraft may be directed by Air Traffic Controllers onto a different heading in order to integrate with the overall flow of traffic, this is known as vectoring. However on RNAV Match/Detling SID aircraft should not be vectored before the railway line between St Albans and Harpenden, unless this is required for safe separation from other aircraft or for other safety issues such as avoiding adverse weather.

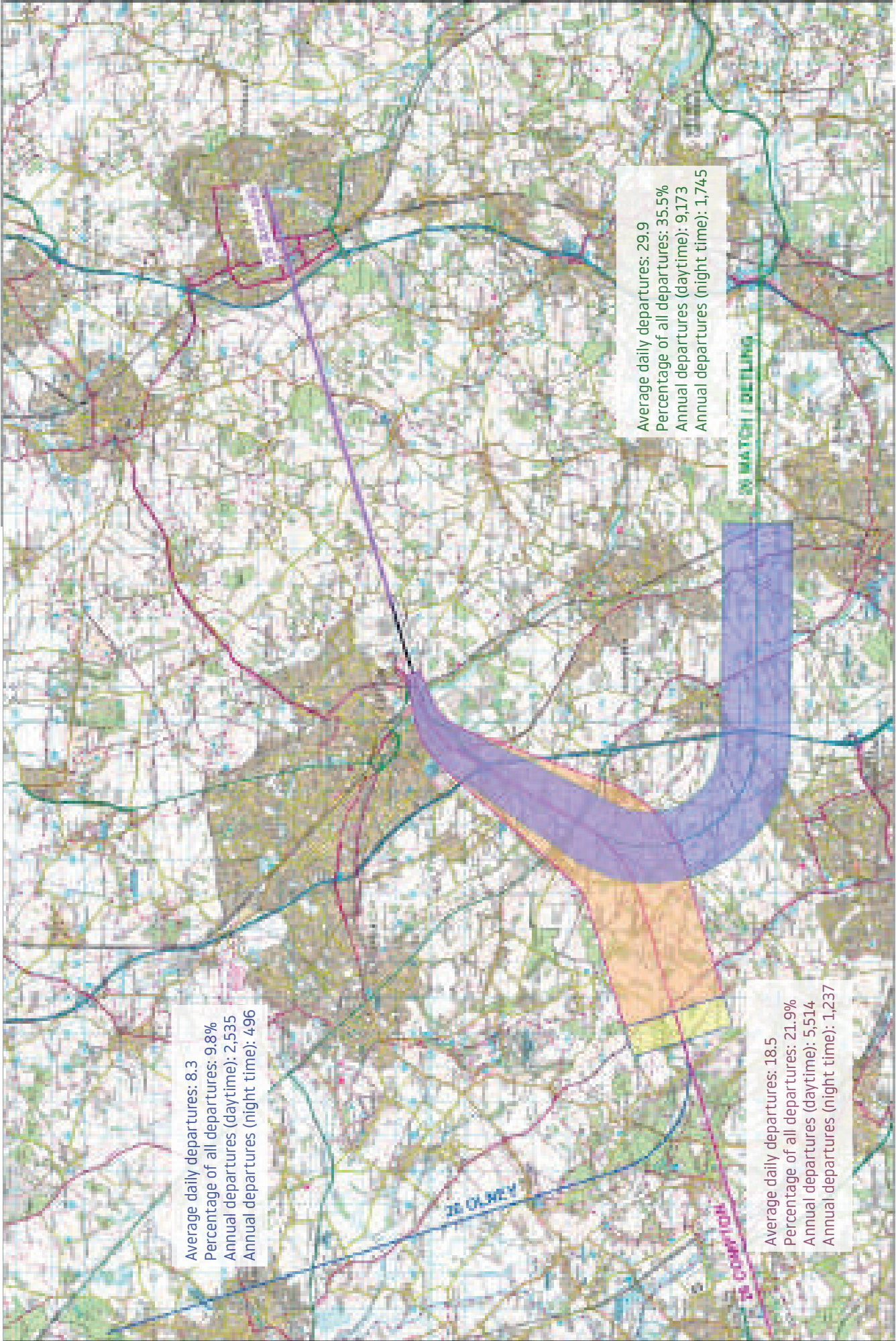
Two maps overleaf show indicative flight routes for westerly and easterly operations at London Luton Airport with detailed information about each departure route.



Plan showing Easterly (07) flight routes



Plan showing Westerly (25) flight routes



On Track performance

On the 1st April 2015, London Luton Airport implemented a Track Violation Penalty System as part of the noise related planning conditions. Using the airport's Aircraft Noise and Track Monitoring System, the Flight Operations Team evaluates the radar tracks and investigates them with required input from Air Traffic Control (ATC) and airlines. A departure is deemed to have complied with the Noise Preferential Routing if the portion of flight below the appropriate vectoring altitude is flown wholly within the Lateral Swathe (LS). Where the aircraft is clearly flying outside the LS, the aircraft is identified as causing a "possible" track violation and is subject to a nominal fine. This money is transferred to our Community Trust Fund which awards grants to community projects.

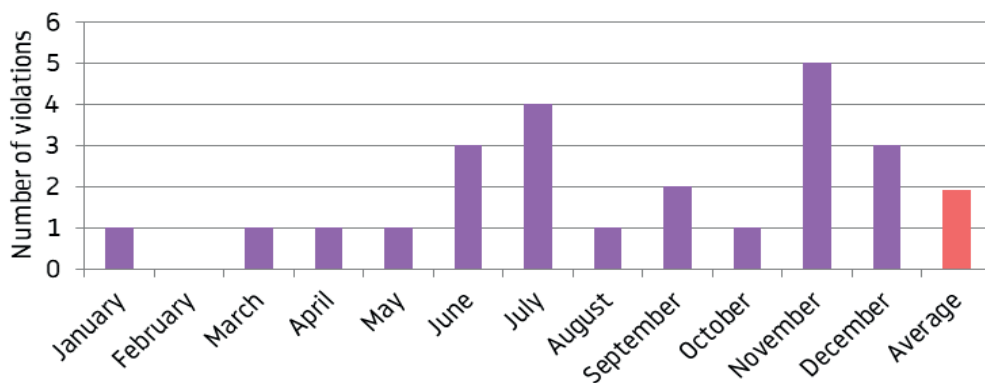
From 1st April 2018, the penalty was increased to £1,000 for a daytime violation (07:00-22:59hrs) and £2,000 for a night time violation (23:00-06:59hrs).

As always, safety is paramount and there may be cases which involve vectoring an aircraft sooner than at the NPR height restriction. If ATC identifies any valid justification that could explain the deviation from the track, then the operator causing it will be exempt from the fine. Valid justifications include:

- Safety or operational reasons, i.e ATC vectoring
- Weather avoidance due to thunderstorm activity (as instructed by ATC)
- Emergencies

The diagram below shows off-track violations by month in 2021. The track keeping performance was 99.7%. This calculation excludes deviations for weather, traffic avoidance and those identified as violations.

Off Track Violations



£25,000 the total of all collected fines transferred to Community Trust Fund

The breakdown of the violations by aircraft type is shown in the tables below.

A/C Type	Total No Violations
A21N, A319	3
B752	1
C500, C56X	2
GL7T	1
GLEX	4
GLF5, GLF6	6
H25B	4
LJ60	1
RJ85	1
TOTAL	23

Airspace Change Proposal's

At LLA we are currently working on our next phase of airspace change which involves Performance Based Navigational procedures. In order to change any piece of airspace, the Civil Aviation Authority (CAA) require all airports to follow a regulatory process which is detailed in the CAA's publication CAP 1616. This document can be downloaded from [here](#).

Furthermore, in line with the CAP 1616 process all documentation surrounding an Airspace Change Proposal will be uploaded to the CAA's dedicated portal which can be accessed at <https://airspacechange.caa.co.uk/>

Swanwick Airspace Improvement Project - Airspace Development 6 (SAIP AD6)

In 2019, LLA started an airspace change proposal with joint sponsors, NATS. The purpose of the airspace change is to reduce the complexity of LLA arrivals (and their interacting relationship with London Stansted Airport arrivals), in turn assuring a safe operation for the future. This involves a new holding stack for Luton arrivals.

In October 2020, NATS and LLA began a public consultation which ran until February 2021. This consultation included two options for the lower level airspace and a new holding stack for Luton arrivals in the upper airspace.

Over the consultation period LLA and NATS received over 2,400 responses and significant media interest. Including a comprehensive virtual exhibition and numerous webinar events throughout the consultation period.

This airspace change proposal was submitted to the CAA in June 2021 with the CAA approving the proposal in November 2021 following a public evidence session. The airspace change will be implemented in February 2022.

All documentation relating to this airspace change is available on the CAA's airspace change portal [here](#).

Future Airspace Strategy Implementation - South (FASI-S)

As part of a National airspace change programme, as detailed in the Civil Aviation Authority's (CAA) Airspace Modernisation Strategy, London Luton Airport is required to update all of its arrival and departure procedures in a move towards satellite based technology. The programme is known as FASI-S and involves many airports and NATS.

The Future Airspace Strategy Implementation South (FASI South) programme is being co-ordinated by a group known as ACOG (Airspace Change Organisation Group). However, each airport is an airspace change sponsor and responsible for their own designs and integrating these routes with other airports and upper airspace.

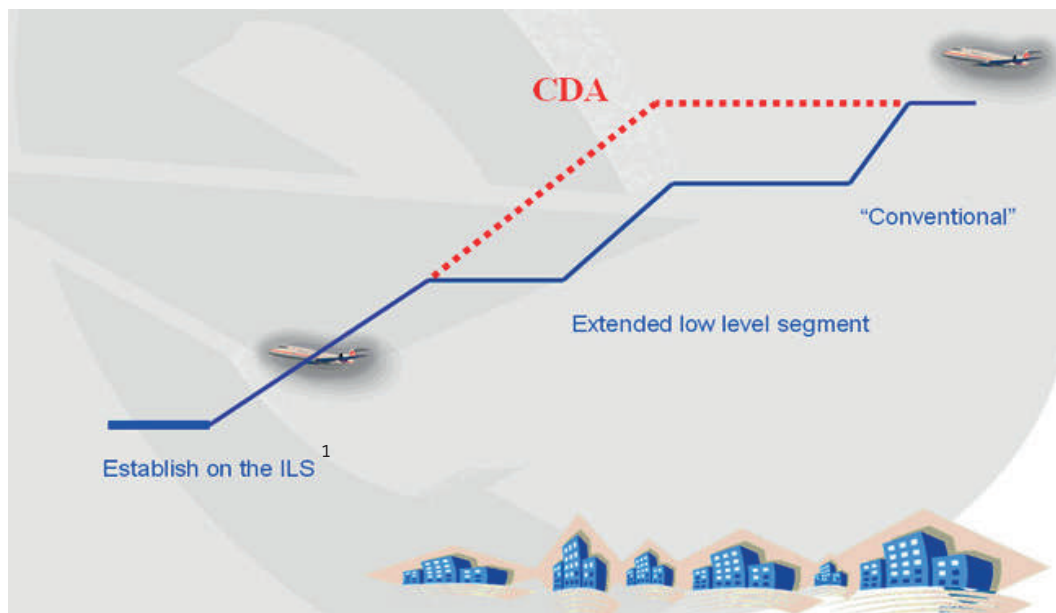
From January-May 2021, LLA had paused the airspace change proposal due to the impacts of COVID. However in May 2021 LLA restarted the work after receiving funding from government for airspace modernisation.

LLA restarted engagement with stakeholders on the long list of designs in autumn these were then taken through to a design principle evaluation and initial options appraisal in winter 2021.

All updated documentation submitted to the CAA for this airspace change is available on the CAA's airspace change portal [here](#).

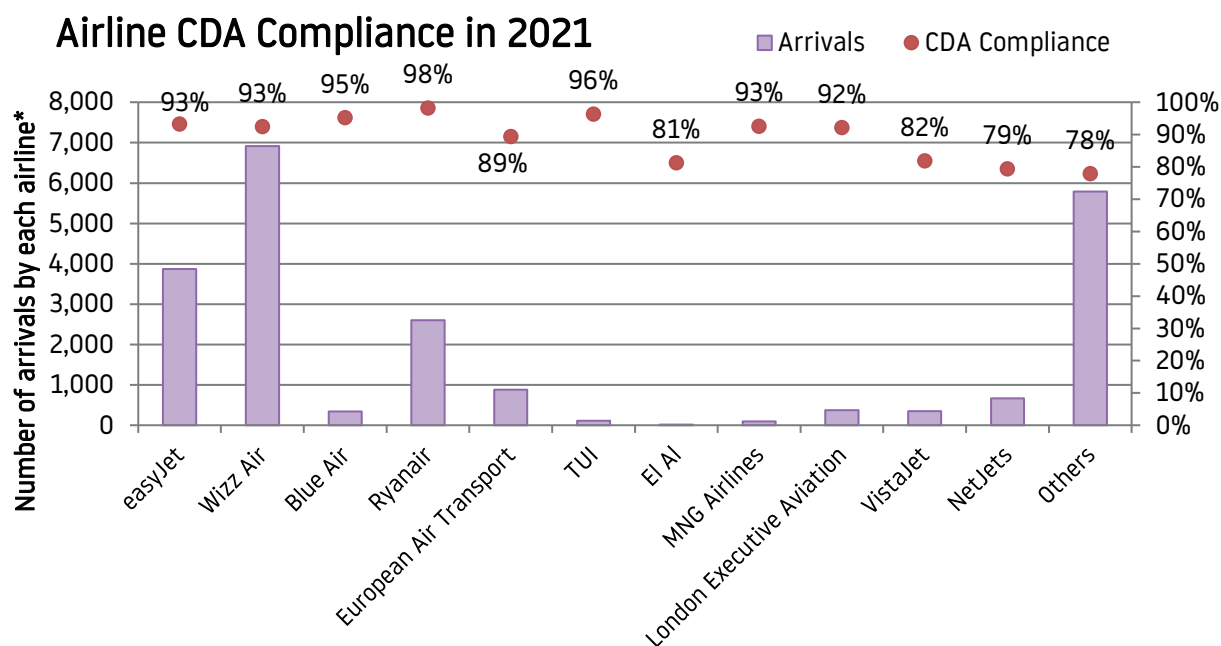
Arriving Aircraft

Although there are no set routes for arriving aircraft there are long established procedures to mitigate the disturbance that can be caused on approach to the airfield. One of the most successful measures is a noise mitigation procedure called Continuous Descent Approach (CDA).



The conventional approach involves descending in steps using engine thrust to level off. In a Continuous Descent Approach, or CDA, an aircraft stays higher for longer and descends at a continuous rate to the runway threshold therefore reducing periods of prolonged level flight at lower altitudes. With CDA less fuel is burnt, less emissions are produced but most importantly it reduces the noise by avoiding the use of engine thrust required for level flight.

The overall CDA achievement was 89% with several major LLA operators achieving higher performance; Ryanair, TUI, easyJet, Wizz Air and MNG Airlines. The chart compares the level of CDA compliance by our main airline operators.



*Domestic and positioning flights are excluded from calculation.

¹ - An Instrument Landing System (ILS) is a ground-based instrument approach aid based on two radio beams which together provide lateral and vertical guidance to an aircraft approaching and landing on a runway.

Delayed Landing Gear Deployment

At LLA we always aim to work constructively with our local community in order to reduce the impacts of noise. In 2017, LLA conducted an aviation leading trial to reduce noise by from arriving aircraft. The trial, conducted during the summer, consisted of aircraft delaying the deployment of landing gear.

As an aircraft makes its final approach most noise is caused by the flow of air over the fuselage as drag is created to slow the aircraft down. Noise was measured along the arrivals flightpath to understand what, if any, reduction which could be achieved. Stevenage, Dagnall and Whipsnade were among those communities who saw the greatest benefit of between 2.7db and 3.4db

Following the successful trial, some operators have already changed their operating procedures to make this standard practice. During 2021, LLA continued to work with operators to encourage delayed landing gear deployment.

Departure and arrival flight tracks

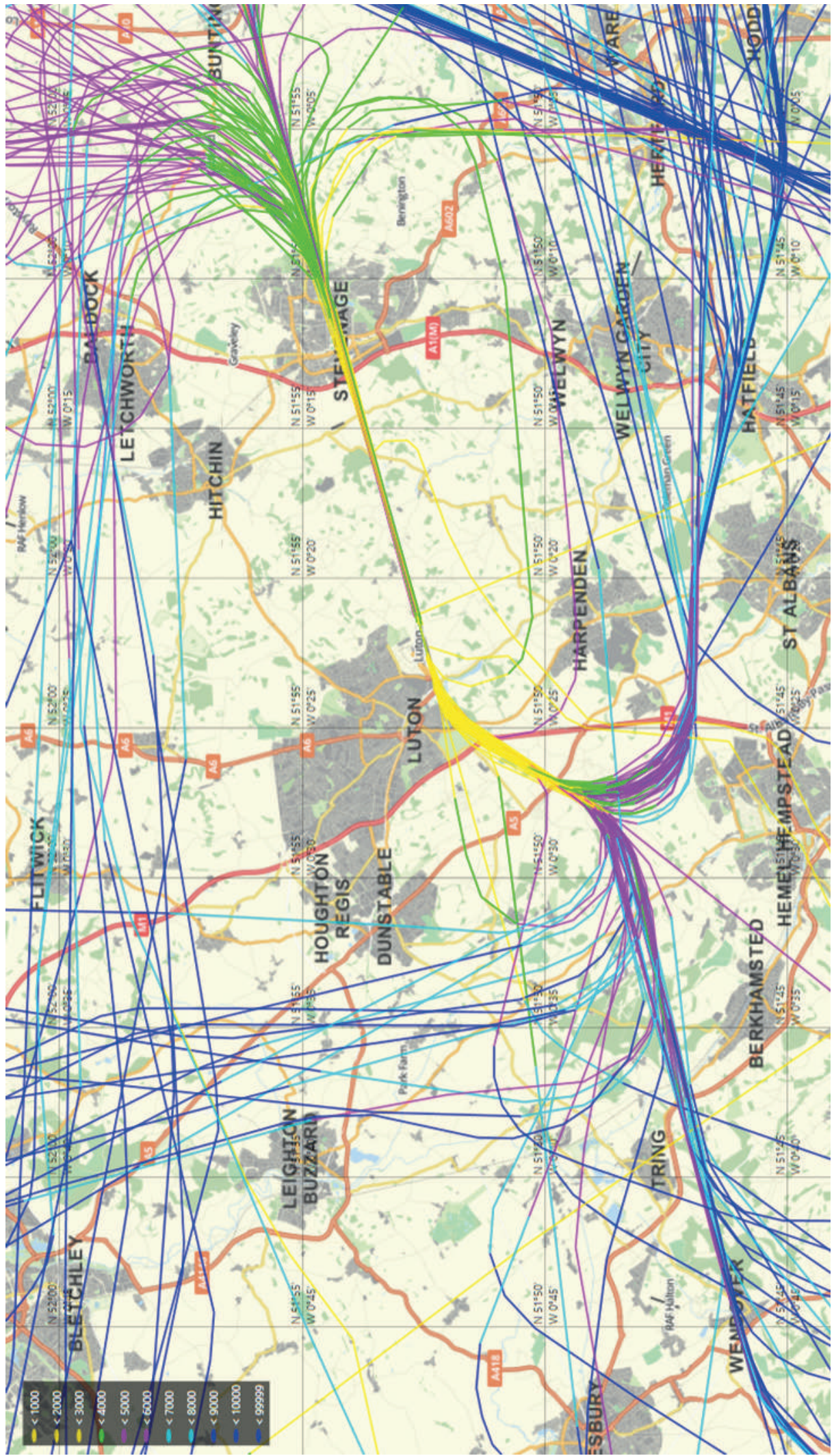
Maps overleaf display typical 24 hour periods of both westerly and easterly operations. They were captured before the Covid impact on air travel. The colour coding from yellow to blue represents different altitude bands up to 10,000ft above mean sea level.

The last two maps display aircraft track density plots for the summer period 16th June - 15th September 2020. A track density plot is a map which displays the pattern of aircraft flight track passing over the region around the airport during a specific period. The system analyses the number of flights passing over each grid element of an array. The colour coding from purple to red represents the range 10 to over 700 flight tracks over a grid element. If any grid element is not colour-coded, the number of aircraft flight tracks passing over that element was less than 10 flight. The red areas represent locations where operations are more densely concentrated.

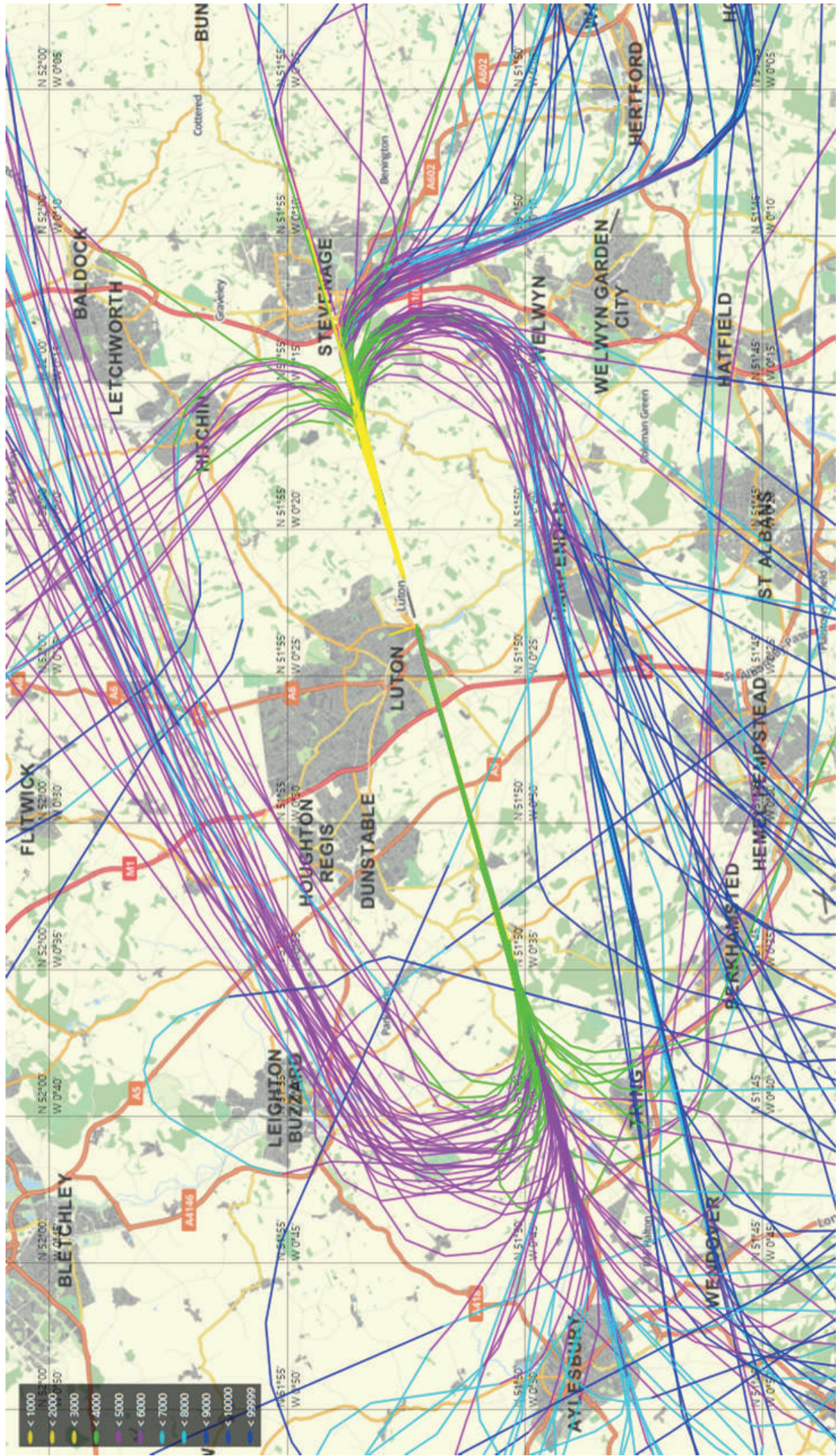
It should be noted that London Luton Airport's aircraft movements integrate with a traffic network travelling to and from other airports in the region, and the South East is one of the world's busiest sectors of airspace. However the following sample flight tracks only include operations for London Luton Airport and overflights from other airports have been omitted for clarity.



