Annual Monitoring Report 2022

Image: Chris Davis

Bristol Airport

Amazing journeys start here

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Foreword

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Welcome to the 2022 Annual Monitoring Report (AMR). In line with our values, Bristol Airport aims to be as transparent as possible so has published AMRs for over a decade. Our latest AMR brings together key reports and data from the Airport's operation during 2022 and highlights the action the Airport is taking to deliver against our ambitious sustainability objectives.

2022 was a unique year for Bristol Airport and the aviation sector globally. After two years of few flights due to the pandemic, in March 2022 the UK and most European countries lifted their covid restrictions, resulting in a sudden 'switch on' of travel and the release of enormous pent-up demand. This created strains for airports and airlines across Europe, and Bristol Airport experienced the fastest recovery of any major UK airport from the pandemic, serving close to 8 million passengers during 2022.

Being able to play a part in reconnecting family and friends, many of whom had not seen each other for over two years, was an uplifting experience for me and many of those working at Bristol Airport. The report shows the benefits to our region as employee numbers rapidly increased through 2022, returning the Airport to its status as the area's largest private sector employer. The sudden return of travel did present challenges, which is reflected in the report, but the situation stabilised as we moved through the year.

The return of pre-pandemic levels of passengers allowed for the restart of bus and coach services, with full frequency services operating by the autumn. In August, we began offering free bus travel to Bristol Airport and business partner employees to encourage staff away from commuting by car.

In 2021, we made a commitment to achieving net zero operations by 2030, aiming to be the first airport in the country to achieve this milestone. Significant progress towards the target has been made during 2022.

Our Airport Carbon Transition (ACT) programme, with a annual £250,000 fund for decarbonisation projects, announced its first round of funding. The innovative projects included using our airfield grassland for carbon sequestration and improving biodiversity. Working with Jet2, an airside electric vehicle charging hub was constructed to enable our business partners to transition to EVs.

Bristol Airport ambitions were recognised by winning the Eco-Innovation Award at the 2022 ACI Europe Best Airports award, for our six-month ultra-low-emissions ground equipment trial with easyJet. We continued to look to the long term, with trials of an electric landside bus and the world's first hydrogen-powered double decker bus.

Partnerships will be critical for us reaching our net zero operations goal and longer-term aim of accelerating the development of zero emissions flight. We formed a new partnership with the charity Groundwork, linked to improving nearby woodland and providing new voluntary and educational opportunities for local people.

The Hydrogen South West consortium, of which we are a founder member, formally launched. This business-led group bring together some of the region's most innovative companies with academia and the wider supply chain, with the collective aim of accelerating the development of green hydrogen economy. As part of this, Bristol Airport launched a project with Airbus to investigate the potential for the Airport to become a 'hydrogen hub' for multiple forms of transport, as part of Airbus' global efforts to bring forward a hydrogen-powered passenger aircraft by 2035.

As part of a UK Government-backed project, 2022 saw an announcement that Bristol Airport will host test flights of a ground-breaking electric Vertical Take Off and Landing (eVTOL) aircraft, being developed by the Bristol-based Vertical Aerospace.

During an extraordinary year, I am enormously proud that Bristol Airport has returned to its position as the region's gateway and as the leading provider of employment for our area. We continue to make great strides toward net zero operations and have laid the groundwork to enable our region to benefit from the rapid developments toward zero emissions flight.

Dave Lees
Chief Executive Officer

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Summary and key year highlights