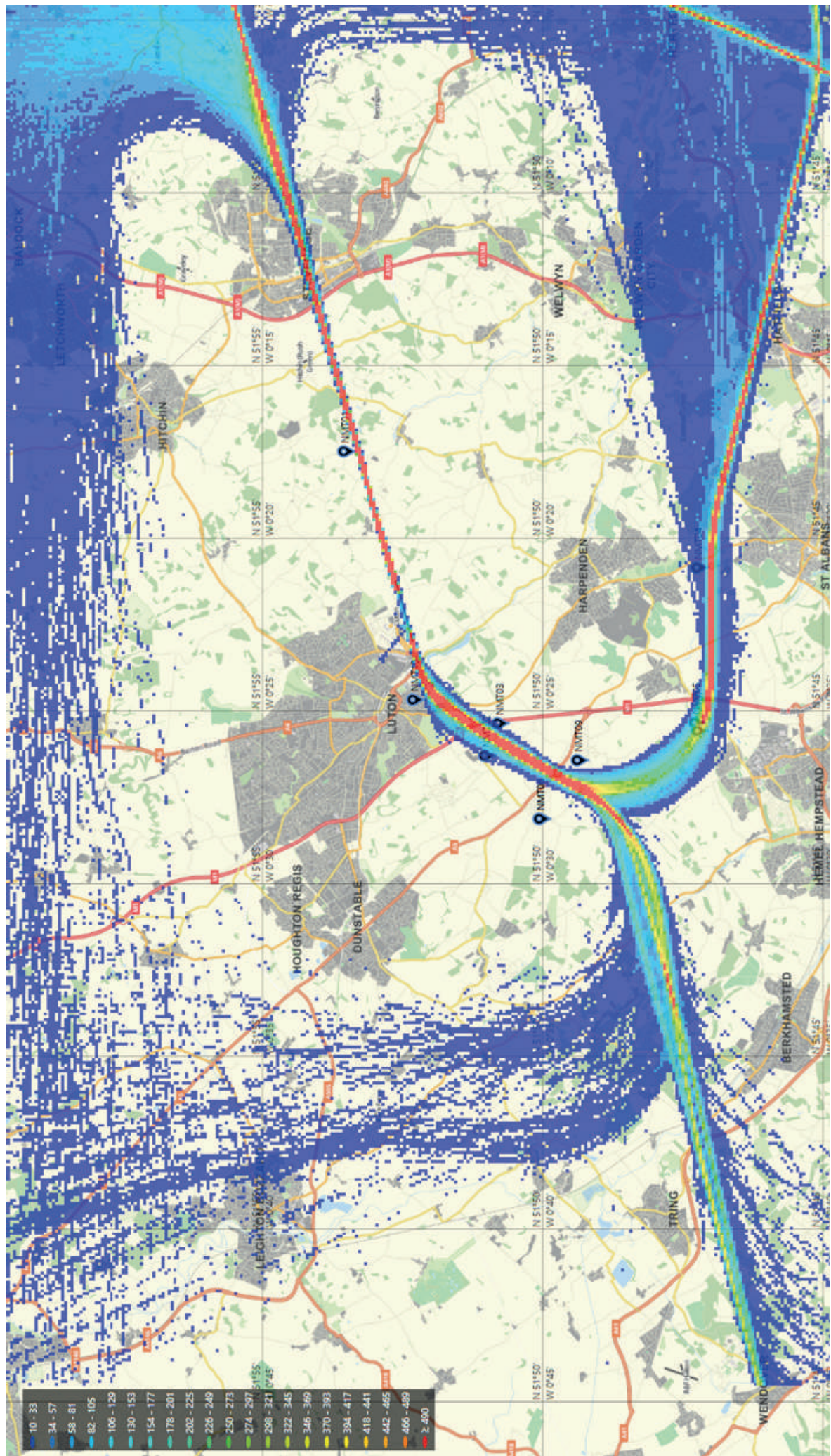
Westerly (25) Flight Routes (24 hour period)



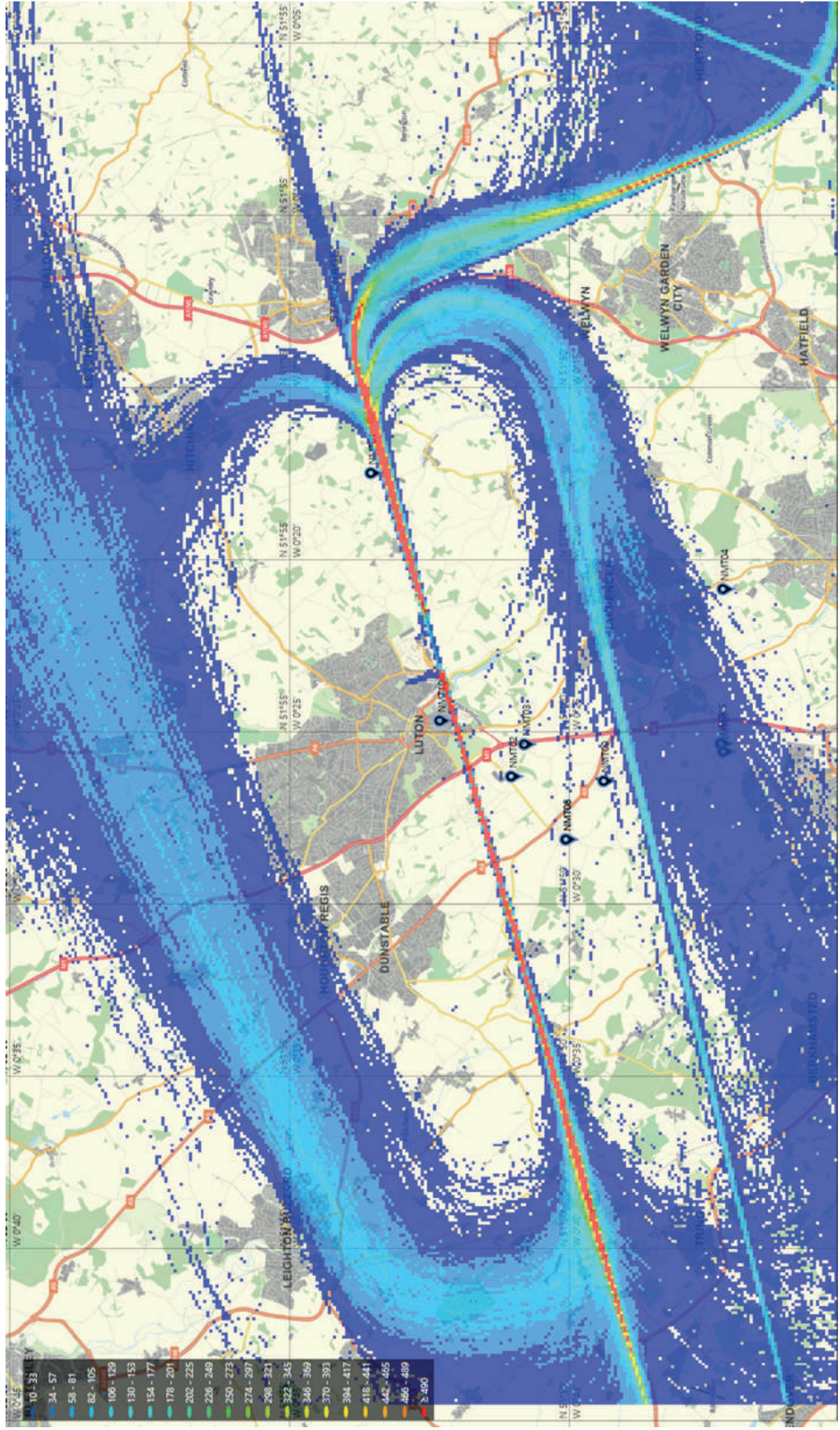
Easterly (07) Flight Routes (24 hour period)



Plot Density - 16th June - 15th September - Westerly (25)



Plot Density - 16th June - 15th September - Easterly (07)



Aircraft Noise

Noise is generally defined as unwanted sound. Although it is recognised that noise perception is very subjective, there are a number of internationally recognised terms to describe and measure aircraft noise. Most airport related noise is created by aircraft approaching, taking-off and taxiing to and from the runway. The management and control of noise continues to be a major element of the airport's policy to constantly seek to minimise and mitigate our environmental impact.

How is noise monitored?

People who live close to airports or under flight paths can often feel strongly about the disturbance to their lives from noise. Effects of noise include general distraction, speech interference and sleep disturbance which can lead to annoyance and complaints.

At LLA we monitor noise and track keeping with a specialised system that is designed to monitor air traffic within a radius around the airport (set at around 25 miles), and generally up to an altitude of 12,000ft. It downloads noise data from three fixed noise monitors located 6.5km from the aircraft start of roll, at either end of the runway within the neighbouring communities. This method records the maximum noise level at a point, rather than the way it is spread over the surrounding area. New features and system enhancements continue to improve the functionality and capabilities available to the Flight Operations Department.



LLA has 7 portable noise monitors and 3 fixed noise monitors. During 2021, noise was monitored in Childwickbury. The Community Noise Report can be found on <https://www.london-luton.co.uk/corporate/community/noise/community-noise-reports>.

Noise violation levels



The following table identifies daytime and night-time noise levels correlated to departing aircraft at the fixed noise monitoring terminals.

In order for a noise event to be correlated to an aircraft it should reach a detection threshold. The noise monitoring terminals are set at the lowest level to record the maximum number of aircraft noise events. However, a number of smaller aircraft types, such as business jets and propeller aircraft, get very close to but do not reach the detection threshold. Ambient background noise is also an important factor as specific incidents such as loud road traffic, emergency vehicle sirens, lawn mowers, drills etc. can register noise levels louder than an aircraft overhead, which results in not all aircraft movements being correlated to noise events. Generally, the louder noise events have more certainty of being correlated with aircraft movements.

Weather conditions can also effect the number of noise monitoring events recorded in the table; for example, if winds are greater than 10m/s and temperature is either higher than 25°C or below -10°C, results from noise monitors will be invalid and therefore will not be correlated.

Number of Correlated Events	dB (A)*	Daytime	NightTime	Total
	<70	5,275	756	6,031
	70	1,644	167	1,811
	71	2,326	270	2,596
	72	2,901	420	3,321
	73	3,355	508	3,863
	74	2,825	487	3,312
	75	1,795	308	2,103
	76	878	132	1,010
	77	337	55	392
	78	156	21	177
	79	64	6	70
	80	19	0	19
	81	1	0	1
	82	0	0	0
	83	0	0	0
	84	2	0	2
	85	2	0	2
	86	0	0	0
	87	1	0	1
	88	0	0	0
	89	0	0	0
	90	0	0	0

During the daytime 99.6% of correlated departing aircraft recorded maximum noise levels less than 79dB(A), with 93.2% registering below 76dB(A). Throughout the year, 6 correlated daytime departures (0.03%) registered maximum noise levels at 80dB(A) or above. These departures were in breach of the daytime noise violations and were fined £1,000 for each occurrence.

During the night 99.8% of correlated departures recorded maximum noise levels below 79dB(A), with 93.1% below 76dB(A). During the year, 6 correlated night departures (0.2%) registered maximum noise levels at or above 79dB(A).

There were no correlated departing aircraft in the night time which recorded a maximum noise level at or above 80dB.

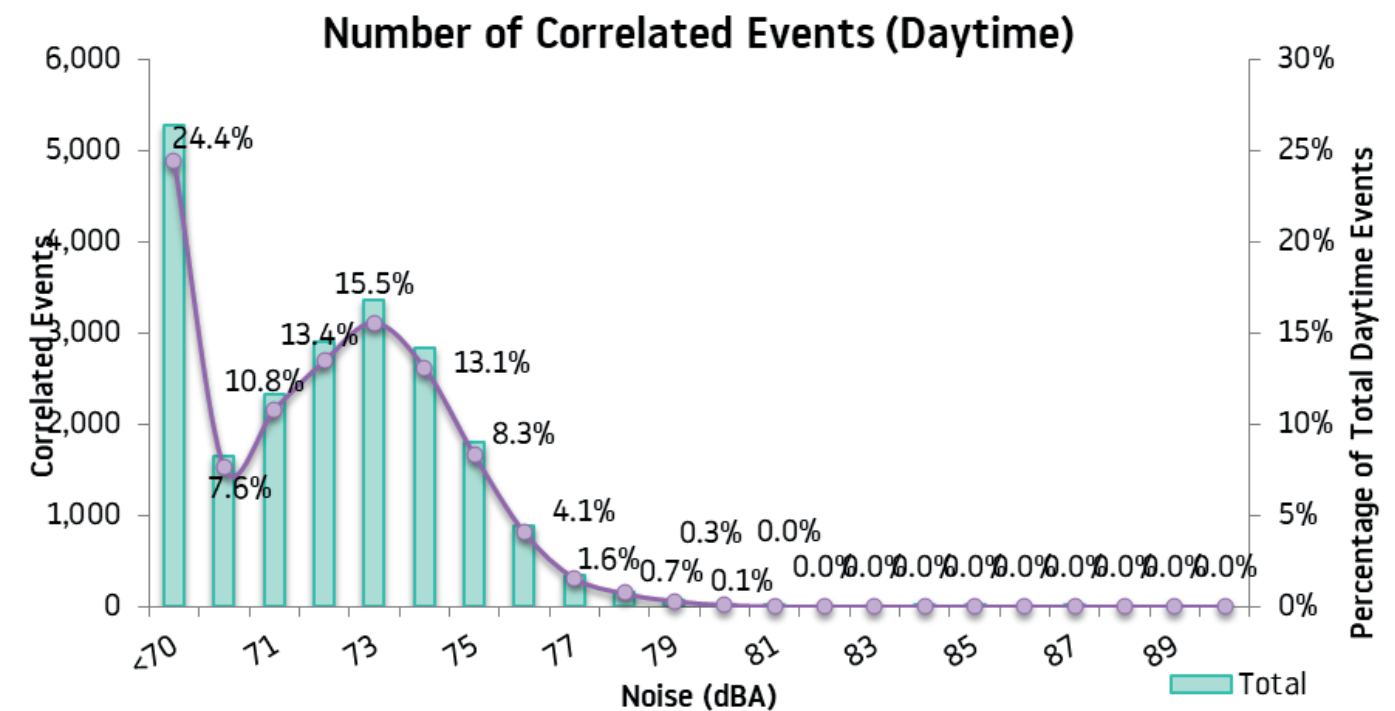
***Rounded number**

There were six noise violations in 2021. The operator was fined £1,000 for each daytime noise violation. All violation events occurred in the daytime period.

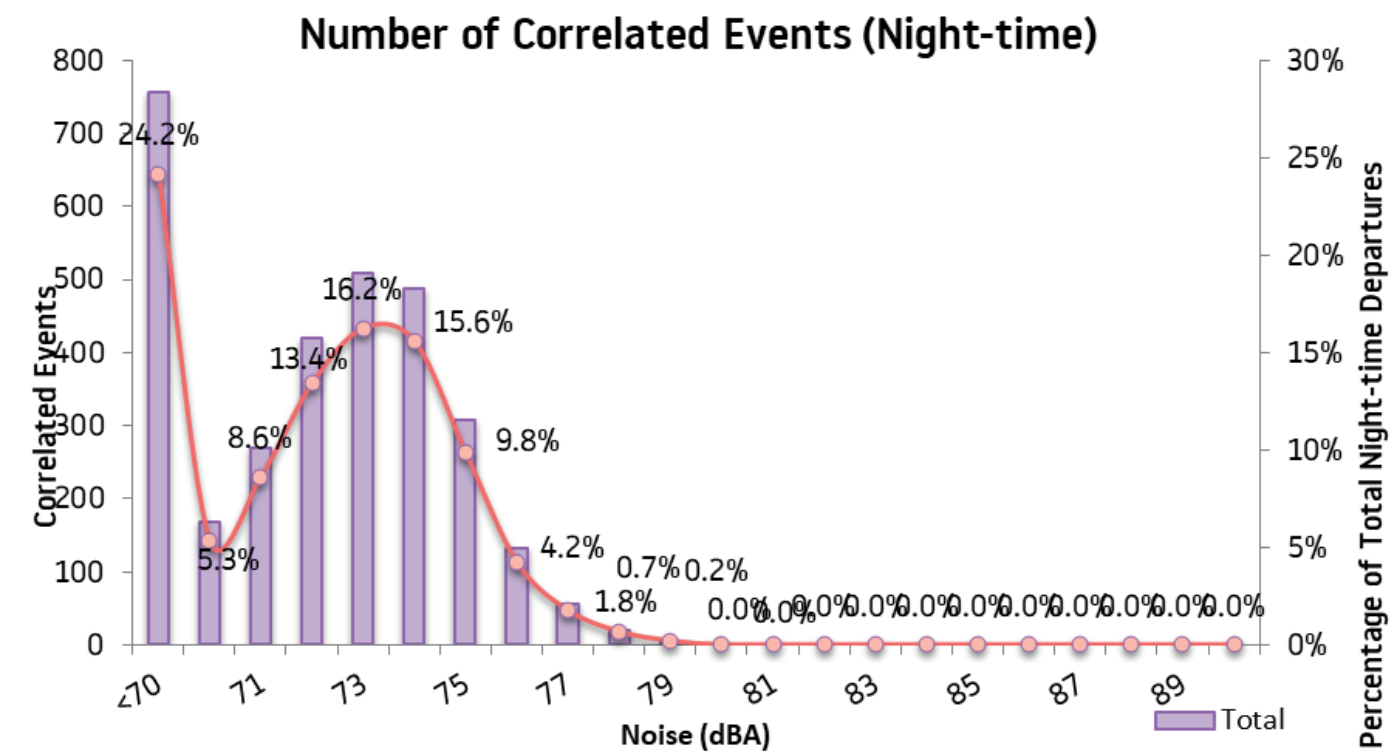
	Date & Time (Local)	Aircraft Type	Noise Level
Daytime	21/08/2021 08:44	MD87	84.5 dB(A)
Daytime	27/08/2021 13:41	MD87	84.0 dB(A)
Daytime	18/09/2021 15:28	MD87	83.8 dB(A)
Daytime	16/10/2021 14:52	MD87	86.6 dB(A)
Daytime	10/11/2021 10:00	F900	80.7 dB(A)
Daytime	19/11/2021 09:25	MD87	84.9 dB(A)

Daytime Noise

The following graph shows the number of correlated events during the daytime period (07:00hrs - 22:59hrs) compared to the total percentage of correlated events during the daytime.

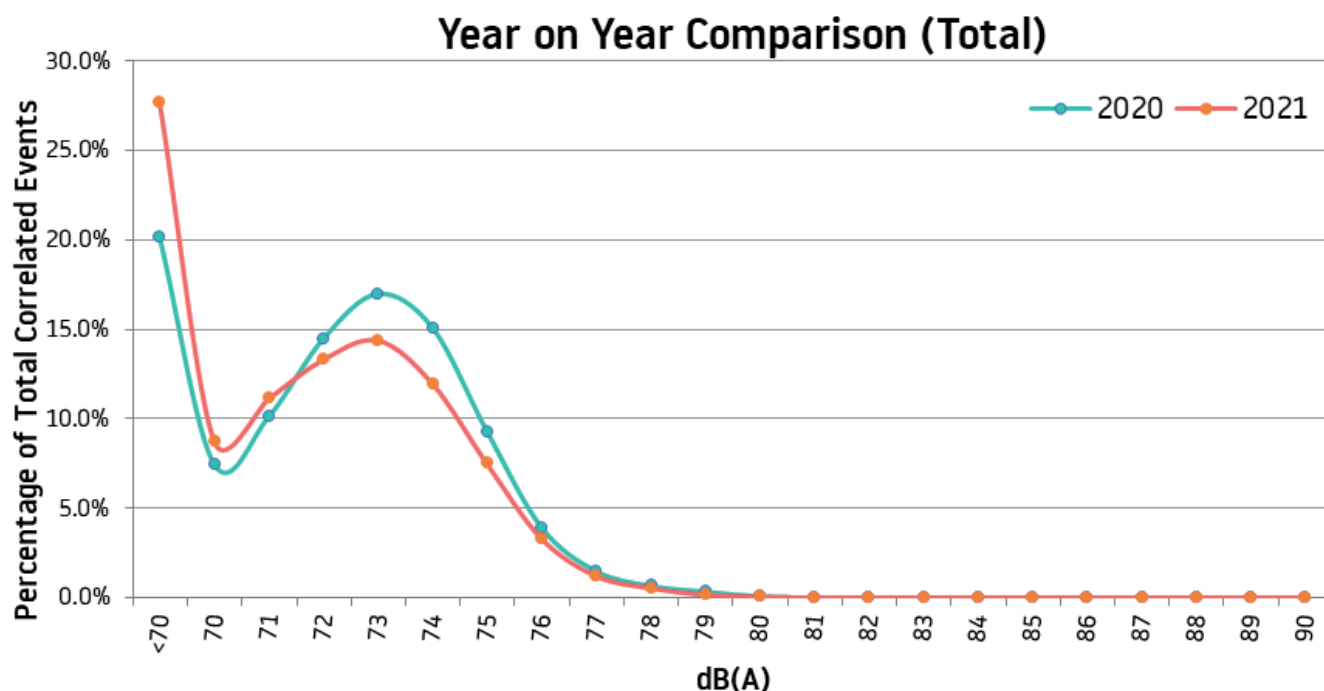


The following graph shows the number of correlated events during the night-time period (23:00hrs - 06:59hrs) compared to the total percentage of correlated events during the night-time.



Annual Comparison

The graph below shows the year-on-year comparison of the correlated departure noise events. The decrease in noise level in 2021 was mainly due to the reduction in commercial air traffic movements and bigger share of private air traffic movements during the COVID pandemic. Also, our main airline operators had increased the use of more environmental friendly aircraft (A320 NEO and A321 NEO) in 2021. The modal share of these newer models was more than doubled to 13.1% from 5.5% in 2020.



There were six daytime noise violations in 2021. They were operated by private operators and fined £1,000 for each violation. Noise Violation fines are passed to the London Luton airport Community Trust Fund, further details of which can be found at: <https://www.london-luton.co.uk/corporate/community/noise/supporting-lla's-community-trust-fund>

Noise Insulation Scheme

Our Noise Insulation Scheme is just one element of our noise management plan to reduce the impact of noise on those properties in Hertfordshire and Bedfordshire closest to the airport. The scheme covers both residential and non-residential properties. Depending on any existing insulation in the property, double glazing, secondary glazing and ventilation units can be provided. Rooms eligible for insulation include living rooms, dining rooms, kitchen-diners and bedrooms.

From January-September 2021, the noise insulation scheme was paused due to COVID-19 and government restrictions. Therefore no properties were contacted or insulated during these months. From October 2021, with pandemic restrictions lifting the noise insulation scheme re-started with our new contractor Newview Homes. 30 Properties were re-contacted, these were people who had accepted the scheme during Q1 of 2020 but the works could not be carried out because of COVID-19 impacts. The NIS scheme will continue to gather pace during 2022 and further eligible properties will be contacted.

Noise Contours

Noise contours seek to show what the relative noise impact of the airport's operations might be in any given area. They are drawn by averaging, over a specified time frame, the noise energy of departing and arriving aircraft and any quiet periods; they are the Government's preferred way of demonstrating the impact of a particular airport on the local communities.

Noise contours are closed irregular loops on a map, each contour representing a different noise level. They are akin to contour lines on OS maps that show different land heights.

There are various ways to produce noise contours. The preferred method takes account of individual noise-events (flights) and periods of comparative quiet to produce average noise levels over a particular period of time, typically a day or night. The contours are produced by computer models that process the noise of each flight, the number of flights, and the flightpaths over a month or more to create estimates of the average noise during the day or night.

The outer most contour of daytime contours represents an average noise of 54dB_LAeq (known as "A-weighted equivalent noise level") which is considered the onset of community annoyance, i.e. the level of noise at which people may start to become annoyed.

It is important to note that because the values assigned to each noise contour are averages that also take quiet intervals into account, they are not the same as the noise of each plane, or even of a typical plane, most of which would record much higher dB (decibel) levels. In addition, because noise contours are calculated once over a period of a month or more, and the number of flights, aircraft-mix and flightpaths used vary each day, on some days the actual average noise experienced will be greater than the contours and sometimes it will be less.

The contours for 2020 and 2021 provide part of the information that would be required to comply with Condition 12. Also required is information on the current QC Annual Budget for 2020, which will be determined once the year is complete.

Types of Contour

Summer daytime and summer night time (within this report)

The contours are determined from the movements in the 92 day period 16 June – 15 September inclusive. The individual movements during the period are analysed by aircraft type, operation and runway used, and the movements are split into those during the 16 hour daytime (07:00-23:00) and 8 hour night time periods (23:00-07:00). The totals are then divided by 92 to get the daily average number of summer period movements. These are then input into the modelling software. So while in the reporting the overall runway split is given, in the production of the contours the individual runway used by each movement is taken into account. The condition 10 contour area limits apply to these contours.

Annual Contours (within this report)

These are calculated for two parameters *L*_{den} and *L*_{night} from the annual movements. *L*_{den} considers the whole 24 hour period, with 5 dB added to the noise in the evening (19.00-23.00) and 10 dB added to the noise at night (23.00-07.00). *L*_{night} considers the night period only without any additions and so is similar to the summer night contour except that it relates to the annual period, not just the summer period. The individual movements are processed along the same lines as those for the summer contours except that those during the evening are identified separately from those in the 12 hour day (07:00-19:00). The annual totals by aircraft type and operation and runway are divided by 365 to get the daily average. These contours are produced to comply with the actions in the our Noise Action Plan and originally comes from an EU Directive which requires the production of contours based on annual activity.

Quarterly Night Contours (within Quarterly Monitoring Reports)

These are produced for the NTSC/LLACC and provide information on how the activity at night varies across the year. They also provide an early indication of trends prior to the production of the summer contours. The processing of the movements is the same as the other contours.

Methodology

Aircraft movement data for use in the contour production has been supplied by LLAOL. Twelve night-time flights associated with the Euro 2020 football tournament were subject to a dispensation and have therefore not been included in the 2021 summer contours.

The 2021 contour production methodology has been updated from that used for the 2020 contours. It retains the inclusion of terrain, and the use of the INM software (Version 7.0d), but the validation has been updated. The validation is now based on measured results in 2020 at the fixed noise monitors. This update to the contour prediction methodology is described in the BAP note A11060-N62-DR, dated 12th August 2021. The effect of the update, when tested on the 2021 Q1 night contours, was a small increase in contour area of between 2% and 4%. The same methodology has been used to produce the 2022 forecast contours.

The 2022 contours are based on forecast movement numbers provided by LLAOL for the key passenger aircraft types. The forecast for 2022 also includes a number of movements by “other” aircraft types. The number of these “other” movements forecast for 2022 is similar to the number of movements by aircraft types not specifically included in the forecast that occurred in 2021. These actual 2021 movements have therefore been allowed for in the forecast 2022 contours, but with a factor applied to match the number of forecast movements.

The 2022 forecast does not include a breakdown of the number of arrivals and departures. In the daytime period this is generally close to 50/50, however at night it can vary. LLAOL have advised that they expect the split in 2022 to be similar to 2019. The 2022 contours have therefore been produced using the arrival/departure split in the daytime and night-time periods in 2019, which are shown below.

Operation	% of 2019 Summer Movements	
	Daytime	Night-Time
Arrivals	49%	58%
Departures	51%	42%

The 2021 contours are based on the actual runway usage in 2021, which is shown in the table below. The 2020 contours, which are included for comparison, are based on the actual runway usage in 2020.

The forecast 2021 contours have been produced based on the long term (2015-2019) average modal split, which is shown in the table below. The 2020 and 2021 splits have not been used in the average as the activity in those years is not considered representative due to the effects of the COVID-19 pandemic. The 2022 forecast contours have also been produced using the long term (2015-2019) average departure route split.

Year	% of Summer Movements	
	Runway 07	Runway 25
2020 Actual	22%	78%
2021 Actual	49%	51%
Long Term Average (2015-2019)	22%	78%

Annual Noise Contours Summer 2021

The table below shows the annual daytime noise contours for summer 2021 covering the standard summer period from 16th June to 15th September inclusive, using the latest version of INM software (the Integrated Noise Model) version 7.0d which is the method used by many other airports in the UK.

L_{Aeq, 16 hour} Daytime	Contour Area (km²)					
	1984	1999	2020	2021	Difference 2020-2021	2022 (Forecast)
>72	1.63	1.5	0.7	0.7	-	1.0
>69	2.80	2.5	1.2	1.1	-0.1	1.7
>66	4.86	4.4	2.0	1.7	-0.3	3.0
>63	9.10	7.3	4.0	3.3	-0.7	6.0
>60	17.18	11.8	7.3	6.3	-1.0	10.2
>57	31.52	19.6	12.2	10.9	-1.3	18.6

The 2021 57 dB daytime contour is around 11% smaller than the equivalent 2020 contour. The number of daytime movements in 2021 remained similar to 2020, however the number of movements by passenger turbofan aircraft types has reduced by around 7%. These have been replaced with movements by quieter turboprop and business aviation aircraft. There was also an increase in the proportion of flights by the quieter modernised aircraft types. The 2021 57 dB daytime contour is around 11% smaller than the equivalent 2020 contour.

The table below shows the annual night time noise contours for summer 2021 covering the standard summer period from 16th June to 15th September inclusive, using the latest version of INM software (the Integrated Noise Model) version 7.0d which is the method used by many other airports in the UK.

L_{Aeq, 8 hour} Night-time	Contour Area (km²)					
	1984	1999	2020	2021	Difference 2020-2021	2022 (Forecast)
>69	1.39	1.8	0.9	0.5	-0.4	0.7
>66	2.42	3.0	0.9	0.8	-0.1	1.1
>63	4.01	5.2	1.5	1.3	-0.2	1.8
>60	7.06	8.3	2.7	2.2	-0.5	3.4
>57	13.05	13.2	5.4	4.4	-1.0	6.4
>54	24.48	21.6	9.3	8.1	-1.2	11.4
>51	44.92	36.0	16.3	13.7	-2.6	20.7
>48	85.04	60.6	28.8	23.9	-15.4	36.3

The 2021 48dB night-time contour is around 17% smaller than the equivalent 2020 contour. The number of night-time movements in 2021 was around 21% lower than in 2020. The overall fleet mix remained similar, subject to an increase in the proportion of flights by the quieter modernised aircraft types.

The 2022 forecast contours are larger than in recent years, as 2022 is forecast to have significantly more movements than 2020 or 2021. The 48dB LAeq,8h contour area is however less than the airports current contour area limit of 37.2 km².

Around 19% of all movements in 2021 were by quieter modernised aircraft compared to around 12% in 2020. There was a particularly large increase in the proportion of movements by the Airbus A321neo. The number of movements by modernised aircraft is forecast to increase in

2022, however due to a greater increase in movements by non-modernised types, the proportion of flights by modernised aircraft is forecast to reduce to around 15%. The daytime and night-time contours for 2021 are a different shape than the 2020 contours, largely due to a change in the runway modal split. 49% of movements conducted easterly operations (used Runway 07) in summer 2021 compared to 22% in summer 2020. Compared to the 2020 contours, the 2021 57dB daytime and 48dB night-time contours are longer in relation to Caddington, but are narrower to the west of the airport, and much smaller to the south-west. The 2021 57dB daytime contour is wider to the east of the airport and a similar length compared to 2020. The 2021 48dB night-time contour is also wider to the east, but shorter than the equivalent 2020 contour. The 2022 forecast contours are a similar shape although larger than the 2020 contours.

Contour population counts

An assessment has been carried out of the number of dwellings and the population within the noise contours produced for 2021. This has utilised a postcode database supplied by CACI Ltd, specifically the 2021 iteration of the database. Each postcode in the database is described by a single geographical point, and if this point is within a given contour then all of the dwellings and population in the postcode are counted as within the contour.

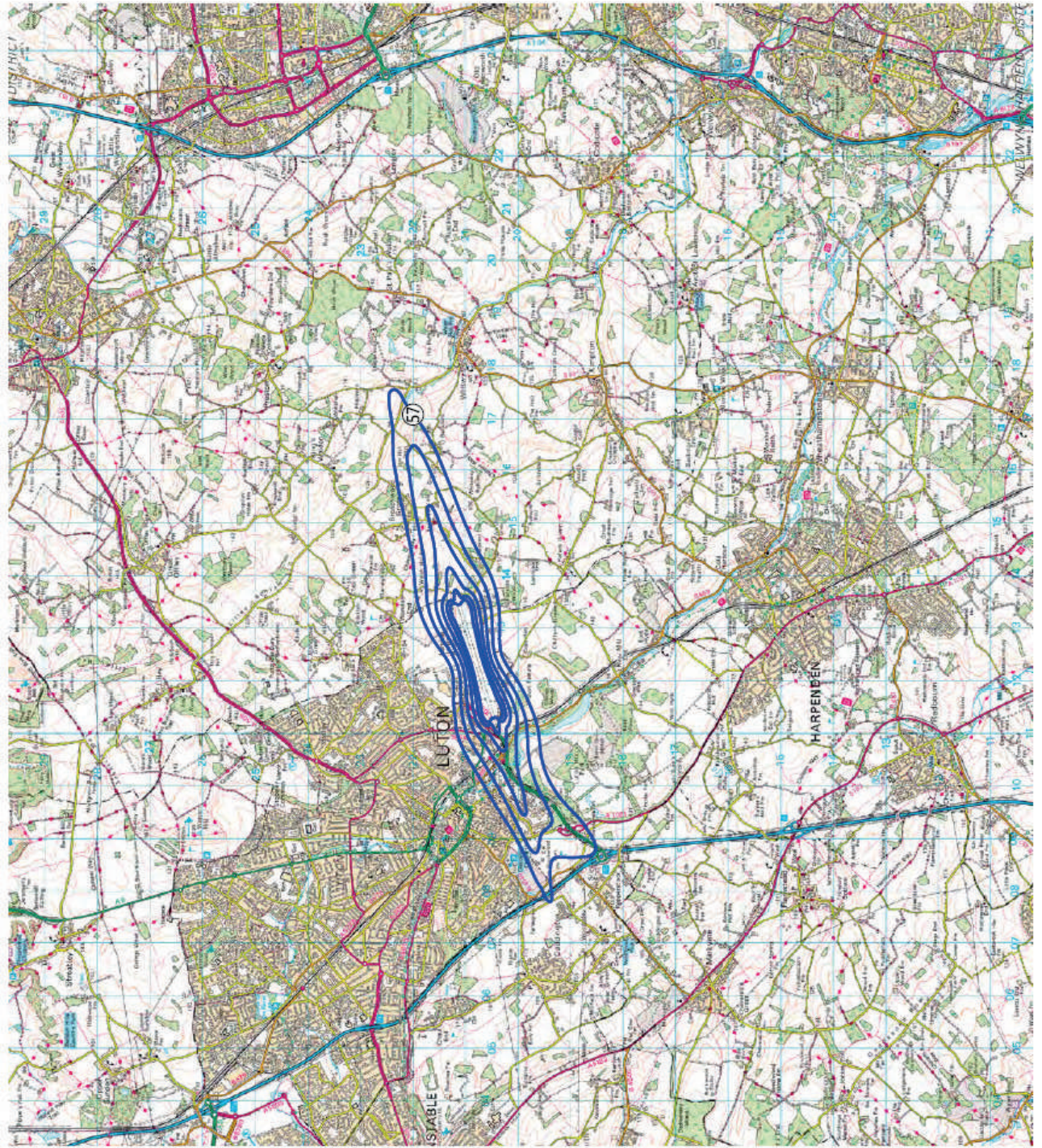
The dwelling and population counts are given for the 2020 and 2021 daytime and night-time contours in the tables below. The values in these tables have been rounded to the nearest 50, except where less than 50 when the actual value is given. The 2020 counts given here have been updated to utilise the latest postcode database, and so may differ from those previously reported.

L_{Aeq, 16 hour} Daytime	2020		2021	
	Dwellings	Population	Dwellings	Population
>72	0	0	0	0
>69	0	0	0	0
>66	0	0	0	0
>63	100	350	8	20
>60	750	2,000	450	1,150
>57	2,550	6,200	1,250	3,300

L_{Aeq, 8 hour} Night-time	2020		2021	
	Dwellings	Population	Dwellings	Population
>69	0	0	0	0
>66	0	0	0	0
>63	0	0	0	0
>60	7	16	3	6
>57	400	1,100	150	400
>54	1,550	3,950	750	2,050
>51	3,750	8,700	2,000	5,100
>48	6,450	14,800	4,550	10,400

The population and number of dwellings within the contours have decreased, in line with the contour area.

Annual Day Noise Contours Summer 2021



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LEGEND:

Noise Contours,
57 to 72 dB Leq,16h in 3 dB steps

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**London Luton Airport
Regular Contouring**

**Airborne Aircraft Noise Contours
2021 Summer Actual Daytime**

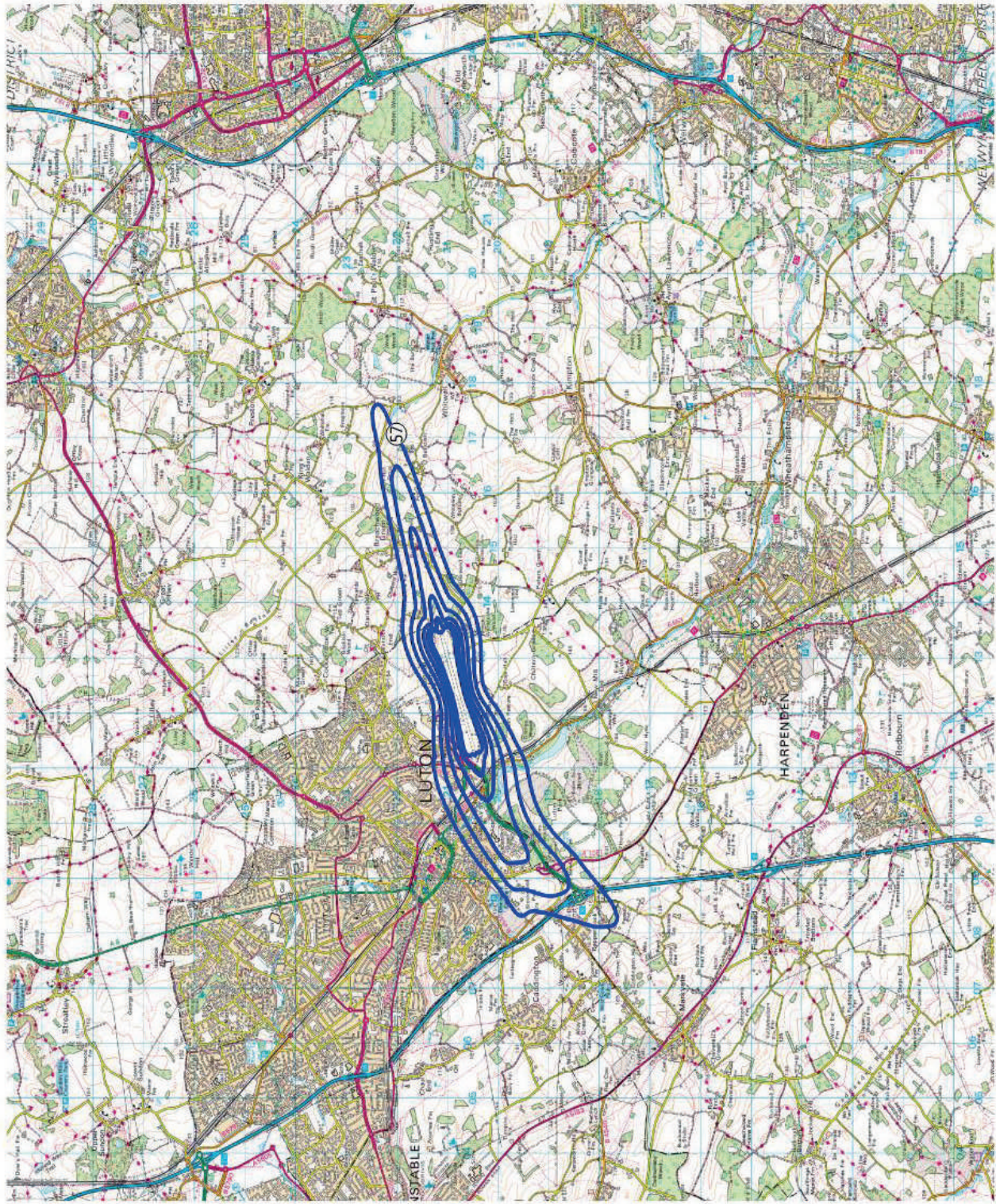
DRAWN: DR
CHECKED: DC

DATE: November 2021
SCALE: 1:100000@A4

FIGURE No:

A11060-N63-01_2.0

Annual Day Noise Contours Summer 2020



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LEGEND:

Noise Contours,

57 to 72 dB Leq,10h in 3 dB steps

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**London Luton Airport
Regular Contouring**

**Airborne Aircraft Noise Contours
2020 Summer Actual Daytime**

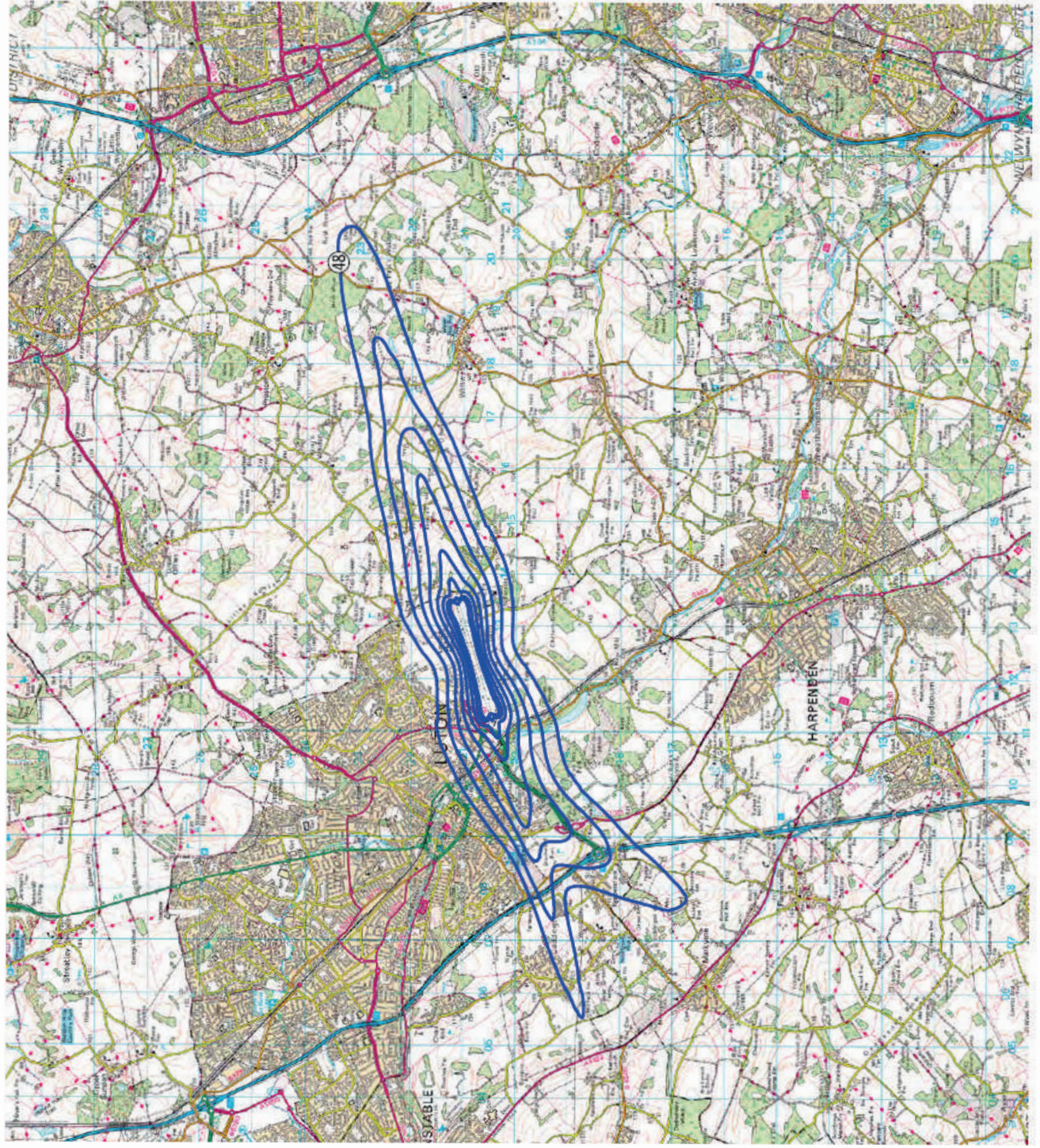
DRAWN: MP CHECKED: DR

DATE: November 2020 SCALE: 1:100000@A4

FIGURE No:

A11060/N55/01

Annual Night Noise Contours Summer 2021



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LEGEND:

Noise Contours,
— 48 to 69 dB $L_{Aeq,sh}$ in 3 dB steps

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London Luton Airport
Regular Contouring

Airborne Aircraft Noise Contours
2021 Summer Actual Night-time

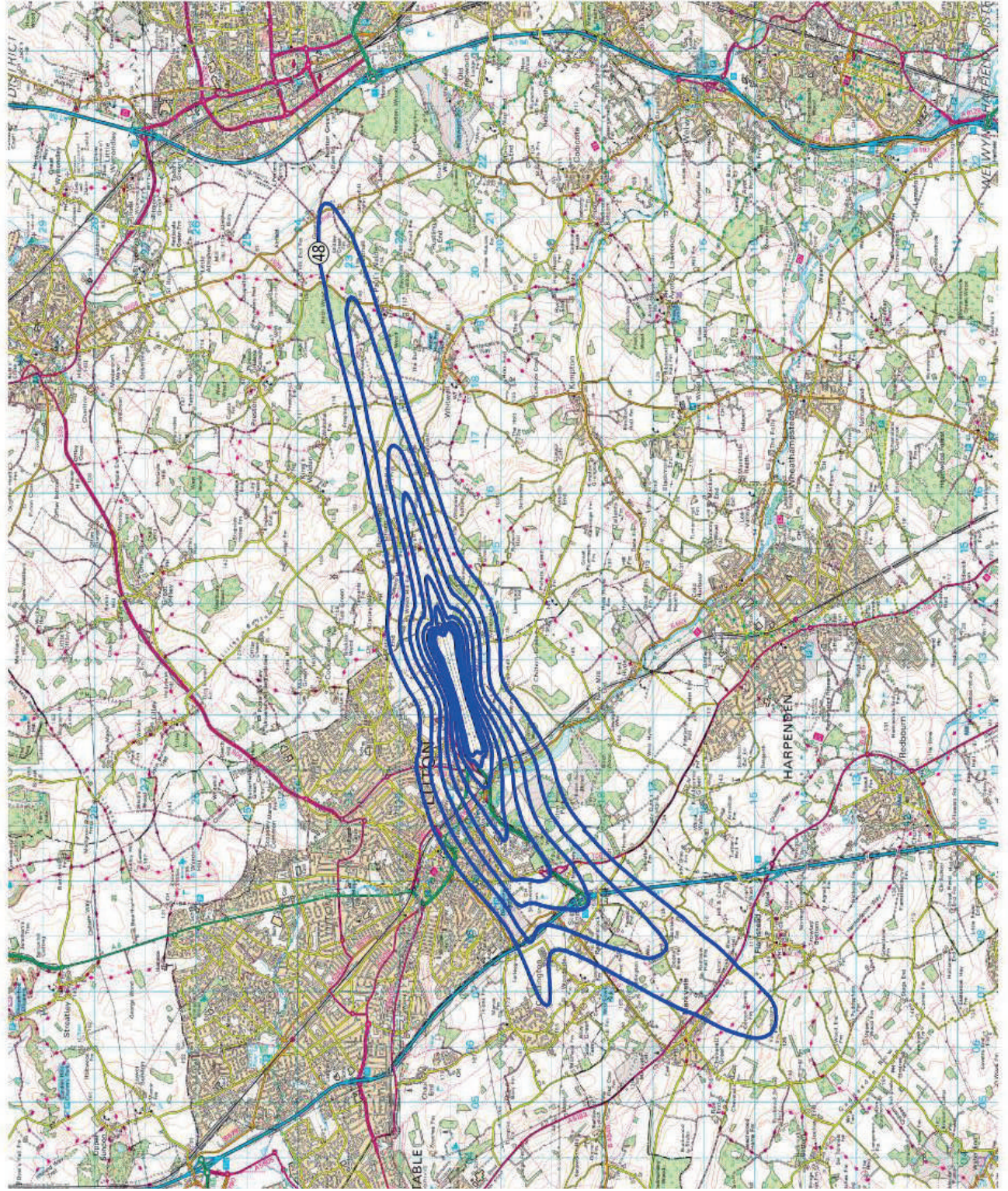
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CHECKED: DC

DATE: November 2021
SCALE: 1:100000@A4

FIGURE No:

A11060-N63-02_2.0

Annual Night Noise Contours Summer 2020



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LEGEND:

Noise Contours,
48 to 69 dB $L_{Aeq,8h}$ in 3 dB steps

—

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**London Luton Airport
Regular Contouring**

**Airborne Aircraft Noise Contours
2020 Summer Actual Night time**

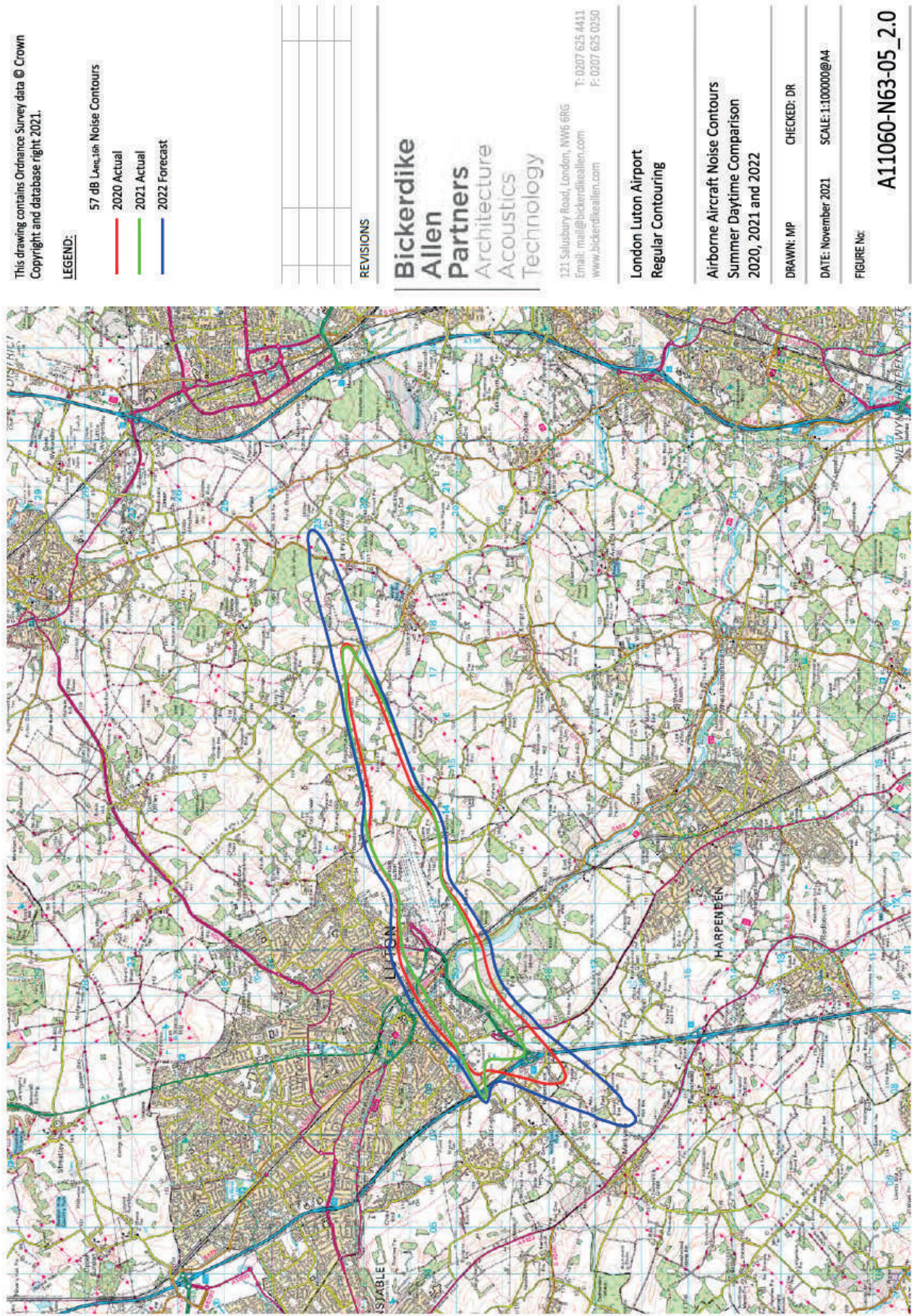
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DATE: November 2020
SCALE: 1:100000@A4