- Bristol Airport was the fastest recovering airport post covid-19 in the UK in 2022.
- Passenger numbers recovered by approximately 90%, from 8.9m passengers in 2019 to 7.9m in 2022.
- The lifting of UK government travel restrictions on international travel in March 2022 significantly facilitated the rapid recovery of the airport.
- The number of air traffic movements doubled between 2021 and 2022. International charter flights quadrupled in this period.
- Runway usage split was 33% Easterly 09 and 66% Westerly 27 in 2022. This is in comparison to the 20-year average split of 76% runway 27 and 24% runway 09.
- Alicante, Dublin and Amsterdam were the top 3 destinations from Bristol Airport, showing the impact of easing covid restrictions on international travel.
- Noise monitoring indicates that all peak departure noise levels recorded were below the noise infringement limits.
- The area of the 57 dB(A) Leq 16hr noise contour for summer 2022 was expected to be 10.8 sq. km, a 5.9% increase in 2021's 57dB predicted summer contour which is expected with back to business operations. This contour area remains the same coverage as 2020 and remains within the permitted noise envelope.
- Bristol Airport was recertified for the ISO 14001:2015 accreditation for its Environmental Management System, which it first earned in 2019.
- During the summer season there were 2998 aircraft movements using 1564.5 quota count points, during the night quota period of 23:30 to 06:00. A further 4,227 aircraft movements took place during the 'shoulder periods' of 06:00 to 07:00 and 23:00 to 23:30.
- 398 environmental complaints were made in 2022 by 253 complainants. When benchmarking to 2019 with a comparable number of aircraft movements, 2022 saw 53 fewer environmental complaints.
- The airport reinstated the A3 Weston Flyer following its suspension throughout during 2021 due to covid-19. The National Express service to Cardiff and Newport returned in 2022 providing further connectivity for the region into South Wales.
- The air quality monitoring programme shows air quality levels at the Airport remain within Government Air Quality Objectives in 2022.
- Despite a 280% increase in passenger numbers between 2021 and 2022, recycling rates remained consistent with 2021 levels. 84% of waste generated on site was recycled or reprocessed and diverted from landfill.
- Groundwater monitoring showed no abnormal levels.
- In 2022, Bristol Airport's carbon footprint across scope 1 and 2 emissions decreased by 29% compared with 2019 (baseline year).
- Customers and employees using our Electric Vehicle Charging Points used 41,811 kilowatt hours (kWh) of electricity, the equivalent of 13,790kg of CO_2 saved. This was a 143% increase from 2021.
- As expected in the recovery following COVID-19, the total number of direct employees in 2022 was higher than in 2021. 307 individuals were directly employed by the Airport in 2022, compared to 259 in 2021. 2022 saw 123 vacancies filled, of which 84 were new roles.
- In 2022, the Bristol Airport Local Community Fund provided grants totalling £122,621.36 to 38 local projects. This sum is £48,660 more than in 2021, supporting double the number of projects.

3 Aircraft movements

As all COVID-19 travel restrictions were lifted in March 2022, BAL operated over double the number of Aircraft Transport Movements (ATMs) in 2022 when compared to 2021. This increase represents an exceptionally strong recovery of rate of 94% when comparing to 2019 movements (69,534). The breakdown of ATMs are provided in **Table 1** below.

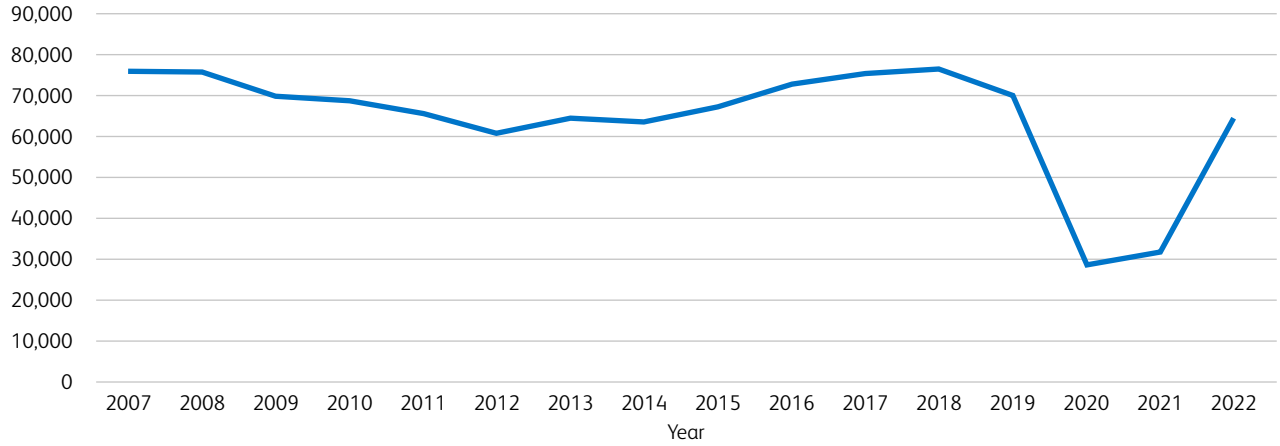
Table 1: This data is provisional Bristol Airport data and therefore may differ marginally to data published by the CAA.