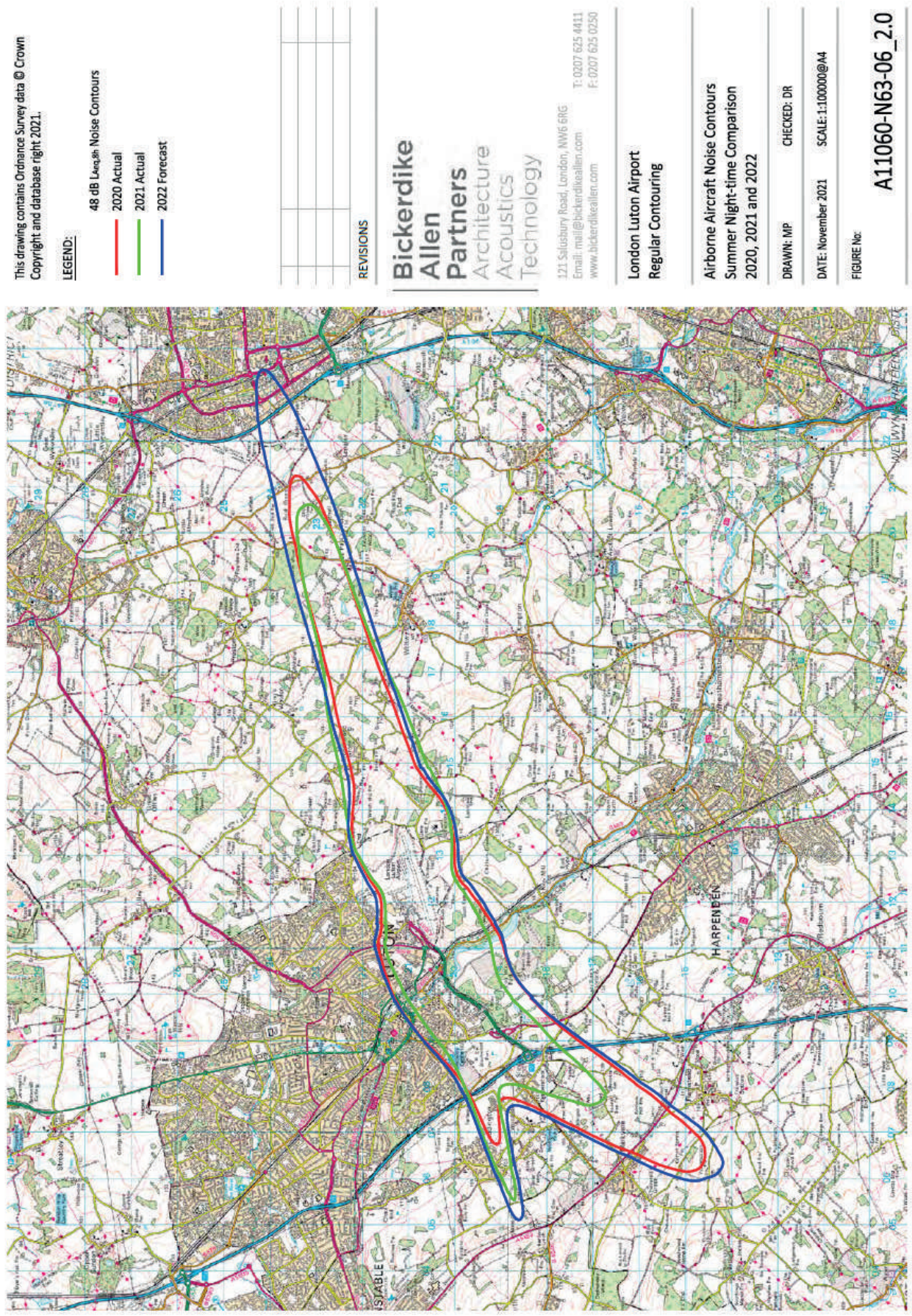
FIGURE No:

A11060/N55/02

Summer Day time Comparison 2020, 2021 and 2022



Summer Night time Comparison 2020, 2021 and 2022



Annual Noise Contours 2021

The annual Lden noise contours for 2021 have been produced in accordance with London Luton Airport's Noise Action Plan. The corresponding annual Lnight noise contours have also been produced, along with population and dwelling counts for each contour.

Compared to annual summer 2021 noise contours Lden is an A-weighted, Leq noise level, measured for an average 24 hr day between 1st January and 31st December 2021, with a 10dB penalty added to the level between 23.00 and 07.00 hours and a 5 dB penalty added to the level between 19.00 and 23.00 hours to reflect people's extra sensitivity to noise during the night and the evening.

Lnight is similarly an A-weighted Leq noise level, for an average 8 hour night period between 23.00 and 07.00 hours for the period 1st January to 31st December 2021.

Annual Lden Noise Contour Results

Contour Value (dB(A) L _{den})	Contour Area (km ²)		Population ¹		Dwellings ²	
	2020	2021	2020	2021	2020	2021
>75	0.6	0.6	0	0	0	0
>70	1.4	1.2	0	0	0	0
>65	3.9	3.2	<100	<100	<50	<50
>60	10.0	8.9	4,100	2,800	1,500	1,100
>55	25.9	22.3	13,400	10,800	5,500	4,650

Annual Lnight Noise Contour Results

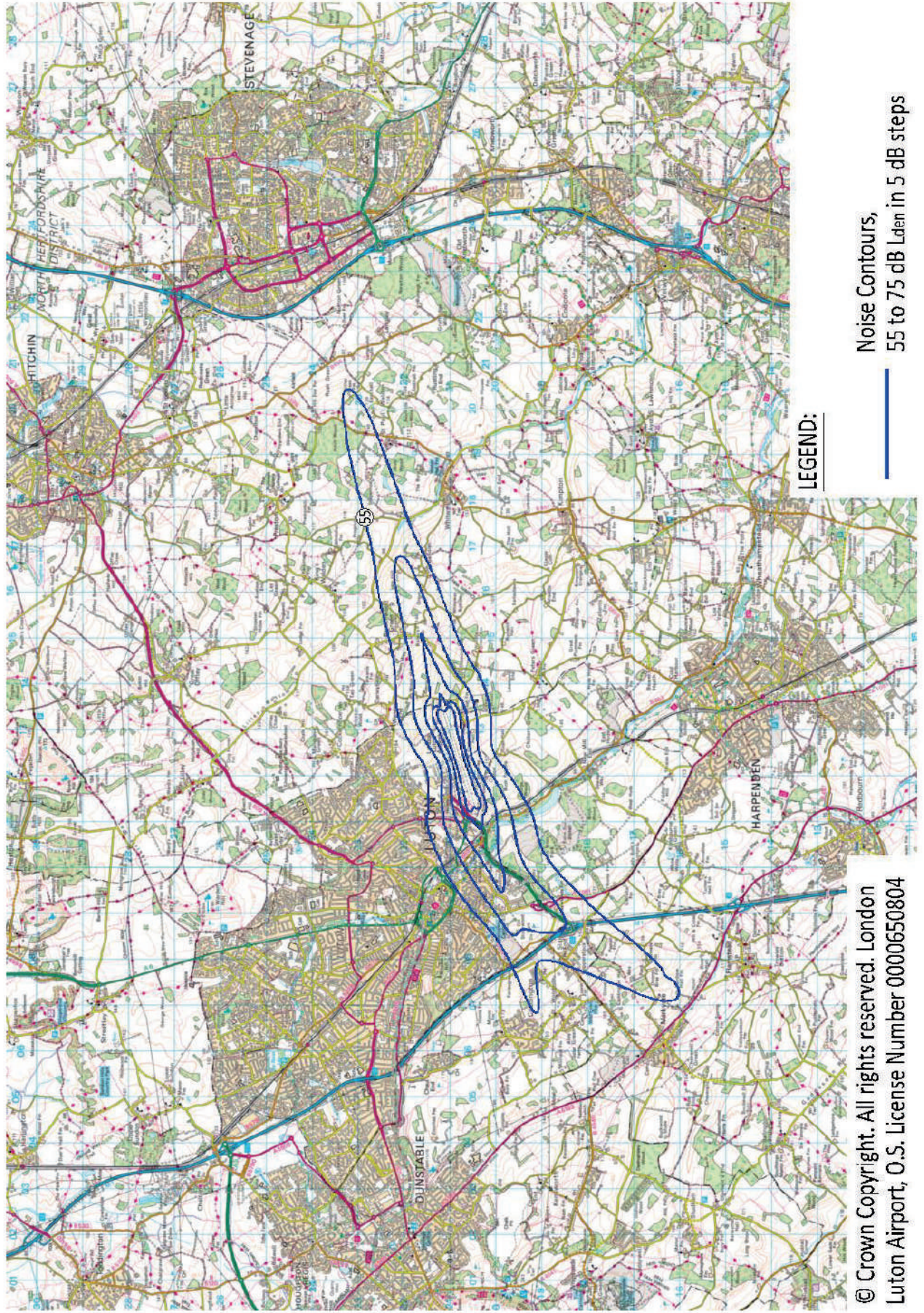
Contour Value (dB(A) L _{night})	Contour Area (km ²)		Population ¹		Dwellings ²	
	2020	2021	2020	2021	2020	2021
>66	0.7	0.7	0	0	0	0
>63	1.2	1.0	0	0	0	0
>60	2.0	1.7	0	0	0	0
>57	3.8	3.2	<100	<100	<50	<50
>54	7.1	6.3	2,100	1,200	750	450
>51	11.9	10.7	5,400	4,400	2,150	1,750
>48	21.5	18.6	11,000	8,900	4,500	3,850

As can be seen from the tables above, the areas of the Lden and Lnight contours have decreased, largely due to the decrease in the number of movements and increasing fleet modernisation. The reduction in the area of the 2021 contours compared to 2020 can be seen in the below Figures, which compare the 55 dB Lden and 48 dB Lnight contours respectively. The population and number of dwellings within the contours have also decreased, primarily due to the smaller contour areas.

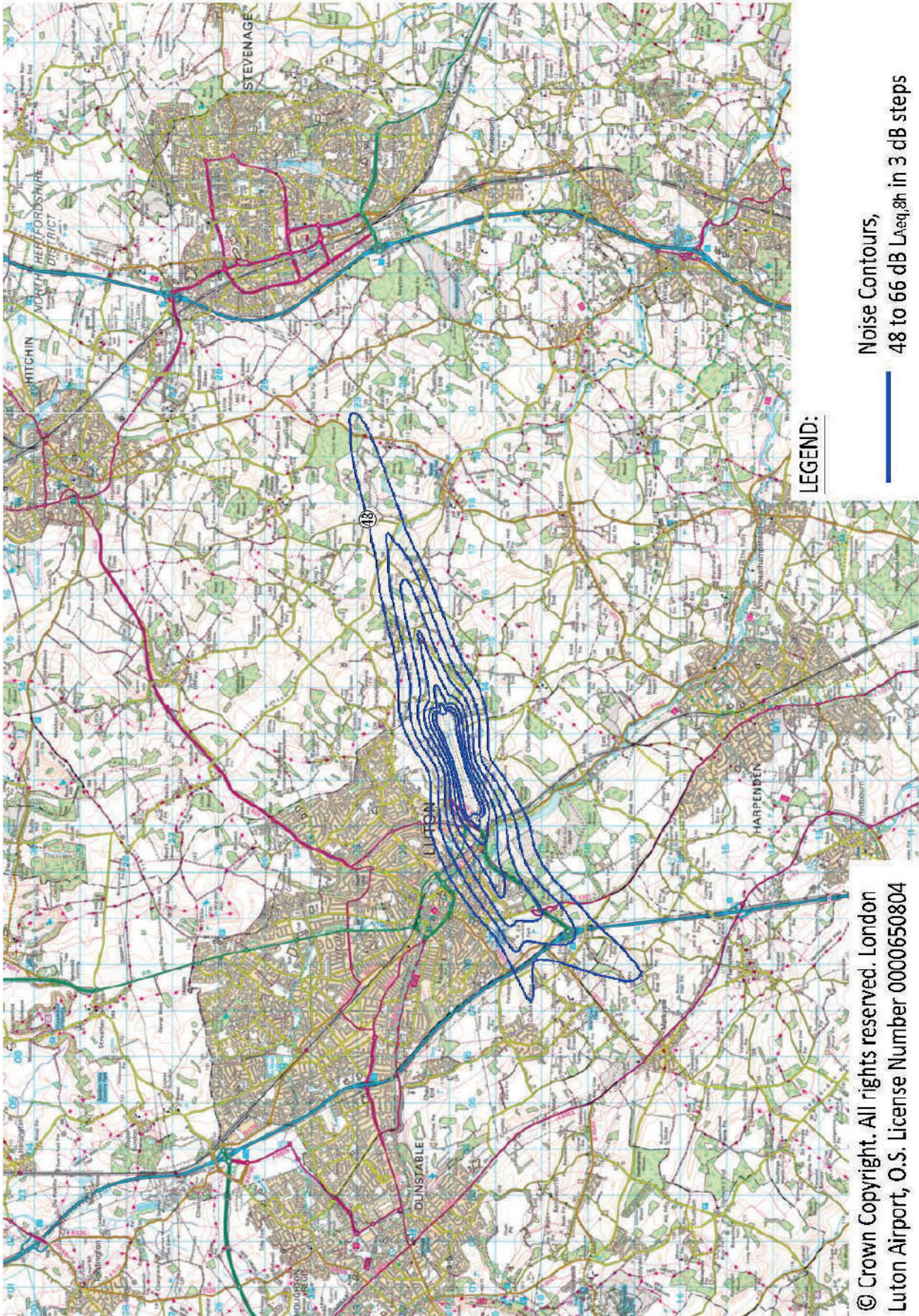
¹ - Population counts rounded to nearest 100

² - Dwelling counts rounded to nearest 50

Annual L_{den} Noise Contours 2021

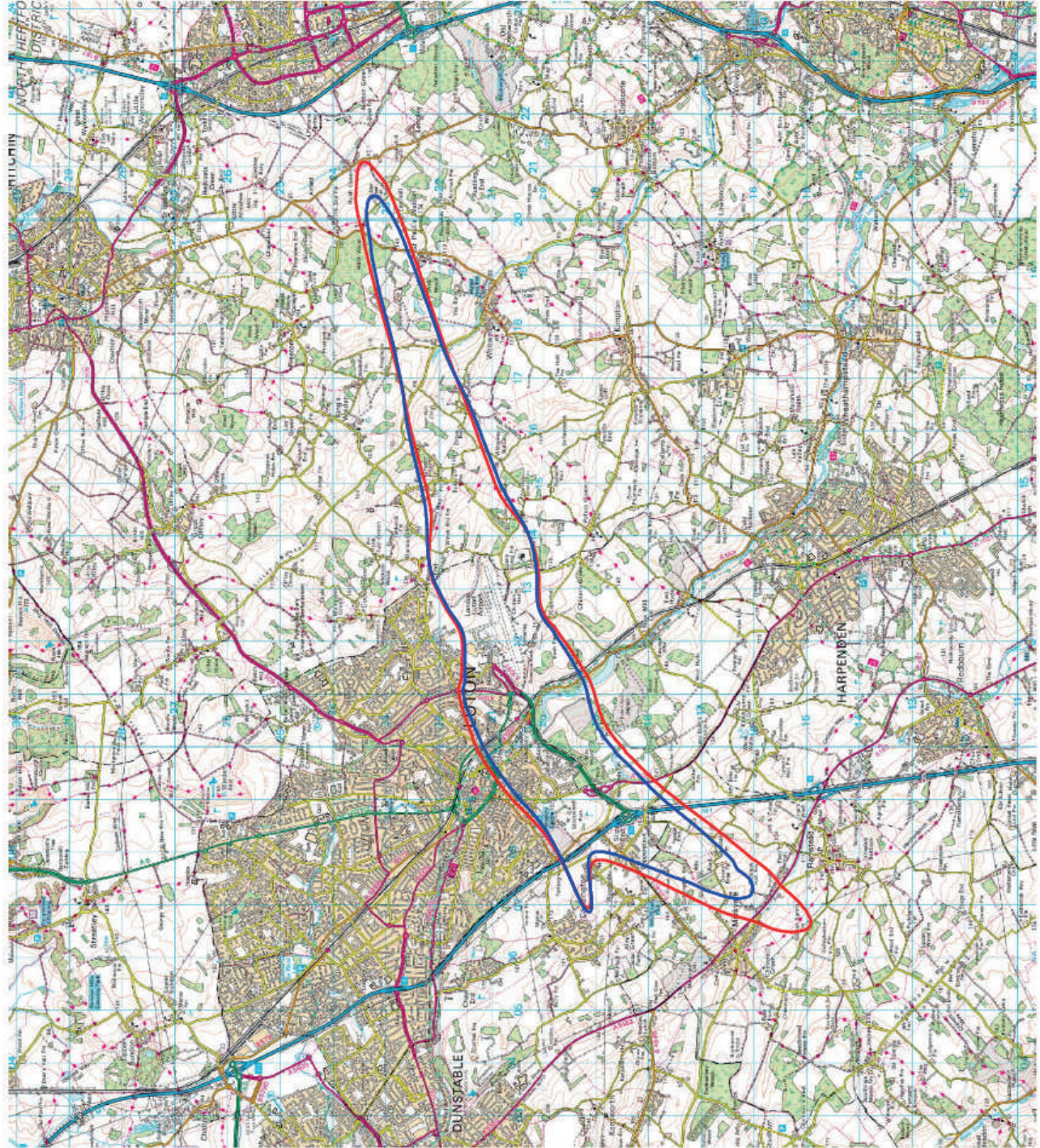


Annual L_{night} Noise Contours 2021



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Annual L_{den} Noise Contours - Comparison of 2020 and 2021



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LEGEND:

- 2021 Noise Contour 55 dB(A) L_{den}
- 2020 Noise Contour 55 dB(A) L_{den}

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London Luton Airport
Annual Contouring

Airborne Aircraft Noise Contours
Comparison of 2021 and 2020 L_{den}
Based on Annual Aircraft Movements

DRAWN: MP

CHECKED: DR

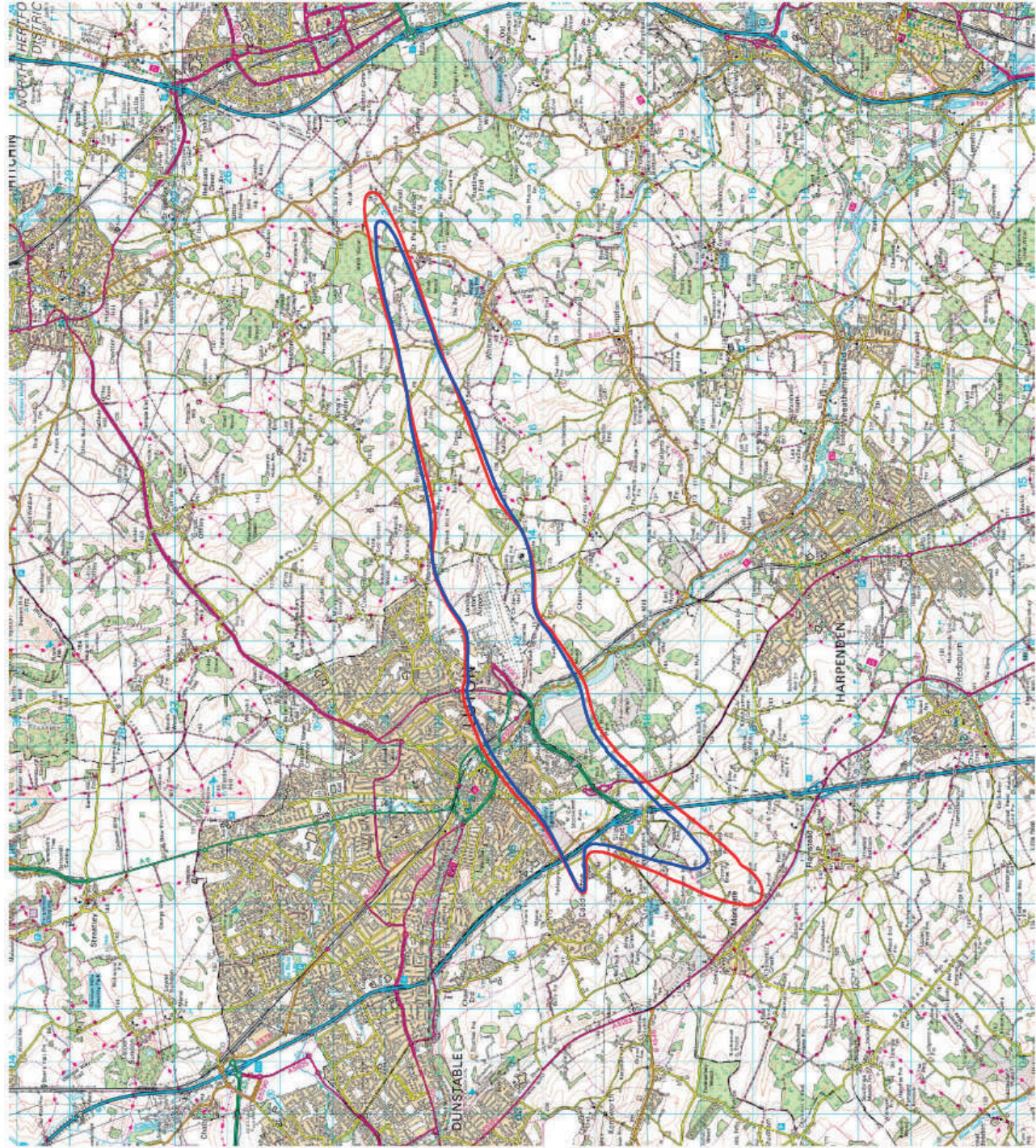
DATE: February 2022

SCALE: 1:100000@A4

FIGURE No:

A11060-N64-03

Annual L_{night} Noise Contours - Comparison of 2020 and 2021



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LEGEND:

- 2021 Noise Contour 48 dB(A) Light
- 2020 Noise Contour 48 dB(A) Light

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London Luton Airport
Annual Contouring

Airborne Aircraft Noise Contours
Comparison of 2021 and 2020 L_{night}
Based on Annual Aircraft Movements

DRAWN: MP

CHECKED: DR

DATE: February 2022

SCALE: 1:100000@A4

FIGURE No:

A11060-N64-04

Correspondence and Complaints

Complaint statistics can be extremely difficult to interpret as people's tolerance of noise and their perception of what causes annoyance varies widely. It is highly subjective and differs between neighbours experiencing the same levels of noise.

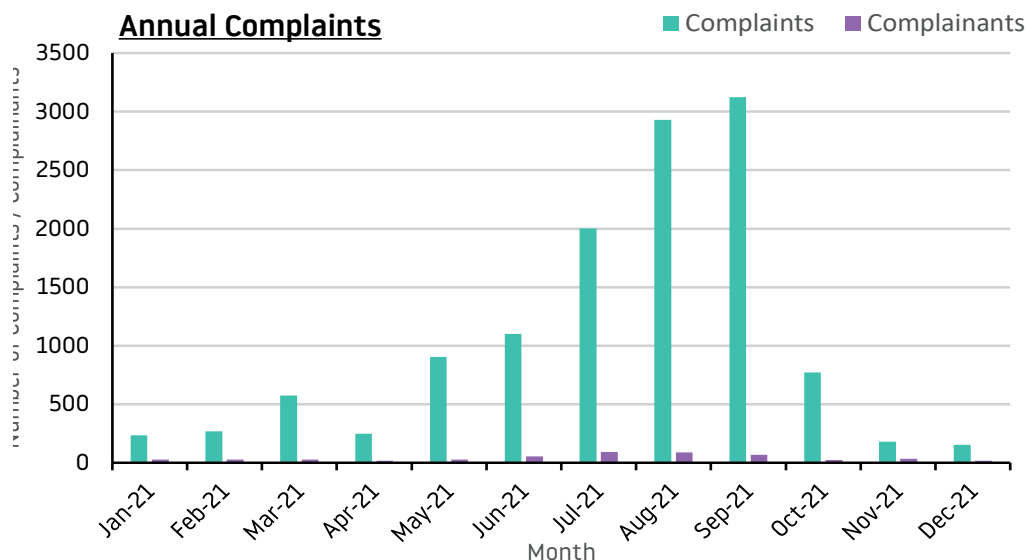
Complaints are reported in two forms – general disturbance and specific disturbance. A general disturbance relates to a complaint that does not specify a time period, examples of this type of complaint includes frequency, air quality and ground noise. A specific complaint relates to a complaint which specifies the time which can be correlated to an aircraft, example complaints of this type include too low, too loud, night flight and off-track. If a single piece of correspondence contains multiple specific disturbances, this will be logged as a general complaint regarding frequency.

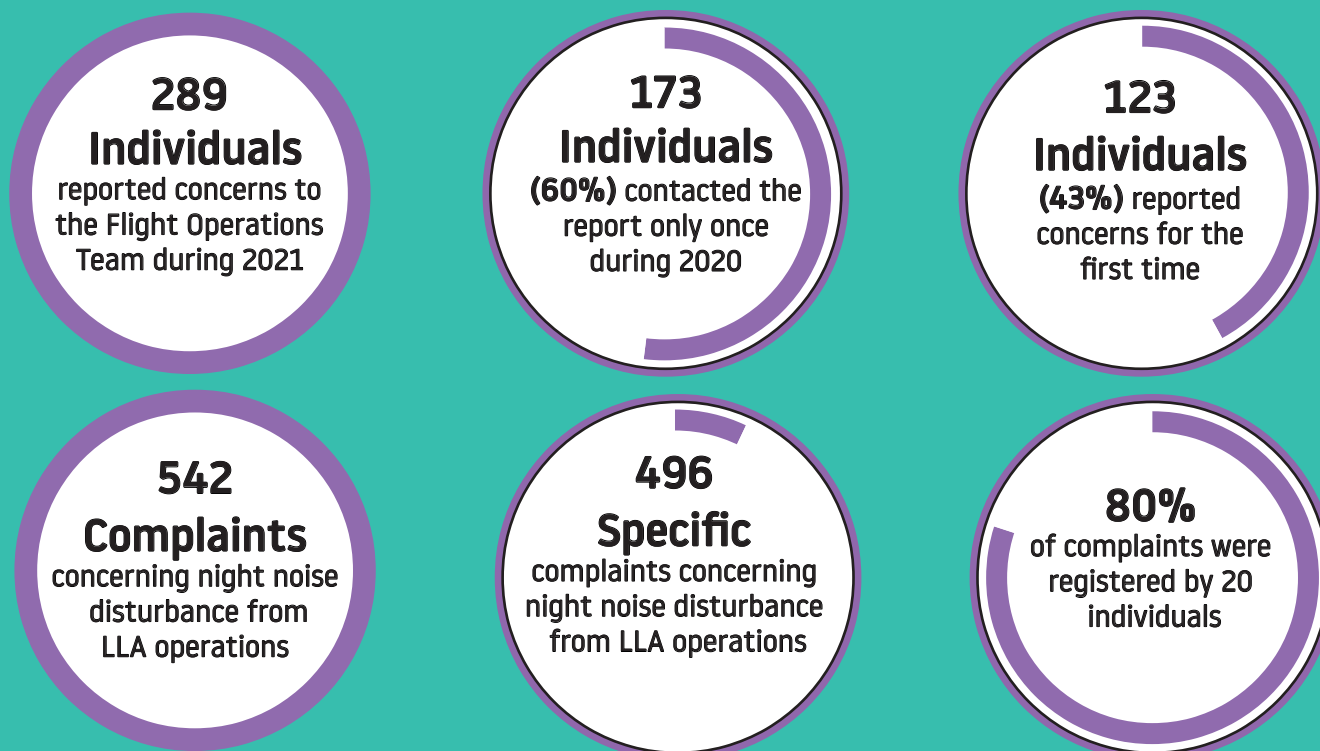
Total complaints relating to LLA aircraft operations

	2020	2021	% change
Total No. of Complaints relating to LLA aircraft operations	4,489	12,432	+177%
No. of Complainants	395	289	-27%
No. of General Complaints	468	412	-12%
No. of Specific Complaints	4,021	12,020	+198%
Average No. of Complaints per Complainant	11.4	43.0	+95%
No. of Aircraft Movements per Complaint	14.2	5.1	-65%

During 2021 a total of 12,432 complaints (on average 34.0 complaints per 24 hours) relating to LLA aircraft operations were received, compared with 4,489 complaints in 2020. Out of the total complaints 95% were registered by the 20 most regular complainants and 62% from just two individuals. The figure below shows the complaints statistics throughout 2021, the most complaints were received in August and September, correlating with an increase in aircraft activity. There was a drop in complaints in October, November and December which correlates to reduced passenger numbers and the drop in movements from the summer period.

In 2021 one complainant made 6001 complaints. At the request of the Noise and Track Committee from the Beginning of July these complaints were excluded from any reports. Therefore, the following graphs and data omit complaint numbers made from the complainant after the end of June. Without the outliers caused by excessively high numbers of complaints from one individual we can continue to identify patterns and areas of concern from the complaint data. However, between January and June their complaints were recorded and are detailed in the graphs below.



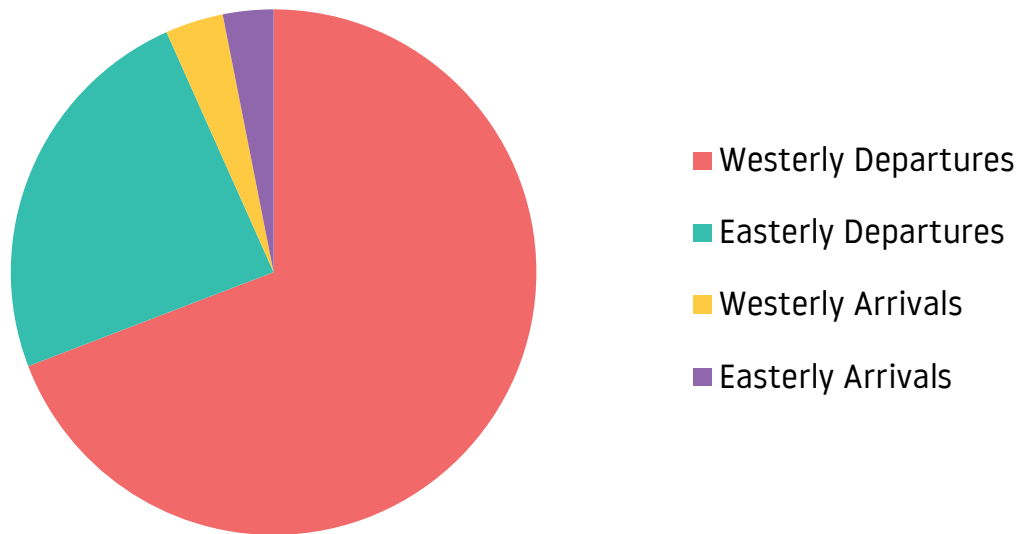


Complaints by aircraft type

Of the 6,431 complaints relating to LLA aircraft operations registered during the year, 6,010 complaints (93%) were clearly correlated to a specific aircraft type, although many complaints were of a general nature. The table below shows aircraft types generating complaints.

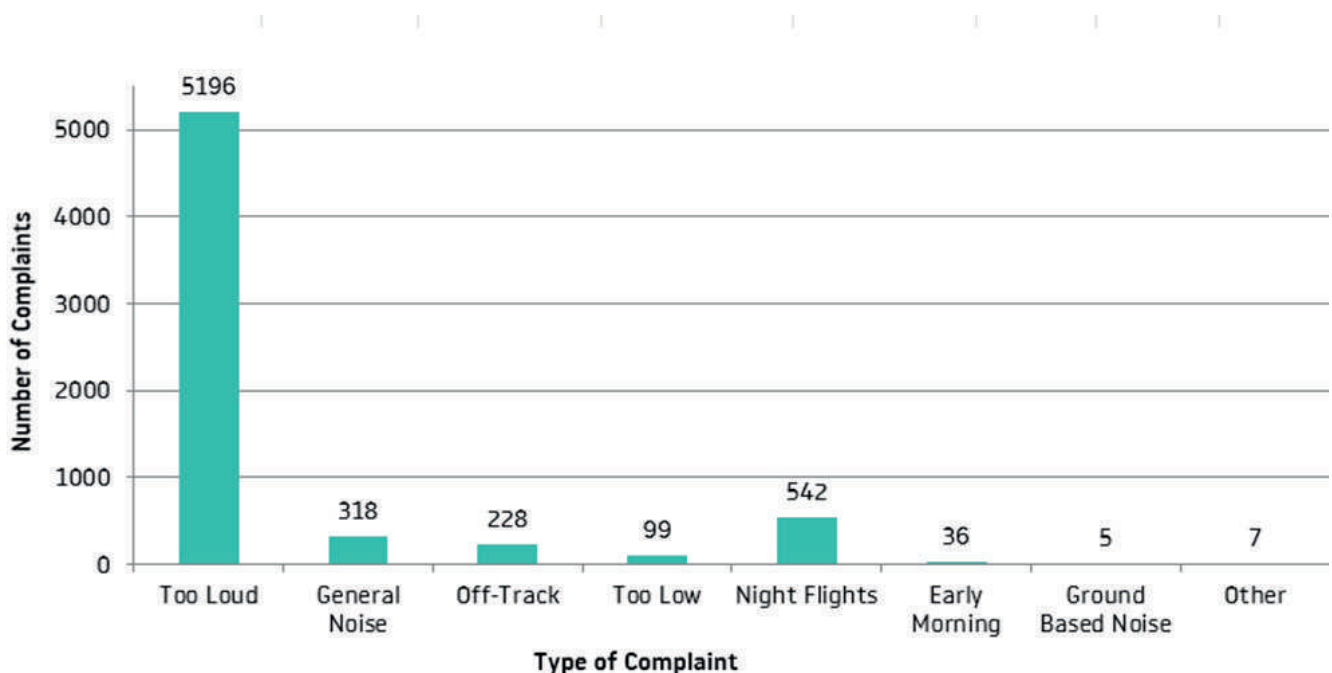
Aircraft Type	No. of Correlated Complaints	% of Correlated Complaints	Annual No. of Movements of Aircraft Type	Movements of Aircraft Type per Correlated Complaint
A319	149	4.6%	3,242	22
A320 Neo	416	7.2%	5,746	14
A320	1768	12.2%	14,426	8
A321	589	12.5%	4,679	8
A321 Neo	834	14.3%	5,798	7
B737-800	655	10.3%	6,319	10
A306 (Cargo)	183	0.56%	890	5
B737-400	55	20.5%	240	4
GLF4/GLF5/GLF6	113	5.5%	2,049	18
B757 & B767	0	0.0%	832	-
B737-300	0	0.0%	6	-
B737-900	7	23.3%	30	4
Helicopter	0	0.0%	170	-
CL30/CL60	51	2.7%	1,869	37
GLEX/GL5T	206	7.7%	2,671	13
Other Aircraft	736	5.8%	12,611	17

Nature of Disturbance

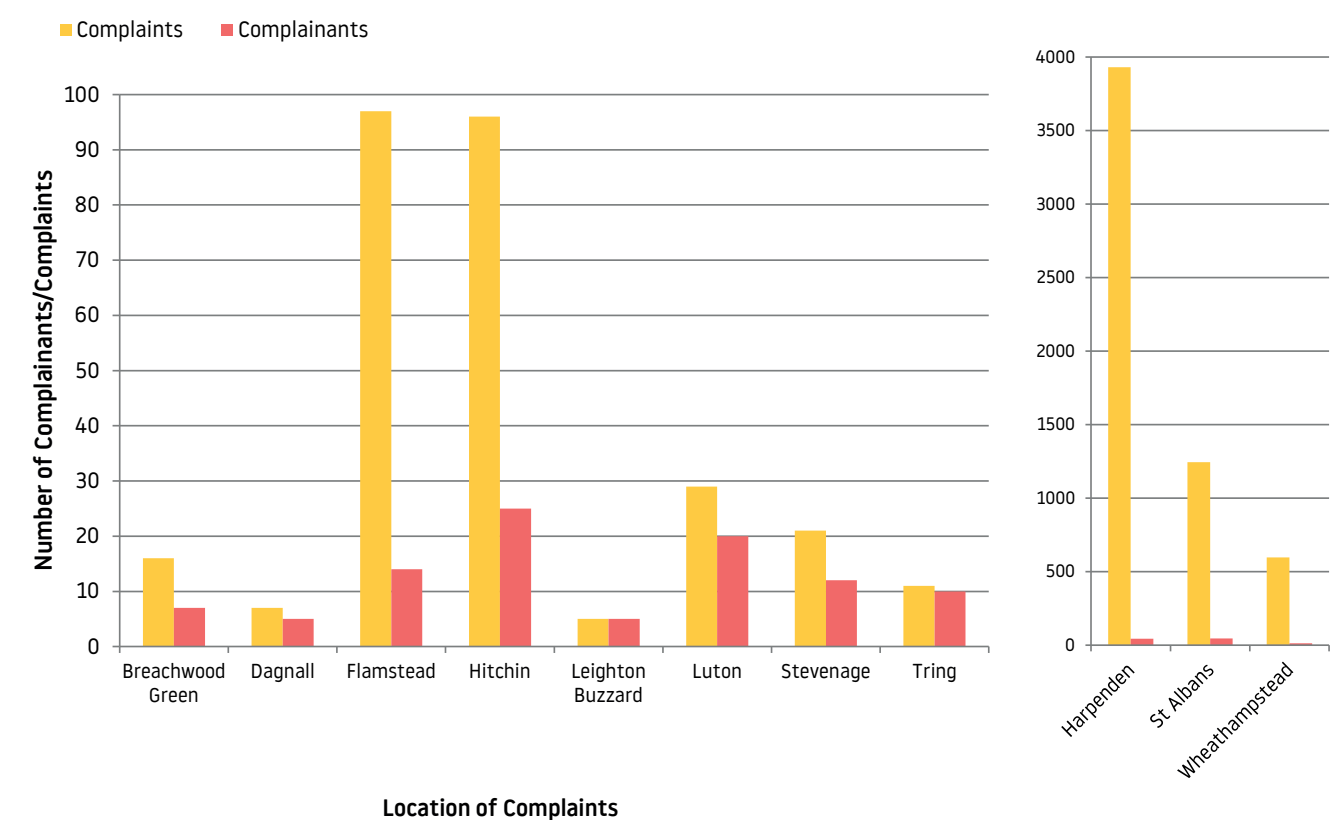


Within the 6,019 specific complaints correlated to aircraft movements concerning westerly departures, 3,836 reported specific aircraft following the Match/Detling route, 77 related to aircraft on the Compton route and 33 related to aircraft following the Olney heading. 40 other complaints involved positioning flights following off-airways flight routes. Of the 1,391 complaints specifically attributed to easterly departures 1,284 related to aircraft following the Compton heading, 26 related to aircraft on Olney flight route and 44 to aircraft on the Match/Detling heading. A further 37 complaints involved positioning flights following off-airways flight routes.

Out of the total 385 complaints correlated to specific arriving aircraft, 206 related aircraft arriving at the airport during westerly operations and 179 complaints related to easterly arrivals.



Location of Complainants (5+)



Communication method

The following table shows the method of communication used to contact London Luton Airport regarding noise.

Communication Method	% of Total Complaints
TraVis	17.1%
Email	80.9%
Telephone	1.9%
Letter	0.1%

Any concerns relating to aircraft operations associated with London Luton Airport can be reported to the Flight Operations Team by the following means:

Postal Address	Flight Operations London Luton Airport Percival House Percival Way Luton Beds LU2 9NU
Direct Telephone	(01582) 395382 (24 hours)
Direct email	noise.enquiries@ltn.aero
TraVis	www.travisltn.topsonic.aero

Complaints analysis

During 2021 there was an increase in complaints and a decrease in complainants compared to 2020. This was due to an complaints campaign that took place during the summer months.

- A large number of complaints were generated by a small number of people. The 20 most regular complainants in 2021 created 90% of total complaints, with two individuals generating 56% of total complaints.
- Out of the specific complaints that were reported, the main reason that was that aircraft were too loud, this reason accounted for 81% of specific complaints.
- As winds dictated westerly operations for 68% of the time, the largest percentage of complaints related to aircraft operations during westerlies, this is in line with previous years.
- High numbers of complaints were recorded from specific locations, for example Harpenden, St Albans and Wheathampstead. Complaints from these areas accounted for 99% of total complaints.
- Harpenden recorded the highest number of complaints with 9,931 complaints in 2021; of the 9,931 complaints 6,001 (60%) were recorded from one person.

Community Relations

Through the London Luton Airport Consultative Committee (LLACC), which meets every quarter, London Luton Airport maintains a close working relationship with representatives of its local authorities and resident groups. Information on the Consultative Committee including meeting minutes and its representatives can be found at the following link: <https://www.londonluton.co.uk/corporate/the-llacc>

In 2021, the Flight Operations Team intended to continue the Public Surgery programme. These drop-in events allow local residents to talk to the team face to face to discuss any concerns regarding the impact of LLAs operations. Unfortunately in light of COVID-19 and the need to continue social distancing measures there were no public surgeries arranged for the first half of 2021. Details about our public surgeries are published on our website here: <https://www.london-luton.co.uk/corporate/community/noise/noise-surgeries>

Invitations are often extended to local residents and LLACC members to visit the Flight Operations Team for a demonstration of the Aircraft Noise & Track, there were no face-to-face visits with the Flight Operations team in 2021. However, in response to a complaints campaign throughout the summer of 2021, the Flight Operations team worked with representatives from LADACAN and STAQS to hold a dedicated webinar for a group of residents who had been making a significant number of complaints. The dedicated webinar was set to discuss the complaint procedures and provide information from STAQS and LADACAN about how they work with the LLACC committee. Unfortunately, this was not attended by any of the residents that were sent information regarding this dedicated session.

A Public Surgery was also organised for August 2021 in response to the increase number of complaints the Flight Operations team received. This was held in Sandridge and received good attendance with many raising concerns regarding night flights and westerly departures.

Early in 2021, a public consultation was held regarding changes to LLA's arrival routes. As part of this consultation virtual webinars were held with the public and local government. The consultation started on 19th October 2020 and ran until 5th February 2021.

Community Engagement

At LLA we continue to recognise the critical role we play in our local community. Our operations are intrinsically linked to the community's wellbeing and future prosperity. The proximity to residential areas means that impacts such as noise, produced by aircraft and airport operations, has the potential to adversely impact the life of people living nearby and under its flight paths. Whilst schemes exist to mitigate noise, it cannot be eliminated. We also recognise that our futures are intertwined; we prosper together and want to develop along with the town itself. Our Community Engagement programme therefore aims to ensure those living close by also see the benefits of a successful airport. Our focus for community engagement is promoting a healthy life, supporting skills development of the local community and in turn alleviating the effects of poverty.

In 2019 the funding for the airport's Community Trust Fund was increased to £150,000, During 2021 despite the challenges everyone faced we continued to support this and again contributed over £200,000. This supported beneficiaries across Hertfordshire, Bedfordshire and Buckinghamshire.

The Community Trust Fund assisted 27 organisations in the local areas supporting all different projects that met LLAs criteria of "Healthy today, Skilled tomorrow and alleviating poverty", these are listed on the following page and benefitted approximately 10,000 people.

Organisation	Description of project	Area
Breachwood Green Parents, Teachers and	Creation of an outside learning and environmental area for the primary school and use of the wider community.	North Herts
Bounce Forward	Programme supporting 16-18 yr olds in Central Beds to provide a toolkit to build resilience and self-awareness. The programme will be delivered via 3x 90 minute workshops at 3 different Central Beds Schools.	Central Bedfordshire
Friends of the Abbey JMI	'Community Cabin'- provision of a safe and welcoming onsite additional learning space for pupils and broader community groups	St Albans
Bipolar UK	Supporting individuals with bipolar, their carers and families in St Albans District through a local peer support group. Delivered via zoom, replacing the face2face provision which was forced to close due to social distancing.	St Albans
4th Dunstable Scout Group	To fund the building works for a new scout hut (internal kitting out) so that they can meet with groups in a safe, functioning space.	Central Bedfordshire
UCARE	Funding to help create Cancer awareness video and health and well being resources for people with learning disabilities and their carers.	Aylesbury Vale
Hope Church Luton Trust	Grant to help cover the coordination costs of running the Lounge, which provides support to the community.	Luton
The Salvation Army Dunstable Corps	To provide a debt advice service, which is run by dedicated and fully trained volunteers. Grant to cover the staff co-ordinator costs.	Central Bedfordshire
The Youth Booth	To support the running costs of the community hub, which is open 5 days a week and run by a team of volunteers.	Dacorum
Youth Talk	To help cover costs of counsellor to support young people (13-25yrs) often with complex mental health needs.	St Albans
The Daylight Club	To support for staffing costs for 12 months to allow time for the Club to become re-established. The club supports adults with disabilities and run a variety of activities twice a week.	St Albans
Friends of St Luke's School	To create a purpose built MUGA for year round use by the school (which supports young people with complex needs), as well as being available for wider community use.	St Albans
Doverly Down Lower School PTA	To replace existing outdated play equipment for use of the pupils.	Central Bedfordshire
Herts Schools Outreach (UK) CIC	To help fund an intervention service for young people, predominately in school settings in the North Herts area.	North Herts
Re-engage (formerly Contact the Elderly)	Reducing isolation through telephone befriending activities and development of other outreach services in Central Beds.	Central Bedfordshire
Trestle Theatre Company	Drama project using theatres masks and drama to help young people suffering from anxiety, depression and other mental health issues.	St Albans
The Living Room (Stevenage)	Treatment group for individuals experiencing love/sex/relationship addiction in and around Stevenage.	Stevenage

Garden House Hospice Care	To help fund a specialist Dementia Nurse to ensure that people in North Hertfordshire, Stevenage and the surrounding areas of central Bedfordshire who are living with dementia, and their families, have the best possible care at the end of their life.	North Herts
Sorted Counselling Services	Counselling for young people from Houghton Regis and surrounding towns and villages.	Central Bedfordshire
Codicote Football Club	To purchase 2 new dugouts to enable them provide a safe and secure setting for all ages accessing the club.	North Herts
Magpas Air Ambulance	The Hearts Matter project aims to upskill people of all ages, especially young people, and train them in the life-saving skill of CPR to ensure that they are equipped to act in the event of a cardiac arrest emergency.	Luton
Aldbury Parish Council	Urgent repairs to central play area to benefit young people living in the village	North Herts
Wheathampstead United Church	Equipment for the new community gym providing affordable gym membership for up to 600 residents of Wheathampstead and surrounding areas.	St Albans
The Counselling Foundation - Stevenage	Supporting long term counselling for people with complex needs.	Stevenage
Something To Look Forward To	A project to provide individually tailored support for carers of people living with cancer. Carers will be able to support and essentials items.	Luton
Dunstable & District Citizens Advice Bureau	To support the costs for an additional telephone advisor at the Bureau, following a rise in demand for services and a shortage of volunteers to assist.	Central Bedfordshire
Khalsa Youth Football Academy	The funding will be used for 2 co-ordinators who will deliver the sessions/programs including the design and delivery of the sessions to SLD children/adults and their families.	North Herts

In 2021, we raised £19,272 for our two charity partners, Luton Food Bank and East Anglian Air Ambulance, from a golf day, passenger foreign currency donations, and passenger car parking donations. Some 218 crates of food and hygiene items, worth £4,360, were also donated to the food bank, helping more than 2,000 local families. These were collected by our security team, who removed the items from passengers unable to take the items airside.

As a result of the pandemic, our centrally organised volunteering programme could not run as normal. However, many of our colleagues chose to volunteer independently, going above and beyond to support community initiatives. Many staff volunteered at the local vaccination centre and at Luton Food Bank.

In 2021, we also sponsored two awards this year: Community Interest and Love Luton. The awards recognise those in our community who have dedicated volunteering time to support charities and local services.

Noise Action Plan

LLA's Noise Action plan is valid from 2019- 2024, the full document can be downloaded [here](#).