Air Transport Movements Categories	2021	2022	% Increase from 2021 to 2022
Cargo	-	0	-
Scheduled domestic passenger aircraft	5,979	9,695	62%
Scheduled international passenger aircraft	13,800	41,741	202%
Charter domestic passenger aircraft	577	844	46%
Charter international passenger aircraft	849	3,990	370%
Positioning flights	609	818	34%
Other (incl. flying club, private charter)	10,381	8,589	-17%
Total ATMs	**32,202**	**65,678**	**104%**

Aircraft Transport Movements include all flights rather than aircraft movements which mainly reflects scheduled and charter flights only. Positioning flights refer to flights which have the sole purpose of positioning the aircraft to conduct a flight from a different airport. The rapid recovery of Bristol Airport to pre-pandemic operations once international flights resumed in March 2022 amidst a decline of coronavirus cases is reflected in **Figure 1**. Both scheduled and charter international passenger movements experienced the sharpest incline in the last year, seeing a 202% and 370% rise respectively.

The number of ATMs for the past fifteen years are shown in **Figure 1** below.

Figure 1: Aircraft Transport Movements 2007 to 2022



Aircraft types

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A breakdown of ATMs by aircraft type that used Bristol Airport during 2022 is set out in **Table 2**.

The difference between totals in **Table 2** and **Table 1** is due to the availability of data when breaking down to aircraft type level.

Table 2: ATMs by aircraft type

Name	ATM
Helicopter	
AgustaWestland AW109	48
Eurocopter - EC135	1514
Eurocopter AS-355 ECUREUIL 2	4
AgustaWestland AW169	10
AgustaWestland AW189	2
Aerospatiale AS332	0
Bell 429 GlobalRanger	14
Bell 206	15
Bell 505	2
Boeing CHINOOK 114/234/414	14
Airbus Helicopter H145	0
Eurocopter EC130	6
KAWASAKI EC-145	0
AGUSTAWESTLAND LYNX WILDCAT	5
Agusta Westland Merlin	2
Eurocopter AS-350	6
Eurocopter AS-365 DAUPHIN 2	2
NH Industries NH90	2
Robinson R22	0
Robinson RAVEN II R-44	5
Robinson R66	2
SA-330 PUMA	2
Sikorsky S-76	14
Jet Engine	
Airbus 139	347
Airbus 319	5863
Airbus 320	13067
Airbus 320 neo	4494
Airbus 320 WINGLET	3433
Airbus 321	100
Airbus 321 neo	2875
Airbus A340 all models	6
Airbus A330 all models	13
BAe 146 all pax models	0
BEECH Beechjet 400	40
Beechcraft/Raytheon Premier 1	0
Boeing 737 MAX 8 pax	4819
Boeing 737-700 pax	0
Boeing 737-700 WINGLET	0
Boeing 737-800	272
Boeing 737-800 WINGLET	15144
Boeing 737-300	4
Boeing 757-200	4
Boeing 767	2
Boeing 787-8 Dreamliner	508
Boeing 787-9 Dreamliner	14
Boeing EC135A	0
Boeing Globemaster III	6
Boeing Goshawk	0
Bomardier Challenger CL601-A3 (600 Series)	44
Bombardier Challenger CL300	50
Bombardier Challenger 850	2
Bombardier CRJ200	14
Bombardier CRJ-900	0
Bombardier Global 5000	10
Bombardier Global 6000	2
Bombardier Global 7500	8
Bombardier Global Express	17
British Aerospace BAE 146-200	8
BAE 125 Hawker 1000	4
Canadair Regional Jet 1000	0
Cessena Citation 525	371