1: Operational Procedures

Ref:	Action	Impact	Timescale	Performance Indicator	Numbers Affected	Target	Progress to date
1.1	Reduce the Maximum Noise Violation Limits (NVL) for departing aircraft and bi-annually review the penalties to ensure it remains effective in seeking to reduce departure noise.	Departure Noise	2020	Reduction of NVL's.	Residents within and beyond 55dB L_{den}	Reduce NVL's to 80dB during the day time and 79dB during the night-time by 2020.	Complete - reduction implemented from 1st Jan 2020
1.2	We will work with our airline partners to improve performance relating to Continuous Descent Approach (CDA) with the aim of reducing the noise impact to the communities below.	Arrival Noise	Ongoing	CDA Compliance.	Residents within and beyond 55dB L_{den}	92% compliance by 2020. 95% compliance by 2022.	Ongoing - implemented new target from 1st Jan 2020
1.3	We will identify and act on opportunities to minimise noise through modernisation of the airspace structure working with both community and industry partners.	Departure/ Arrival Noise	Ongoing	Progress through CAP 1616 process.	Residents within and beyond 55dB L_{den}	Submit Airspace Change Proposal to the CAA by 2022.	Ongoing - work paused in 2020 due to COVID.
1.4	Work with Air Traffic Control, airlines and local communities stakeholders to explore opportunities to facilitate more continuous climb operations (CCO).	Departure Noise	2019-2023	Evidence of work.	Residents within and beyond 55dB L_{den}	Explore opportunities and make appropriate changes to facilitate more CCO's.	Ongoing - work restarted in May 2021
1.5	Undertake a review of Noise Abatement Departure Procedures used at London Luton Airport to evaluate their effectiveness and work with our airline partners to identify and implement improvements.	Departure Noise	2019	Evidence of the review.	Residents within 55dB L_{den}	To assess the effectiveness and establish targets for noise reduction.	Incomplete - new target to be complete by end of 2022.
1.6	Review and promote the Arrivals Code of Practice and Departures code of Practice and work with our airline partners to set minimum performance criteria and a method for measuring performance.	Arrivals/ Departure/ Ground Noise	2019-2023	Evidence of review and new performance criteria.	Residents within and beyond 55dB L_{den}	Set minimum performance criteria by Q2 2019.	Incomplete - new target to be complete by end of 2022.
1.7	Continue to promote and encourage the use of single engine taxi procedures at London Luton Airport.	Ground Noise	Ongoing	Minutes of FLOPC meetings.	Residents within 65dB L_{den}	Increase the number of aircraft using single engine taxi procedures.	Ongoing
1.8	Work with our airline partners to promote and encourage the adoption of low power, low drag procedures such as delayed landing gear deployment in order reduce noise from arriving aircraft.	Arrival Noise	Ongoing	% of aircraft using low power, low drag procedures.	Residents within and beyond 55dB L_{den}	Increase the number of operators using low power, low drag procedures.	Ongoing
1.9	Working with our partners at Sustainable Aviation we will challenge current operational procedures to ensure continuous improvement to best practice.	Departure/ Arrival Noise	Ongoing	Minutes of Sustainable Aviation meetings.	Residents within and beyond 55dB L_{den}	Annually review and improve the departures and arrivals code of practice.	Ongoing

2: Quieter aircraft

Ref:	Action	Impact	Timescale	Performance Indicator	Numbers Affected	Target	Progress to date
2.1	We will work with our Airline Partners to achieve the voluntary phase out of aircraft that are Chapter 3 or below, to encourage the introduction of quieter aircraft.	Departure/Arrival/ Ground Noise	2019-2023	% of Chapter 4 aircraft.	Residents within and beyond 55dB L_{den}	100% Chapter 3 aircraft by 2020 and 100% Chapter 4 aircraft by 2022.	Ongoing - 100% Chapter 3 aircraft or above achieved in 2020 and 2021.
2.2	We will review our landing charges annually to encourage the use of quieter aircraft at London Luton Airport.	Departure/Arrival/ Ground Noise	Annually	Publication of Charge's and Conditions of use.	Residents within and beyond 55dB L_{den}	Reduce the size of the noise contours.	Ongoing
2.3	Introduce incentives for airlines to adopt the quietest aircraft e.g. Airbus NEO and Boeing Max.	Departure/Arrival/ Ground Noise	2019	Publication of Charge's and Conditions of use.	Residents within and beyond 65dB L_{den}	Introduce new charges in 2019.	Complete - new charges implemented for 2020-2021.



3: Operational restrictions

Ref:	Action	Impact	Timescale	Performance Indicator	Numbers Affected	Target	Progress to date
3.1	We will operate within our agreed Total Annual Movement caps.	Night Noise	Ongoing	Movement reports in AMR and QMR.	Residents within and beyond 48dB L_{night}	A maximum of 9,650 movements between 23:00hrs-06:00hrs and a maximum of 7000 movements between 06:00hrs-07:00hrs for a rolling 12-month period.	Ongoing
3.2	We will continue to operate within our agreed Total Annual Quota Count (QC) caps.	Night Noise	Ongoing	QC reports in AMR and QMR.	Residents within and beyond 48dB L_{night}	3,500 QC points for a rolling 12-month period between (23:30hrs-06:00hrs).	Ongoing
3.3	To review and reduce the Total Annual Quota Count (QC) cap.	Night Noise	2020	Reduction of annual QC cap.	Residents within and beyond 48dB L_{night}	To review the Quota Count (QC) cap in 2020 to minimise night time noise disturbance.	Ongoing
3.4	We will operate within our agreed contour area limits.	Arrivals/Departure/ Ground Noise	Ongoing	Area of noise contours	Residents within 57dB $L_{aeq 16 hr}$ and within 48dB L_{night}	57dB(A) L_{eq16hr} (0700-2300) - 19.4 sq km. 48dB(A) L_{eq8hr} (2300- 0700) - 37.2 sq km.	Ongoing - although planning application to change limits.
3.5	Develop a noise contour reduction strategy to define methods to reduce the area of the noise contours.	Arrivals/Departure/ Ground Noise	2021	Evidence of work.	Residents within 57dB $L_{aeq 16 hr}$ and within 48dB L_{night}	Submit strategy to Local Planning Authority in 2021.	Complete - submitted to local planning authority.
3.5	In order to minimise ground noise we will monitor and enforce restrictions around the use of Aircraft Auxiliary Power Unit's (APU).	Ground Noise	Ongoing	Minutes of FLOPC meetings.	Residents within 65dB L_{den}	Ensure operators are aware of the APU procedures at Flight Operations Committee meetings.	Ongoing
3.6	In order to minimise ground noise, particularly at night, we will restrict the permitted hours for engine testing to daytime periods only.	Ground Noise	Ongoing	Log of engine testing.	Residents within 48dB L_{night}	Restrict engine testing for aircraft in the daytime period only.	Ongoing

4: Land-use Planning and Mitigation

Ref:	Action	Impact	Timescale	Performance Indicator	Numbers Affected	Target	Progress to date
4.1	We will install acoustic insulation in eligible properties as part of our residential and non-residential Noise Insulation schemes.	Ground/ Departure/ Arrival Noise	Ongoing	Noise Insulation Scheme update in QMR and AMR.	Residents within 63dB L _{day} or 55dB L _{night} or any property in which airborne noise level in excess of 90dB SEL occurs.	Continue to spend the full NIS budget annually.	Ongoing - scheme restart in Q4 2021.
4.2	We will conduct an annual survey of those properties who have received noise insulation to measure the levels of satisfaction with the current Noise Insulation Scheme.	Ground/ Departure/ Arrival Noise	2019- 2023	Annual Survey Results.	N/A	Conduct annual survey of insulated properties by the following February. Report results of survey to Noise and Track Sub-Committee.	Ongoing
4.3	We will offer households exposed to levels of noise of 69dB L _{Aeq 16h} or more assistance with the cost of moving.	Ground/ Departure/ Arrival Noise	Ongoing	Evidence in AMR.	Residents within 69dB L _{AEQ}	Continue to offer assistance.	Ongoing - no properties within this contour.
4.4	We will work with community stakeholders to develop a plan to protect quiet areas as defined by UK government policy.	Ground/ Departure/ Arrival Noise	2020	Evidence of Plan.	Residents within and beyond 55dB L _{den}	Develop a plan by 2020 and ensure this is protecting quiet areas.	Incomplete - new target to complete by end of 2022.
4.5	Through the Airspace Change Process we will ensure areas identified as 'quiet areas' are preserved as far as possible. 'Quiet Areas' will be defined and assessed as per government legislation.	Ground/ Departure/ Arrival Noise	Ongoing	Stages in CAP 1616 process.	Residents within and beyond 55dB L _{den}	Preserve quiet areas through Airspace Change Process as far as possible.	Ongoing
4.6	We will work with local authorities to raise awareness of the impacts of siting new developments that may be affected by aircraft noise.	Ground/ Departure/ Arrival Noise	Ongoing	Local Planning Group meeting minutes.	N/A	Increase awareness for local authorities through our Local Planning Group.	Ongoing

5: Working with the Local Community and Industry Partners

Ref:	Action	Impact	Timescale	Performance Indicator	Numbers Affected	Target	Progress to date
5.1	Carry out biennial surveys of local communities to seek feedback on our approach to noise management and our complaints service for continual improvement and to offer the ability for local communities to help shape the future of noise controls.	Community relationship	2019 / 2020	Results of Survey.	N/A	Carry out first survey in 2019 to define baseline and set improvements in 2020.	Incomplete - new target, to complete survey by end of 2023.
5.2	We will improve communications through regular updates to our website, noise blog, community newsletters (Inform) and reports.	Community relationship	Ongoing	Evidence of comms. on website.	N/A	Review website annually and publish newsletter bi-monthly.	Ongoing
5.3	We will positively respond to requests for meetings with airport representatives regarding aircraft noise, airspace modernisation and expansion plans*.	Community relationship	Ongoing	Minutes of meetings.	N/A	Engage proactively with any visitors to the airport, as well as visiting local residents.	Ongoing - increase in virtual meetings in 2021 due to COVID.
5.4	We will regularly organise public drop in sessions in locations surrounding the airport for community members to visit and speak to airport employees about noise management.	Community relationship	Ongoing	Evidence in QMR and AMR.	N/A	Organise and attend at least 6 Public Surgery drop-in events each year.	Ongoing
5.5	We will log all enquiries and complaints relating to airport operations and publish complaint statistics in our QMR & AMR.	Community relationship	Ongoing	Evidence in QMR and AMR.	N/A	Regularly publish statistics in monitoring reports on quarterly and annual basis.	Ongoing
5.6	We will annually monitor the Noise Action Plan (NAP) actions with LLACC and where we recognise that further improvements can potentially be achieved; we will look to address it.	Community relationship	Ongoing	Evidence in AMR.	N/A	Publish NAP update in the AMR annually.	Ongoing
5.7	We will give the public access to our online noise and track monitoring system (TraVis) and work with the supplier to enhance future functionality.	Community relationship	Ongoing	Evidence of TraVis website.	N/A	Maintain and enhance functionality of TraVis system.	Ongoing
5.8	We will divert all money raised from noise and track violations penalty schemes into the Community Trust Fund (CTF).	Community relationship	Ongoing	Evidence in annual Community Strategy and AMR.	N/A	Annually publish the amount of money diverted to the CTF.	Ongoing

*expansion of the airport is currently being sought by the airport owners, more detail will be provided as and when it becomes available. Any increase in noise will be addressed through this application process.

Ref:	Action	Impact	Timescale	Performance Indicator	Numbers Affected	Target	Progress to date
5.9	We will produce and publish Quarterly Monitoring reports to inform Stakeholders of performance trends and noise management at London Luton Airport.	Community relationship	Ongoing	QMR published on website.	N/A	Publish reports on our website at earliest opportunity each quarter.	Ongoing
5.10	We will continue to present summer and annual noise contours within our Annual Monitoring Report.	Community relationship	Ongoing	Evidence in AMR.	N/A	Publish contour statistics in Annual Monitoring Reports.	Ongoing
5.11	We will continue to produce and publish an Annual Monitoring Report to inform stakeholders of performance trends and noise management at London Luton Airport.	Community relationship	Ongoing	AMR published on website.	N/A	Publish AMR on our website by 31st May each year.	Ongoing
5.12	We will engage proactively with LLACC and NTSC to identify initiatives which will help minimise noise in our local community.	Community relationship	Ongoing	Minutes of Meetings.	N/A	Meet with LLACC and NTSC every 3 months.	Ongoing
5.13	We will collaborate with our Flight Operations Committee (FLOPC) to determine new initiatives to reduce noise.	Community relationship	Ongoing	Minutes of FLOPC meetings.	N/A	Engage proactively with FLOPC at meetings held twice a year.	Ongoing



Employment

Employment at and surrounding London Luton Airport (LLA) contributes significant economic benefits to Luton as a whole and to the sub-region. A large number of businesses are based in Luton due to the presence of the airport. Thus, any analysis of the airport's impact upon the locality needs to contain an economic perspective, and this includes employment. An analysis of employers within and around the airport boundary has been conducted, the results of which are summarised below. These figures were calculated from 2021 data from the Office for National Statistics' Inter Departmental Business Register (IDBR) which records the number of employees. With the impact of the Covid-19 pandemic, if employees have been on furlough they are still recorded as being in employment on the business records.

A list of businesses at London Luton Airport was matched with the Inter Departmental Business Register (IDBR). The IDBR dataset produced by the Office for National Statistics (ONS) is a comprehensive list of UK businesses that is used by the government for statistical purposes. It provides a sampling frame for surveys of businesses carried out by the ONS and by other government departments. It is also a key data source for analysis of business activity.

An initial list was received from London Luton Airport of companies within their boundary. The listing was matched against the IDBR. Companies outside the airport boundary were identified by the street names/areas as follows:

- ❖ Spittlesea Road
- ❖ Part of Frank Lester Way
- ❖ President Way
- ❖ Wigmore House
- ❖ Part of airport Way
- ❖ Barratt Industrial Park
- ❖ Airport Executive Park

A handful of companies which appeared on the list, but not the IDBR, had imputed estimates from analysis of the size of the enterprise and information from the airport. Furloughed employees are recorded by the IDBR if the employee is still registered with the business.

Total employment in and around the airport

Employment was measured using main section headings from the Standard Industrial Classification 2007 (SIC 2007). Data has been rounded to the nearest hundred, as per ONS guidelines.

Industrial Sector	Total Employees
Accommodation and Food Service Activities	500
Administrative and Support Service Activities	2,700
Financial and Insurance Activities	#
Manufacturing	600
Professional, Scientific and Technical Activities	#
Public Administration & Defence; Compulsory Social Security	300
Real Estate Activities	#
Transportation and Storage	6,100
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	300
Grand Total	10,600

- Figures have been suppressed where there are less than three companies in a given Sector and/or employment in that sector is less than 100 in accordance with the regulations covering the use of IDBR data. Standard Industrial Classification 2007 industrial sector codes have been used. Components may not sum to total due to rounding and suppressed data.

Due to confidentiality issues we are bound by ONS protocols to round to the nearest 100 when reporting IDBR figures. This will mean that any changes in reported figures will be in multiples of 100 and therefore lie within that range.

The table illustrates that there are an estimated 10,600 employees in and around the airport although some of these will have been on furlough, working reduced hours or working from home at the time the employment figures were recorded. This employment figure is 5 per cent lower than the previous year. There 8,800 full time and 1,900 part time employees. The effects of the pandemic are not yet fully seen in the data because of the furlough scheme. Data for the next year will indicate how well the airport has recovered from the pandemic.

Employment by working pattern

The IDBR provides employment figures by full and part time working patterns. The total number of full time employees was 8,800 which decreased by 400 between 2020 and 2021, a fall of 5 per cent. The figure for part time employees was 1,900 which was a decrease of 300 on the previous year's figure, a fall of 10 per cent.

The percentage split of full/part time employees found at the airport compared to that found in Luton as a whole is as follows:

	Full Time Employees	Part Time Employees
Vicinity of LLA	81%	19%
Luton UA	69%	31%

Source for Luton UA Figures: ONS Business Register & Employment Survey 2020, latest data. Figures are percentages of those in employment.

Full and part-time working patterns in the vicinity of the Airport differs from that found within Luton as a whole, with the Airport having a higher proportion of full time workers.

Time series

The following figures from 2013 to 2021 show the estimated employment levels in the vicinity of the Airport.



Source: Business Interlligence, Luton Council

The numbers recorded as in employment around Luton Airport fell between 2020 and 2021 from 11,200 to 10,600, a decrease of 5 per cent. These figures include those who have been furloughed throughout parts of 2020 and 2021. The impact of the Covid-19 pandemic and the strength of the recovery of the airport will be seen in the next year's employment figures.

Employment Skills and Recruitment Plan

As 2021 was a challenging year for all our staff, we paused recruitment and many people were on furlough. To keep the airport operating, our team has worked exceptionally hard, taking on additional responsibility and demonstrating a remarkable level of ingenuity and resilience. Many members of the team on furlough also took on volunteering roles, supporting the vaccination centre at the airport and other good causes across our community.

The pandemic has had a dramatic impact on the airport, and we've made every effort possible to protect jobs. However, given the scale of change, a small number of redundancies had to be made.

In October, we were able to start hiring again. In our new concession agreement with Luton Borough Council, we made a commitment to local recruitment, which stipulates that 90% of all jobs must be advertised in LU postcodes before other locations.

Whilst COVID-19 has limited progress in some areas, we were pleased to hold a job fair in November. Run in partnership with Luton Borough Council and 20 other businesses, we welcomed 600 people to the event. More than 1,000 roles were advertised, and we hired 50 people to join the team in 2022. We currently employ 412 people from the local area with a total salary paid to those employees of £11,096,666.

Both our apprenticeship scheme and the Get into Airports programme was placed on hold in 2021 due to COVID-19. However, we have continued to run staff training during the year, including on our code of conduct and absence management. Departments continued to complete technical training to maintain operational compliance.

We plan to develop a new HR system that will enhance our management of training and development opportunities. We have also set new targets for performance management, personal development reviews (PDRs) and talent management which will be rolled out through 2022.



Procurement

When passenger volume decreased in May 2020, the procurement team, having just achieved CIPS accreditation, developed a robust and rapid plan to survive centred around innovation and collaboration. We delivered a procurement survival and cost saving programme that led to rapid savings of £14m whilst improving Corporate Social Responsibility. This effort was not only recognised by our senior management team as a major contribution to the survival of the airport but was also awarded with the CIPS Award 2021.

In response to COVID-19, the focus for the procurement team has been cost reduction. Very few contracts have been awarded during this period. Monitoring of sustainability performance has been reduced during this period due to resource constraints. The resource restrictions and additional challenges of the pandemic also mean we are behind with our Supplier Code of Conduct. We are not engaging suppliers in our sustainability journey as much as we had planned. Capacity building events could not take place in 2021 but are planned to resume in 2022.

We are aiming to launch the Supplier Code of Conduct by Q4 2022, followed by roll out during 2023. The procurement team has also promoted diversity during the period, adding more extensive equalities questions in tenders and promoting diversity within the team.



Surface Access

We have set three key targets within our Responsible Business Strategy. These will be implemented through our Airport Surface Access Strategy (ASAS), which has three key aims:

- 1) To promote sustainable surface transport options (e.g. reducing employee single occupancy vehicle use, promoting our car sharing scheme, reviewing our own fleet).
- 2) To reduce the impact of surface access to the airport on our local community (e.g. working with local authorities to shift customers to more sustainable transport options, increasing the number of bus bays, improving proximity of coach and bus services, and installing digital totems and signage improvements).
- 3) Encouraging passengers to travel with more sustainable transport options to the airport (e.g. by rail, bus and coach).

Modes of Transport

LLA is well-placed in relation to many areas of the UK, and benefits from excellent accessibility by road and rail. It is located close to the M1 Motorway, linking London with the East Midlands and North East. It is also situated close to Luton Airport Parkway Railway Station, with local, regional and long-distance services calling at this station, including frequent direct services to Central London and the South-East. The bus and coach interchange at the airport provides extensive local, regional and long-distance journeys, with a range of operators providing services. Major changes are currently underway both at the airport and in the vicinity, to improve surface access modes. For example, work continues on the DART system, which will connect LLA with Luton Airport Parkway Railway Station in less than four minutes from circa Q3 of 2022.

Passenger Mode Share

COVID-19 related travel restrictions reduced the total number of journeys made by passengers and staff by around 90% during 2021, and there has been an understandable shift from public transport towards single occupancy private cars. During 2020 and 2021, National Express and Arriva suspended some services to the airport as demand reduced. Consequently, it has not been possible to meet our sustainable travel targets.

Due to lower passenger numbers, we only received limited data on travel mode from the CAA, and we have paused sending out travel surveys until the number of journeys will provide worthwhile and reliable insights.

Passenger Mode

%	2012	2013	2014	2015	2016	2017	2018	2019	2020*	2021**
Drop Off	27	28	25	27	28	42	45	45	56	57
Car Park	23	23	28	27	23	20	17	16	31	16
Rail	17	16	14	16	16	17	17	21	6	17
Bus/Coach	16	16	15	15	16	16	16	17	3	8

* Q1 results only, unweighted and with heavy COVID impact

** CAA Snapback Survey 2021 - unweighted

Whilst the figures have remained fairly static for the last few years, LLA continues to work to promote the use of sustainable transport, examples of which are given below.

A new non-stop express train service run by East Midlands Railway has been introduced between London St Pancras and Luton Airport Parkway. The service will operate using electric trains and run every 30 minutes between 06:00 and 22:00 daily, with additional late night and early morning services to serve airport departures. The service is the first significant step towards a separately branded 'Luton Airport Express' service.

Some of our travel operators have invested in more efficient vehicles to reduce the carbon and air quality impact from their fleets. For example, Arriva have invested heavily in new fleets for its service from LLA, moving to Euro-6 buses.

Our new EV parking tariff gives preferential rates for up to 30 minutes parking for electric vehicles, plus six Tesla and four Type 2 tethered charging points on the 2nd floor in Terminal Car Park 1.

In 2021, we moved staff car parking closer to the terminal, allowing staff to walk to work from the car park rather than needing another shuttle.

Staff mode share

LLA aims to reduce the proportion of staff travelling alone by car to and from London Luton Airport. Whilst employee travel does not generate as many trips as passengers, it remains an important consideration, due to the frequency of a commute. Staff travel surveys are undertaken once every 2 years, the results for which are presented below.

%	2010	2012	2014	2016	2018	2020
Drive alone	66	66	62	68	59	78
Car share	12	8	11	7	8	1
Taxi	1	1	0	1	1	2
Motorcycle	1	1	1	1	1	5
Rail	5	5	10	7	8	2
Bus/Coach	7	9	8	9	16	3
Cycle	2	2	2	2	2	3
Walk	5	6	7	5	6	6

Airport Surface Access Strategy

The Airports Surface Access Strategy (ASAS) sets out the objectives, travel targets and action plan for the period 2018–2022. Monitoring of the progress made at LLA will take place throughout this time. The progress against these targets was last updated in 2020 based on 2019 data. The strategic targets and progress from this review are shown below.

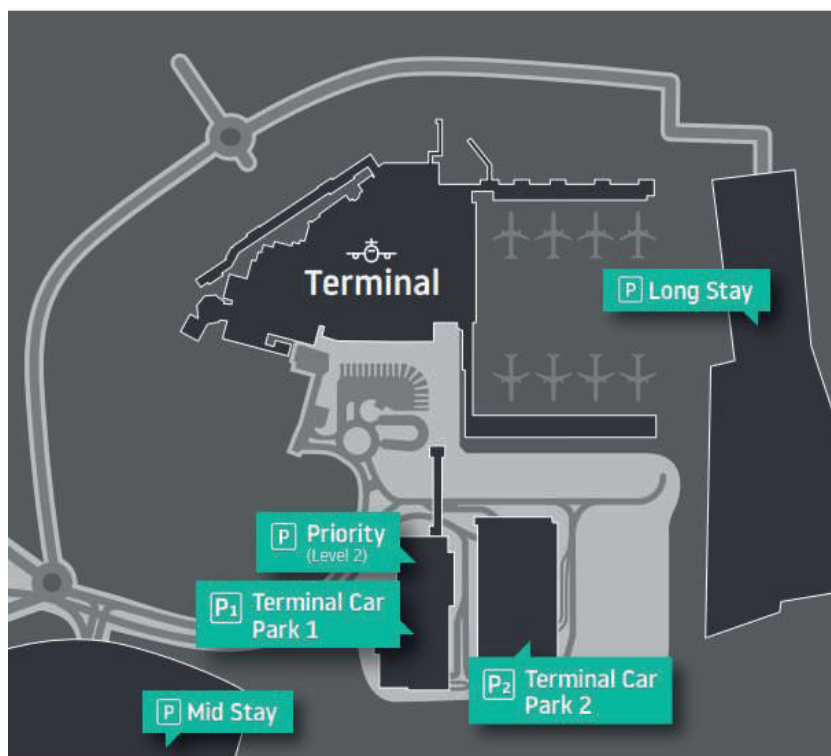
Target	Description of project	2022 Target	Progress to date
1A	Reduce employee single occupancy vehicle (SOV) travel	64%	Achieved - 59% in 2021
1B	Reduce passenger private car travel	47%	73% in 2021 Covid impact
2A	Increase employee travel by sustainable modes of transport	28%	14% in 2021 Covid impact
2B	Increase passenger travel by sustainable modes of transport	33%	25% in 2021 Covid impact
3A	Secure participation in the staff travel survey	12% (2,000 total staff)	Achieved - 24% in 2021 (485)
3B	Increase the number of organisations attending the Airport Travel Forum (ATF)	13+	Achieved - 14 in 2021

More information on the Airport Surface Access Strategy can be found at: <https://www.london-luton.co.uk/corporate/lla-publications/surface-access-strategy>



Car Parks

There are four on-airport car parks at LLA; Terminal Car Parks 1&2 (TCP1 and TCP2), the Mid Stay Car Park and the Long Stay Car Park. The location of these are shown in the map below.



Spaces

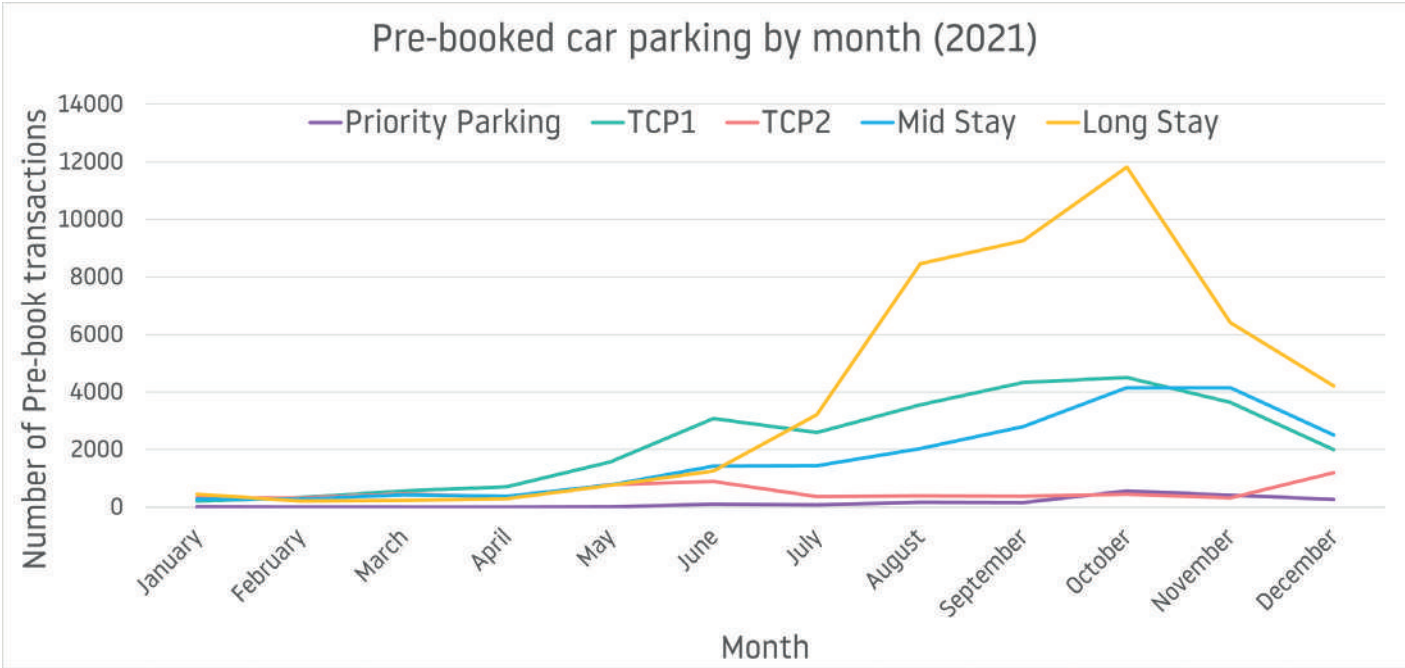
TCP1 and TCP2 are located adjacent to the terminal area and are connected to the terminal by a covered pedestrian walkway. The Mid Stay is a short walk to the Terminal and Long Stay Car Park is located 2km away from the terminal area, and are accessible via regular, free shuttle bus services. The number of car parking spaces in LLA owned car parks are listed below.

Car Park	Total Spaces
Passenger - Terminal Car Park 1 (TCP1)	1,699
Passenger - Terminal Car Park 2 (TCP2)	1,924
Passenger - Mid-Stay	1,281
Passenger - Long Stay	4,151
Drop Off Zone	96
Total Passenger	9,344
Staff - Executive	79
Staff - Car Park B	555
Staff - Car Park 7	110
Staff - Building 134	50
Total Staff	794
Other - Priority Parking	802
Total Other	802

Car Park Pre-bookings

LLA allows pre-booking of all passenger car parks, the graph below shows the number of pre-bookings per month during 2021. The number of pre-bookings each month can exceed the number of spaces within the car park as the same space can be booked for different periods during the month.

In 2021 the number of bookings for all car parks was low in the first half of the year, due to the impacts of the COVID-19 pandemic. These bookings increased July and December 2021 as the industry started to recover and travel restrictions were beginning to be lifted.



Sustainability

London Luton Airport is committed to operating in a way that maximises the socio-economic benefits for the local and regional area whilst minimising the environmental impacts. To ensure this vision is shared and supported, we work closely with airlines, stakeholders and business partners to promote this approach across the airport, ensuring that the full benefits that London Luton Airport can bring to the region are realised.

Air Quality

Air quality monitoring has been carried out in and around London Luton Airport (LLA) since 2003. The results of the monitoring programme are used to assess whether applicable national air quality objectives have been met, and to assess trends in pollutant concentrations in the area, over time. The parameters measured are PM₁₀ and NO₂.

PM₁₀ (Particulates measuring 10µm or less)

Airborne particulate matter (PM) varies widely in its physical and chemical composition, source and particle size.

PM consist of primary emissions, which are emitted directly into the atmosphere, for example from vehicles, and secondary particles, which are the result of reactions that occur between sulphur dioxide, NO_x and other chemical species. Secondary PM can be transported long distances and result in elevated levels when polluted air is transported from continental Europe. PM are typically classified according to their median aerodynamic diameter: PM₁₀ are particles whose effective size is <10 µm. When breathed in, PM can cause inflammation of the airways, and exacerbate symptoms in those with respiratory diseases.

PM₁₀ has been continuously monitored at LLA since 2003. The monitoring site is situated adjacent to the taxiway in the middle of the airport site (Lat/Lon: 51.877650, -0.376297).

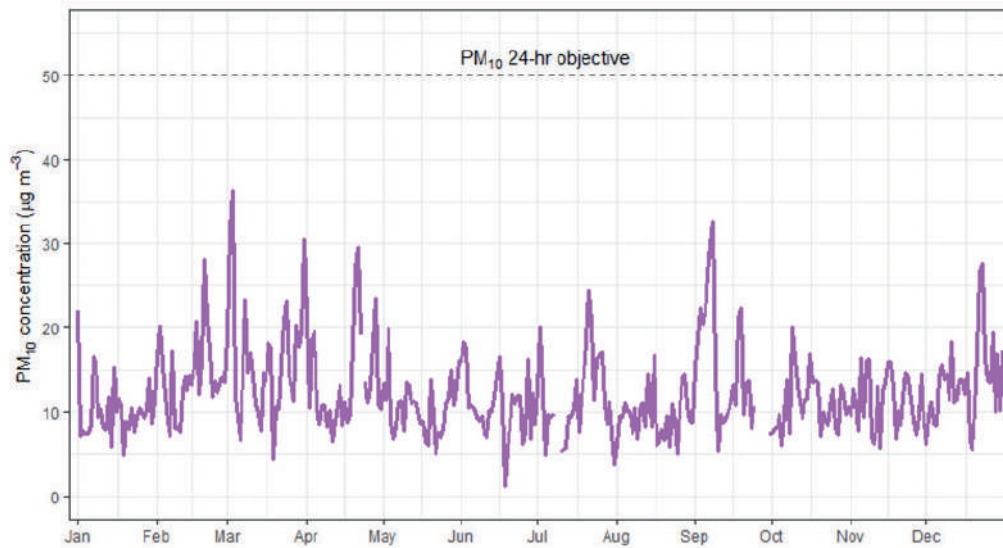
PM₁₀ is monitored using a Beta Attenuation Monitor (BAM). BAMs work by measuring the attenuation of beta radiation as air passes through a filter, which is related to the change in particulate mass. The BAM meets the equivalence criteria after slope correction is applied.

Hourly PM₁₀ data for LLA is available to download from the Air Quality in England website (<https://www.airqualityengland.co.uk/>).

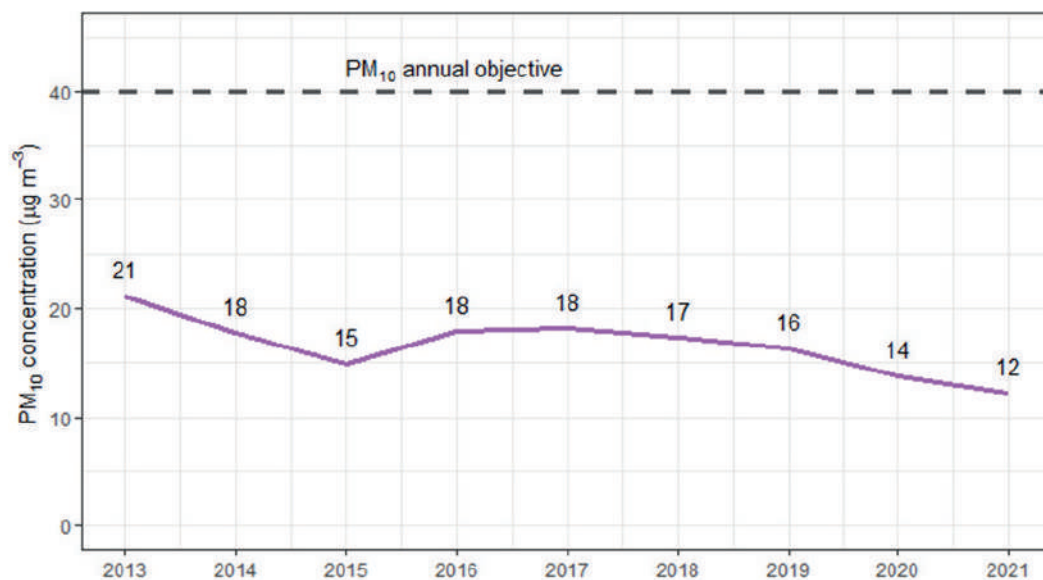
The UK air quality objectives for protection of human health has 2 key objectives for PM₁₀:

1. PM₁₀ 24-hr limit value of >50 µg m⁻³ not to be exceeded more than 35 times per year
2. PM₁₀ Annual mean limit value of >40 µg m⁻³

The figure below shows the 24-hr averaged PM₁₀ concentrations (µg m⁻³) for 2021. The data capture rate for PM₁₀ during 2021 is 98%. The maximum 24-hr average recorded during this period is 36.2 µg m⁻³, therefore, there were no exceedances of the PM₁₀ 24-hr objective in 2021.



The figure below shows the PM₁₀ annual mean from 2013 to 2021. The site registered an annual mean of 12 µg m⁻³ in 2021, which is well below the annual mean air quality objective for PM₁₀ of >40 µg m⁻³. Concentrations of PM₁₀ at this location have consistently remained below the limit value.



NO₂ Diffusion Tube Monitoring

Oxides of nitrogen, nitric oxide (NO) and nitrogen dioxide (NO₂), collectively termed NO_x are emitted from combustion processes. NO₂ has both a primary (emitted directly from the source) and secondary (formed from the oxidation of NO) component. NO₂ is a respiratory irritant and is toxic at high concentrations. It is also involved in the formation of photochemical smog and acid rain and can cause damage to crops and vegetation.

NO₂ monitoring was performed at 19 sites during 2021 using diffusion tubes (see map of locations below). Diffusion tubes are small passive samplers, i.e. they absorb the pollutant directly from the surrounding air, and do not need a power supply. Diffusion tubes at LLA were typically exposed for a period of four or five weeks at each site, each corresponding to a calendar month. The periods were based upon the recommended calendar of diffusion tube exposure periods, which is provided for Local Air Quality Management (LAQM) purposes and available online at <http://laqm.defra.gov.uk/diffusion-tubes/data-entry.html>.

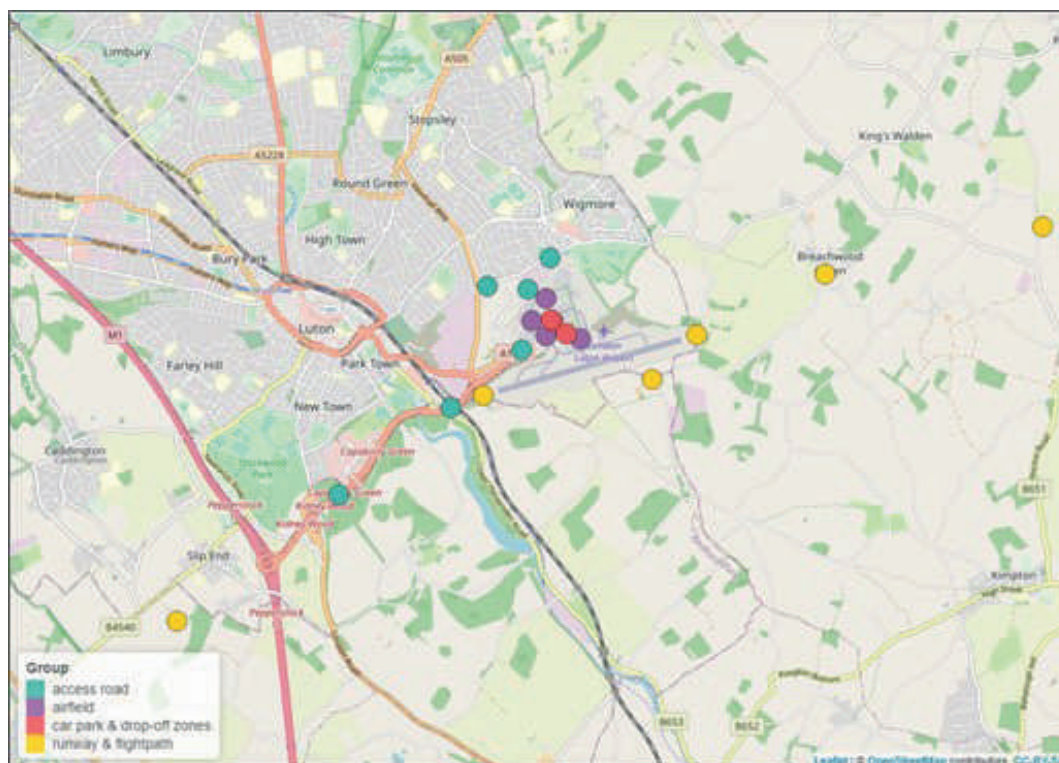
The diffusion tubes sites have been classified according to their environment (location type and area type) based on the information provided, in accordance with the UK Local Air Quality Management Technical Guidance LAQM.TG(16) siting criteria. A further classification groups similar sites together based on their geographical locations in and around the airport: access roads; runway and flightpath; airfield; carparks and drop-off zones.

The sites located within the airfield and on the runway are categorised “other” as defined by LAQM.TG(16) (“any special source-oriented or location category covering monitoring undertaken in relation to specific emission sources such as power stations, car-parks, airports or tunnels”).

¹ - <https://laqm.defra.gov.uk/technical-guidance/>



Location of the 19 NO₂ diffusion tube sites in 2020. The colour of the circle represents the site group, based on their geographic locations.



Details of the diffusion tube locations in 2021:

Location	Longitude	Latitude	Station type	Area type	Group
Terminal Front (Canopy)	-0.37549	51.87935	Traffic	Urban	Car Park & Drop-off zones
Airport Approach Road	-0.38045	51.87622	Traffic	Urban	Access road
Runway Threshold Western	-0.38687	51.87144	Other	Urban	Runway & flightpath
Runway Threshold Eastern	-0.35064	51.87778	Other	Urban	Runway & flightpath
Airside Stand 5	-0.37864	51.87927	Other	Urban	Airfield
President Way Jct	-0.37937	51.88251	Traffic	Urban	Access road
Drop-off zone (new)	-0.37285	51.87782	Traffic	Urban	Car Park & Drop-off zones
BAM Co-Location tube	-0.37626	51.87763	Other	Urban	Airfield
Stagenhoe Bottom Farm	-0.29205	51.88914	Background	Rural	Runway & flightpath
Grove Farm Slip End	-0.43901	51.84775	Background	Rural	Runway & flightpath
Dane Street	-0.35821	51.87309	Traffic	Rural	Runway & flightpath
Airside Stand 61	-0.37626	51.88156	Other	Urban	Airfield
Eaton Green Road	-0.37556	51.8858	Traffic	Urban	Access road
Undercroft Access	-0.375	51.87915	Traffic	Urban	Car park & drop-off zones
Eaton Green Road Lower	-0.38629	51.88284	Traffic	Urban	Access road
A1081 Southbound Carriage Way	-0.41145	51.86098	Traffic	Urban	Access road
Breachwood Green Community Hall	-0.32898	51.88408	Background	Rural	Runway & flightpath
Airside South Stands	-0.3704	51.87731	Other	Urban	Airfield
A1081 New Airport Way	-0.39238	51.87009	Traffic	Urban	Access road

If a monitoring site has fewer than 9 months of data, annualisation of the data is necessary. Annualisation is based on the methodology provided in the UK Local Air Quality Management Technical Guidance LAQM.TG(16). During 2021, all sites collected at least 9 months of data. However, for Dane Street, tubes data in August and October were potentially compromised, due to water ingress and a damaged lid. As such, the two results were rejected in the final data set, resulting in 8 months of data in total for 2021 at Dane Street, therefore annualisation was required this site. Annualisation was performed using automatic NO₂ monitoring data from two nearby AURN urban background sites with at least 85% data capture (Oxford St Ebbes and Reading New Town).

NO₂ diffusion tubes are also affected by various external conditions during exposure (e.g. temperature, wind, humidity and sunlight), which can result in an over-estimation or under-estimation of the ambient NO₂ concentration, when compared to reference analysers. To correct for this, a bias adjustment factor is applied to the annual averaged data, before comparing to any air quality objectives. The bias adjustment factor can be determined by co-locating diffusion tubes with a local automatic NO_x analyser and comparing the results of the two methods. If there are no local bias adjustment factors available, or they are unsuitable, the bias adjustment factor from the national database can be used. As no co-location study was performed here, bias adjustment factors from the national database have been applied (for 2021, the bias correction factor is 0.78).

The UK air quality objectives for protection of human health, has 2 key objectives for NO₂:

1. NO₂ 1-hr limit value of >200 µg m⁻³ not to be exceeded more than 18 times per year
2. NO₂ Annual mean limit value of >40 µg m⁻³

Only the NO₂ annual mean limit value can be directly compared to monitoring with passive diffusion tubes as tubes only measure over a monthly period duration. Additionally, the annual mean objective is only applicable in locations where members of the public may be regularly exposed, for example, building façades of residential properties. In the case of the LLA monitoring network, there are no NO₂ diffusion tubes located where the annual mean objective applies.

The figures below show the NO₂ annual mean concentrations from the diffusion tube monitoring programme, from 2013 to 2021 for sites located in the groups:

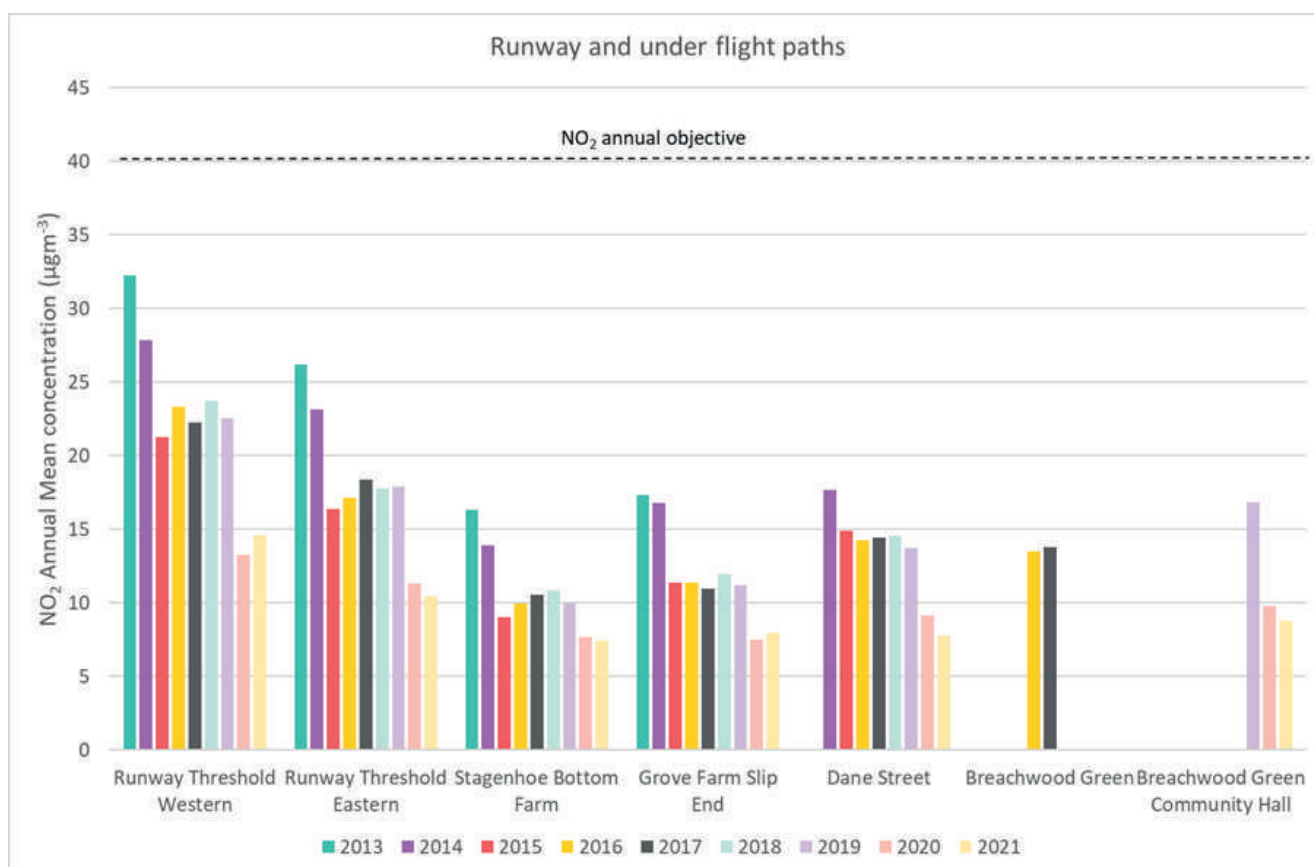
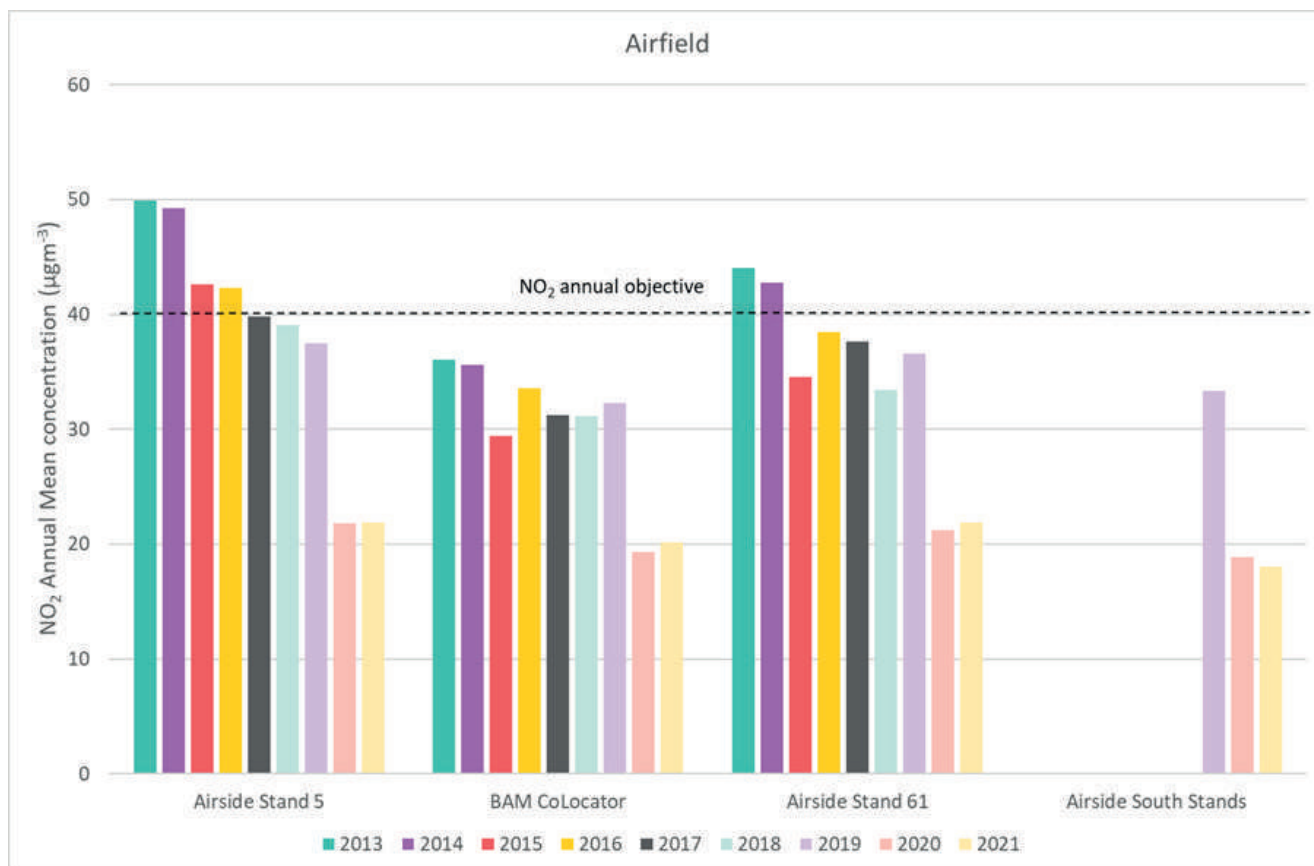
- I. runway and flight path,
- II. airfield,
- III. car parks and drop off zones, and
- IV. access roads.