Name	ATM
Cessena Citation II C550	0
Cessena Citation Mustang 510	0
Cessna Citation 7	4
Cessna CITATION 10	8
Cessna Citation 500	2
Cessna Citation 550	40
Cessna Citation 560 5 Ultra	149
Cessna Citation 56X	93
Cessna Citation 680 SOVEREIGN	30
Cessna Citation CJ4-525C	49
Cessna Citation Latitude (Model 680A)	6
Cessna Citation Mustang	26
Dassault Falcon 2000	37
Dassault Falcon 50	2
Eclipse Aerospace EA500	48
Embraer 135	104
Embraer 145	475
Embraer 170	179
Embraer 175	518
Embraer 190	1691
Embraer 195	4
Embraer E190-E2	0
Embraer E195-E2	4
Embraer Legacy 500	425
Embraer Legacy 600 / Legacy 650	0
Embraer Phenom 100	34
Embraer Phenom 300	0
Eurofighter Typhoon	2
Falcon 7X	14
Falcon 8X	68
Falcon 900	42
Gulfstream 1125 ASTRA	14
Gulfstream 2	14
Gulfstream 4	10
Gulfstream 5	41
Gulfstream 6	163
Gulfstream Aerospace G-1159 Gulfstream II / III / IV /V	0
Gulfstream G650	0
Hawker 900-p	2
HAWK	18
Honda HA-420 HondaJet	20

Name	ATM
Learjet 31	2
Learjet 35	31
Learjet 45	128
Learjet 55	4
Learjet 60	10
Learjet 75	14
Beechcraft/Raytheon Premier	3
Propellered	
2000 Rockwell Commander 114B	0
Aerospatiale/Alenia ATR 42-500	0
Airbus A400M Atlas	17
ATR 42-300	2
ATR 42-500	6
ATR 72 500	800
ATR 72 600	2047
Beechcraft 350 SUPER KING AIR	101
Beechcraft 35 Bonanza	5
Beechcraft King Air BE-90	12
Beechcraft Super King Air 200	1234
Britten Turbine Islander	2
Cessena 172 SKYHAWK MESCALERO	588
Cessna 182 SKYLINE	43
Cessna 421 GOLDEN EAGLE	12
Cessan 425	2
Cessna Caravan	10
Cessna 414 Chancellor	2
Cessna F150L	51
Ciruss SR-22	92
Dassault Dash 8-400 series	0
Diamond DA40 Diamond Star	10
Diamond DA-42 Twin Star	32
Diamond DA62	26
Diamond Star	0
Dornier 328	2
GROB G-115	0
GROB G-120TP	0
Lockheed L-182 / 282 / 382 (L-100) Hercules	4
Mooney M-20	2
Partenavia/Vulcanair PA-68	4
Piaggio P180 Avanti	8

Name	ATM
Pilatus PC9	2
Pilatus PC-12	104
Pilatus PC-12/47E	0
Piper P28A CHEROKEE WARRIOR	986
Piper P28R Arrow	1
Piper PA-28 CHEROKEE	1274
Piper PA-30 Twin Comanche	4
Piper PA-31-350 CHIEFTAN/MOJAVE/NAVAJO T1	16
Piper PA-32 CHEROKEE SIX/SARATOGA/TURBO SARATOGA	4
Piper PA-34 SENECA	74
Piper PA-46 MALIBU MIRAGE	2
PITTS special	2
Robin DR400	0
Socata Tampico 9	3
Socata TBM-850	8
Socota TB-10 TOBAGO	198
Socota TBM-700	93
Socota TBM-900	4
Swearingen SW3	2
Unknown aircraft type	76
Grand Total	**65706**

Out of the 65,706 total movements in 2022, the Airbus A320neo, which is a modernised, quieter aircraft type, made 21,488 movements, equivalent to 32.7 %. The Neo constituted to over double the percentage of movements in 2022 than in 2021. The Boeing 737 MAX which is a similarly modern aircraft made up 7.3 % of movements in 2022, compared to only 2.4 % in 2021. It did not feature in the movements list in 2020. In 2021 it made up 2.4 % of jet engine aircraft movements.

Table 3: Fleet breakdown % of Neos and Max's overtime

Year	2020	2021	2022
% of Neos/Max's	21 %	25 %	40 %

5 Passenger statistics

Following the revival of the aviation industry in 2022 as flights resumed post covid-19, passenger numbers drastically exceeded that of 2021 across all categories shown in **Figure 2** below. The number of scheduled flights in 2022 was over double the number scheduled in 2021. Bristol Airport experienced the fastest recovery in passenger numbers across all UK airports, seeing a 90% recover rate in 2022 passenger numbers in comparison to 2019. When contrasted to 2021, passenger numbers in 2022 were 280% higher than the previous year, as shown in **Table 4** below.

Table 4: The rapid recovery of Bristol Airport to pre-pandemic operations once international flights resumed in March 2022 amidst a decline of coronavirus cases is reflected in Figure 1.

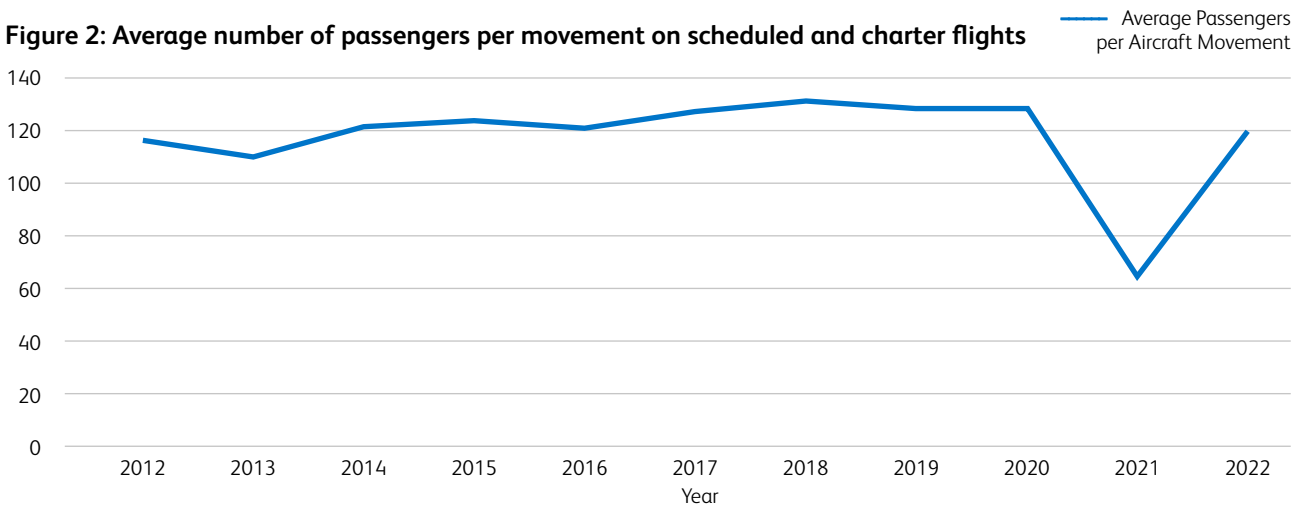
Flight Type	2022	2021	Change
Scheduled Domestic	1,142,451	647,002	+77%
Scheduled International	6,015,119	1,303,675	+361%
Charter Domestic	5,766	2,996	+92%
Charter International	672,572	104,518	+543%
Other	5,019	3,136	+60%
Infants	-	0	-
Transit	-	0	-
Total	**7,841,102**	**2,061,327**	**+280%**

Breaking down into scheduled and charter flights, scheduled flights operate to an established schedule between the airport and airlines in advance. A charter flight is where the flight has not been published as part of an airlines pre-determined schedule, for example a charter flight wouldn't be scheduled to depart every week at a specific time but will alternatively follow an unspecified itinerary.

Looking further into passenger statistics, the graph below shows the average number of passengers per aircraft movement.

It is important to note that due to differences in the way some flights are recorded, passenger and aircraft movement figures generated by Bristol Airport may contain small variances when compared to those reported by the UK Civil Aviation Authority (CAA).

Figure 2: Average number of passengers per movement on scheduled and charter flights



6 Passenger routes

Table 5 lists the top ten most popular routes from Bristol Airport during 2022 and 2021. These are represented in the map below (**Figure 3**). As Covid-19 restrictions eased, international routes increased in popularity, with 2 out of the top 3 destinations being outside of the UK in contrast to the top 3 destinations in 2021 all being within the UK. Despite being the 2nd most popular destination in 2021, Belfast was not within the top 10 in 2022. All other destinations remained consistently in the top 10 between 2021 and 2022, except the replacement of Belfast with Barcelona in 2022. Although Barcelona now sits within the top 10 destinations, it is important to note that this is inclusive of flights to 3 different airports within Barcelona, specifically to Barcelona (BCN), Girona–Costa Brava Airport (GRO) and Reus Airport (REU).

Figure 3: Map showing destinations from Bristol Airport in 2022

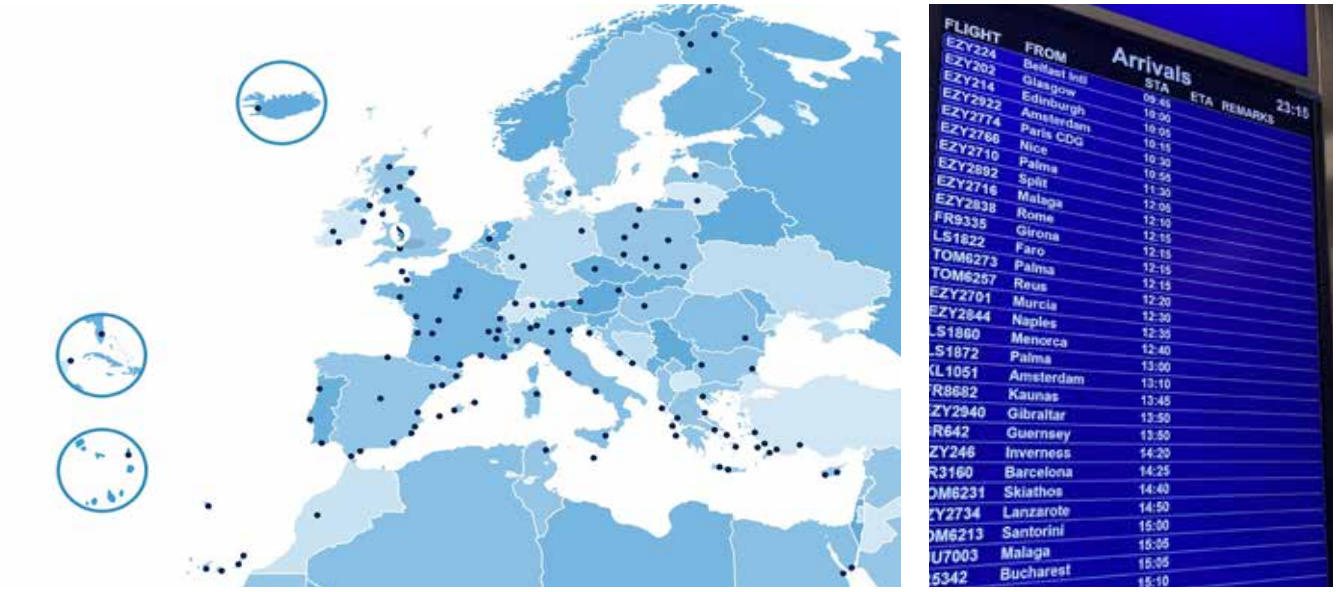


Table 5: Top ten destinations by movement in 2022 and 2021

2021 Destinations	2021 Passenger Numbers	2022 Destinations	2022 Passenger Numbers	2021 vs 2022
Edinburgh	173,698	Alicante	357,138	↑ 5
Belfast	165,203	Dublin	349,481	↑ 3
Glasgow	140,113	Amsterdam	347,410	↑ 7
Dublin	105,183	Palma de Mallorca	343,573	↑ 1
Palma de Mallorca	101,360	Malaga	313,760	↑ 2
Alicante	89,939	Edinburgh	294,976	↓ 5
Malaga	78,734	Glasgow	289,044	↓ 4
Faro	74,250	