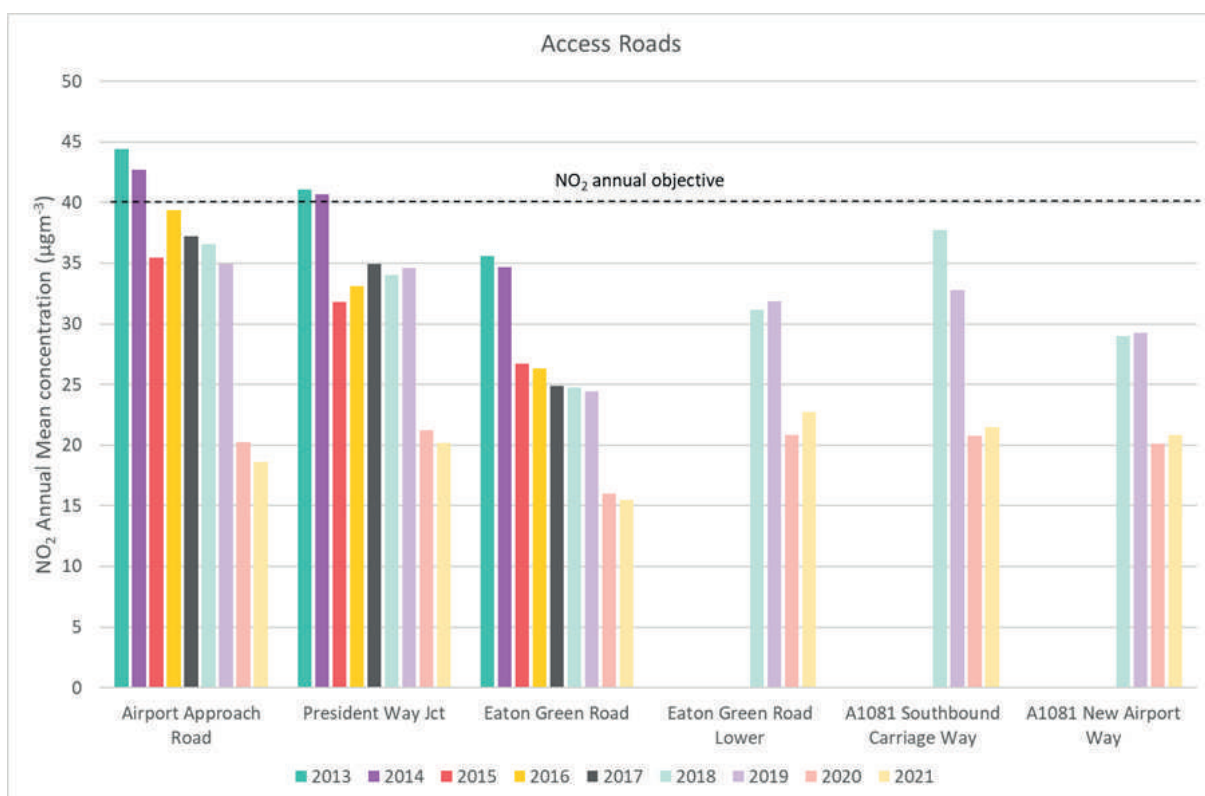
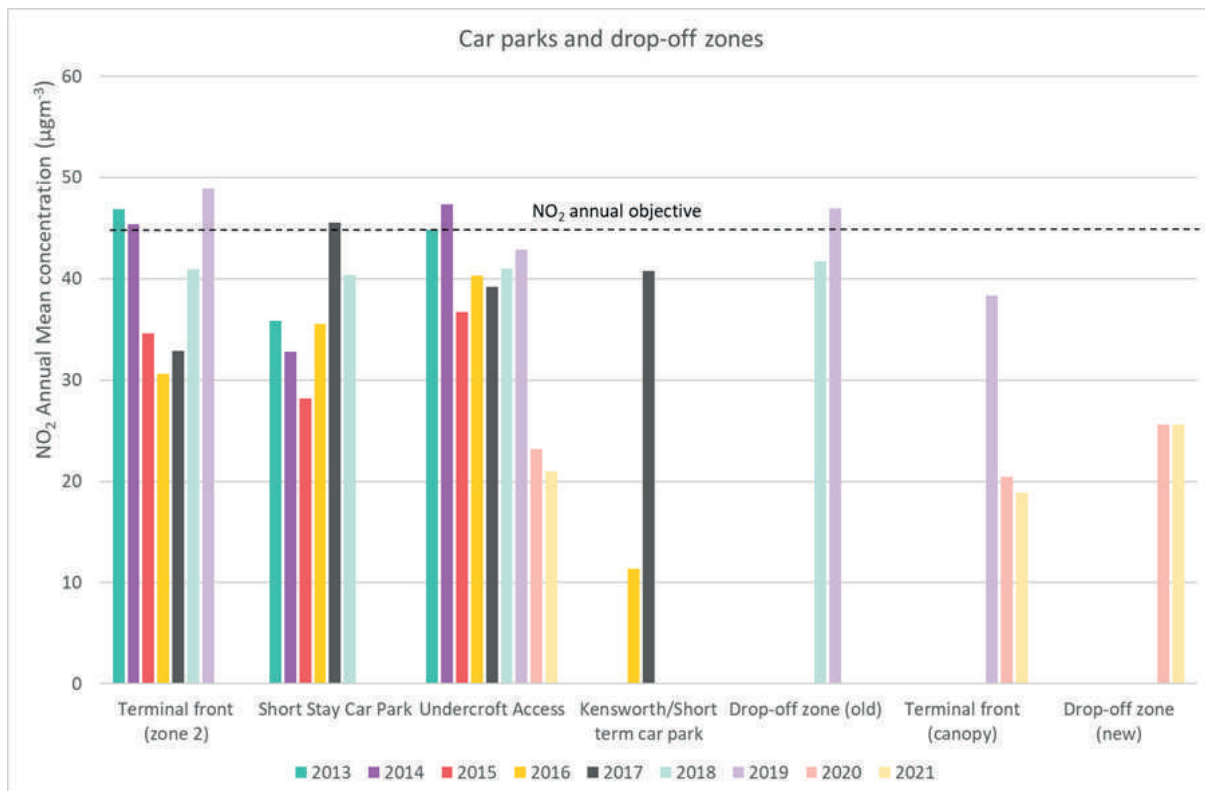
In all figures, the dashed line at 40 µg m⁻³ represents the annual mean NO₂ limit value.

On the runway and under flight paths, the annual mean NO₂ concentrations are well below the limit value of 40 µg m⁻³. For those locations on the airfield, NO₂ concentrations since 2017, have not been above the limit at any of these sites. The tubes located in car parks and access roads indicate that NO₂ concentrations are typically higher in these areas, with some locations exceeding the objective of >40 µg m⁻³ in previous years. However, as mentioned above, these measurements are located where the public are not regularly exposed for prolonged periods, therefore the annual limit is not applicable.

The annual mean decrease in NO₂ concentrations in 2020 when compared to 2019 ranged from 23% to 47% (average = 38%) across all sites. For 2021, annual mean decrease in NO₂ concentrations, when compared to 2019, ranged from 26% to 51% (average = 39%).

The small changes between 2020 and 2021 suggest that Covid-19 lockdown and travel restrictions, resulting in reduced traffic and operations at the airport, are likely to have contributed to the observed NO₂ concentrations in 2021. The results show that the NO₂ concentrations in 2021 were remained much lower than in previous years, with no exceedances of the annual mean NO₂ concentration at any site.





In summary, the following conclusions have been drawn from the analysis of the data from the air quality monitoring programme at LLA during 2021.

The annual mean PM₁₀, monitored within the airport boundary, was 12 µg m⁻³ in 2021, which is well below the annual mean air quality objective for PM₁₀ of 40 µg m⁻³, and there were no exceedances of the air quality objective for 24-hour mean PM₁₀ of >50 µg m⁻³.

NO₂ was measured by 19 diffusion tubes in and around the airport. The annual mean NO₂, after bias correction, ranged from 7.4 to 25.6 µg m⁻³, across the 19 sites. The annual mean AQS objective of 40 µg m⁻³ for NO₂ is not applicable at any of the sites as they are not located where members of the public may be regularly exposed, however, there were no exceedances of this limit in 2021.

Responsible Business Strategy

Our Responsible Business Strategy (RBS) sets our commitments on environmental, social and business ethics at the airport. The tables below detail our targets, and progress can be found within our Sustainability Reports which are published on our website each year. These can be viewed and downloaded here.

1: Ensure Environmental Responsibility and Efficiency

Ref:	Theme	Target	Ref.	Theme	Target
1.1	Carbon accreditation	Achieve the 'Mapping' level of certification within the Airport Carbon Accreditation Scheme by end of 2020 and the 'Reduction' level of certification by end of 2022.	1.14	Noise	100% Chapter 4 aircraft or better by 2022.
1.2	Carbon reduction	Develop a Carbon Management Strategy with ambitious emission reduction target by the end of 2020.	1.15	Noise	Assess if Slightly Steeper Approaches can be adopted and implement recommendations by 2023.
1.3	Energy	Source 100% of electricity from renewable sources by end of 2021.	1.16	Noise	Carry out a survey of local communities to seek feedback on our approach to noise management and our complaints service by end of 2020 and define improvement targets.
1.4	Energy	At least 25% of the energy we use to come from on-site renewables by end of 2026.	1.17	Noise	By 2020, develop a strategy to define methods to reduce the area of the noise contours by 2028 for the daytime and the night-time.
1.5	Energy	Reduce operational electricity demand (excluding vehicles) to less than 2.0 kWh/pax by end of 2023.	1.18	Sustainable travel	Reduce single occupancy vehicle travel to the airport for customers and employees (employees: 2022 – 64%; customers: 2022 – 47%)
1.6	Water	Reduce total water consumption to less than 6.98 litres/pax by end of 2023, representing a 10% reduction from the 2018 baseline.	1.19	Sustainable travel	Greater than 28% of employees and 36% of customers travelling to and from the airport using sustainable modes of transport by 2022.
1.7	Water	Identify and quantify operations that currently use potable water but could be served by non-potable water by end of 2021.	1.20	Sustainable travel	Promote and monitor sustainable travel at the airport. Secure 12% participation in the staff travel survey by 2020 and increase the number of organisations attending the airport travel forum.
1.8	Waste	Recycle at least 70% of nonhazardous operational waste (excluding aircraft waste) by end of 2022.	1.21	Sustainable travel	Establish a plan for low-carbon airside and landside vehicles by mid-2021.
1.9	Waste	Reduce operational waste (excluding aircraft waste) to 0.12 kg per passenger by end of 2023.	1.22	Spills	Reduce the number of fuel spills with a severity rating of 'Major' to less than 5 per year by 2025, and zero spills with a severity rating 'Hazardous' or 'Catastrophic'.
1.10	Waste	Achieve the Carbon Trust Standard for Zero Waste to Landfill accreditation by end of 2020.	1.23	De-icing	More than 95% of all airframes will be de-iced in areas designed for capture and collection of de-icing fluid by March 2024.
1.11	Waste	Less than 5% of non-hazardous construction & demolition waste by weight from qualifying projects to be sent to landfill by 2021.	1.24	Single-use plastics	All new concession contracts to include a requirement for zero singleuse plastics.
1.12	Air quality	Develop an air quality strategy which includes measures to limit the airport's contribution to air pollution by end of 2022.	1.25	Climate change risk	Identify climate change risks and develop a resilience plan and integrate it into business risk assessment process by the end of 2022
1.13	Noise	No Chapter 3 aircraft operating at the airport by 2020.			

2: Community Engagement - A healthy today and a skilled tomorrow

Ref:	Theme	Target
2.1	Charitable giving	Maintain LLA's contribution to the Community Trust Fund at £150,000 per annum.
2.2	Charitable giving	Promote the airport's employee matched-funding scheme and achieve 20 requests for matchfunding per year.
2.3	Charitable giving	Dedicate £30k per year to support selected local and regional initiatives that support community spirit and cohesion.
2.4	Skills and training	Instigate a training and skills development programme for ten local schools per year. Arrange at least two on-site tours for local schools per year.
2.5	Volunteering	Increase the proportion of staff taking at least one day of paid time off (PTO) per year for volunteering in the local community meeting the following annual targets: 10% in 2020, 15% in 2021, 20% in 2022, 25% in 2023.
2.6	Community wellbeing	Implement a programme that supports wellbeing and increases the standard of living in our community
2.7	Community wellbeing	The community support team to attend at least four community noise surgeries a year to showcase the additional support available to members of the community

3: A Safe and Secure Airport

Ref:	Theme	Target
3.1	Enhanced security training	Create a career development programme for airport security above the minimum requirements stipulated by the CAA, including customer experience and leadership.
3.2	Health and safety	Across 2020, share the learning from at least 90% of health and safety investigations to embed lessons learned and prevent repeat events.
3.3	Health and safety	Senior Managers will complete four safety tours a year and we will align this with a recognition scheme embedded in our risk governance process to reinforce best practice and behaviours.
3.4	Health and safety	In 2020, all members of our senior management team will complete training on 'Safety Differently' to support our vision and culture journey.
3.5	Health and safety	Senior Managers will be required to attend 75% of risk governance meetings throughout the year.
3.6	Health and safety	We will conduct pre-emptive assessments (appreciative investigations) on each department every quarter to identify opportunities to improve.
3.7	Health and safety	We will conduct quarterly continuous improvement safety tours for each of our key on-site suppliers.
3.8	Information security	Achieve certification to ISO 27001 (information security management system) by the end of 2021.
3.9	Information security	Fully compliant with the NIS Directive by the end of 2020.

4: Grow with our People

Ref:	Theme	Target
4.1	Facilitating talent	Develop a facilitating talent strategy by the end of 2020, including entry-level talent. Support Luton Council with a financial commitment for their training academy. We will put in place measures that will double the number of apprenticeships by 2021.
4.2	Facilitating talent	In partnership with the Prince's Trust deliver no less than two 'Get into Airports' programmes, each with 15 individuals or more, securing a 75% or higher positive outcome.
4.3	Facilitating talent	Promote airport career opportunities. Complete ten career and job events for schools including events at the airport and in schools. Activities promoting career opportunities and employment to be focussed within the more deprived wards.
4.4	Diversity and inclusion	Develop a broad Diversity and Inclusion strategy by the end of 2020. This will include supporting Women in Aviation and Aerospace Charter making a commitment to work together to build a more balanced and fair industry for women.
4.5	Wellbeing	Develop a wellbeing strategy by the end of 2020.
4.6	Wellbeing	15% of staff to receive mental health first aid training by 2020.
4.7	Fair pay	Undertake a cost-benefit analysis of achieving Living Wage accreditation status and present for decision by the end of 2020.
4.8	Internal engagement	At least 85% of staff to confirm they are 'well informed' or 'very well informed' about our vision, values and strategic pillars in 2020.
4.9	Internal engagement	At least 60% of staff to feel they have a voice on what goes on at the airport in 2020.
4.10	Internal engagement	Raise the visibility and profile of the Executive team with at least 80% of staff knowing the team members by 2020.
4.11	Internal engagement	Support and enable managers to become better communicators with at least 60% communicating with their teams 'regularly' or 'very regularly' by 2020.

5: Deliver Great Customer Experience

Ref:	Theme	Target
5.1	Customer experience training	100% of customer-facing LLA employees undergo training in customer experience by the end of 2020.
5.2	Customer experience charter	Customer experience charter in place by mid-2021.
5.3	Customer experience	Achieve customer satisfaction score of 80% by the end of 2021 and 82% by the end of 2022.
5.4	Training	Provide training to all LLA frontline staff on hidden disabilities by the end of 2020.
5.5	Accessibility	Achieve the highest rating of 'very good' in the CAA's Persons of Restricted Mobility (PRM) categorisation by the end of 2021.
5.6	Accessibility	Establish our Accessibility Focus Group by the end of 2020.
5.7	Accreditation	Gain certification to ACI's customer experience accreditation programme by the end of 2020.

6: Sustainable Supply Chain

Ref:	Theme	Target
6.1	Code of conduct	Create supply chain sustainability code of conduct and standards by the end of 2020.
6.2	Sustainability in contracts	75% of supplier contracts by spend to include sustainability objectives by December 2020.
6.3	Supplier capacity building	Sustainable supply chain toolkit for suppliers in place by December 2022.
6.4	Supplier capacity building	Undertake capacity building events for suppliers each year: 6 in 2020, 8 in 2022.
6.5	Local spend	Maintain at least 25% of total supply chain spend with suppliers based within a 20-mile radius of the airport, and provide support for local organisations to maximise opportunities to work with the airport.
6.6	Climate change risk	Identify strategic suppliers and assess the climate change risks for these suppliers by the end of 2021.
6.7	Climate change risk	Develop a supplier climate change resilience plan by 2023.



Planning and Development

Through its Local Plan, Luton Council (the Council) sets out local planning policies and identifies how land is used, determining what will be built where. The Council also is responsible for the Local Transport Plan (LTP) providing policies, strategies and schemes primarily for Luton. The LTP also refers to strategic transport, infrastructure and other cross boundary matters for Luton's neighbouring towns of Dunstable and Houghton Regis, which form the wider urban conurbation.

Local Plan

The Luton Local Plan (2011-2031) adopted in November 2017, is a strategic document setting out the vision, objectives and spatial planning strategy for Luton up to 2031.

It comprises the following document and accompanying maps:

- Luton Local Plan (2011-31), November 2017;
- policies map; and
- town centre inset map.

These are available on the Council's website at:

<https://www.luton.gov.uk/Environment/Planning/Regional%20and%20local%20planning/Pages/Local%20Plan%202011%20-%202031.aspx>

Policy LLP6 of the Local Plan covers the London Luton Airport strategic allocation, an area of 325 hectares, identified on the policies map, including land within the airport boundary, Century Park and Wigmore Valley Park.

Planning Applications

The following planning applications and consultations under Part 8 of the Town and Country Planning (General Permitted Development) Order (which confers permitted development rights upon the airport operator as statutory undertaker) were either submitted in 2021, determined that year, or else have been undertaken pursuant to an earlier planning permission:

- The airport operator submitted an application to vary conditions relating to passenger throughput, noise contours, car park management for the airport, the airport travel plan and the approved plans and documents, to accommodate an increase from 18 to 19 million passengers per annum and to amend the daytime and night-time noise contours (ref: 21/00031/VARCON) in January 2021. The application achieved a resolution to grant planning permission on 1st December 2021, however, was subject to an Article 31 Holding Direction by the Secretary of State on 22nd December 2021; and
- The airport operator submitted details concerning construction and environmental management, restoration and the management and maintenance of drainage regarding the movement and permanent placement of spoil (ref: 21/00220/DOC) in February 2021, which were approved in April 2021.
- The construction of the Direct Air-Rail Transit (DART) system continued apace in 2021 (ref: 17/00283/FUL) with much of the infrastructure now in place. It is anticipated that the DART will be in operation in 2022.

Separately, it was reported last year that following the consultation in 2019 by the airport owner, Luton Rising (London Luton Airport Limited [LLAL]), on their proposed expansion of the airport to increase the passenger numbers to 32 million passengers per year, that Luton Rising had considered the feedback received and intended to submit an application for a Development Consent Order (DCO) in 2021. Following the Coronavirus Pandemic, it is understood that work is on-going and that the DCO will be submitted in 2022. The DCO will be determined by the Secretary of State.

Hotel developments

The Luton hotel market is very much dominated by airport related demand, from passengers and crew, with the Luton Hotel Study (July 2015) indicating that demand was likely to continue to grow.

The following hotel developments have been granted planning permission, are being implemented, or are still under consideration, since the table in the 2018 AMR was produced –

Site address	Current status of application	Number of bedrooms
Bartlett Square	Planning permission for 172 bedroom hotel granted planning permission in January 2020 (yet to be implemented)	172
Napier Gateway (part of the Napier Park site)	Mixed development including 209 bedroom hotel (still to be built)	209
Power Court (Town Centre)	Outline permission for football stadium and associated infrastructure granted planning permission in September 2019 (yet to be implemented. Note: a new application on the site was received in 2020 which did not include a hotel)	150
Land adjoining junction 10 to junction 10A of M1	Outline application for mixed use development including a hotel granted planning permission in September 2019 (yet to be implemented)	350
Former Honda Garage, Cumberland Street (Town Centre)	Five to nine storey hotel (resubmission) granted planning permission in March 2018 (still to be implemented. Note: in 2020 a permission was granted for 154 dwellings, so the hotel permission may never be implemented)	235
Phoenix House (Town Centre)	Change of use to hotel granted planning permission in August 2017 (development still to be completed)	87
Prudence Place, Proctor Way	Demolition of existing buildings and erection of four storey hotel with undercroft parking granted permission in July 2018 (yet to be implemented)	92
New Century Park	Planning permission for 145 bedroom hotel recommended for approval subject to a legal agreement in March 2019 (still awaiting signing of legal agreement in 2020)	145
15-23 Manchester Street (Town Centre)	Planning permission was granted for the change of use of the upper floors to 39 bedroom hotel in January 2019 (yet to be implemented)	39
Manor Court, Manor Road (Town Centre)	Temporary permission, up to November 2022, for change of use from student accommodation to flexible hotel/ student accommodation granted planning permission in October 2020	97
Courtyard by Marriott Airport Way	Application for eight storey hotel comprising 171 bedrooms recommended for approval subject to the signing of a legal agreement in September 2020 (still awaiting the signing of legal agreement in 2020)	171

Cresta House, Alma Street (Town Centre)	Application for the conversion and change of use from commercial floor space at ground and mezzanine floor to 20-room hotel approved in May 2021 (yet to be opened).	20
135 New Bedford Road	Application for the reuse and extension of existing hotel to provide 10 rooms approved in July 2021 (yet to be implemented).	10
Phoenix House, Mill Street (Town Centre)	Application to extend the existing hotel to provide 17 additional rooms that was approved in July 2021 (yet to be implemented).	17
Linton Hotel, 107 London Road	Application for the demolition of existing hotel and development of flats, pending consideration.	-43
135 New Bedford Road	Application for 20 additional hotel rooms that is pending consideration.	20

National Aviation Policy

The Aviation Policy Framework (APF) published in March 2013 set out the Government's policy on aviation. The APF focuses on the benefits of aviation to the UK economy as well as its environmental impacts.

The 'Airports National Policy Statement: new runway capacity and infrastructure at airports in the south-east of England' (the ANPS) was designated on 26 June 2018. The ANPS provides the primary basis for decision making in relation to the Development Consent Order (DCO) for a new runway at Heathrow, whilst also being an important and relevant consideration in respect of applications for new runway capacity in London and the south-east of England.

The ANPS sets out:

- The Government's policy on the need for new airport capacity in the South East of England;
- The Government's preferred location and scheme to deliver new capacity (the Heathrow Northwest Runway); and
- Particular considerations relevant to a development consent application to which the ANPS relates.

The ANPS includes policies that will be important and relevant for any nationally significant infrastructure project (NSIP) related to airports in the south east of England.

Between December 2018 and April 2019 the Government sought feedback on its proposed new aviation strategy: 'Aviation 2050: The Future of UK Aviation'. The strategy is to focus on: balancing growth from passenger demand with action to reduce environmental and community impacts; improving the passenger experience; and building on the UK's success of establishing new routes and greater choice.

The 'Future of UK Aviation: Making Best Use of Existing Runways' (MBU) was published in June 2018

and is the most up-to-date Government policy concerning the expansion of airports. The document recognises that airport development can have positive and negative local impacts, and reiterates the importance of ensuring that benefits are shared with communities and detriment is appropriately mitigated.

From July to September 2021, the Government ran the 'Jet Zero: Our Strategy for Net Zero Aviation' consultation. This consultation set out the Government's vision for the aviation sector to reach net zero by 2050. Five measures were proposed to support the policies that the Government is proposing to reduce and, where possible, eliminate carbon dioxide emissions from aviation, namely:

- Improving the efficiency of the aviation system;
- Accelerating the development and delivery of sustainable aviation fuel;
- Supporting the development of zero emission flights;
- Using the markets to drive down emissions; and
- Influencing the behaviour of customers.

Local Transport Plan (LTP)

The current local transport plan (LTP4) produced by the Council in April 2021, sets out how the Council will deal with transport matters in and around Luton. It comprises two parts:

- A long term Transport Strategy up to 2040. With regard to the transport affecting the airport, this sets out enhancements to access for the airport and an increased reliance upon sustainable modes of transport, including the DART; and
- A series of transport policies, setting out how the strategy will be implemented.

LTP4 captures Strategic Objective 1 from the Luton Local Plan 2011-2031, which establishes that the Council will safeguard the existing operations of the airport and support its sustainable growth.

The LTP does not make direct reference to the Airport Surface Access Strategy 2018-2022 (ASAS), however, this document remains relevant in promoting sustainable travel to the airport for both passengers and employees, and the Council will work with the airport operator to achieve this.





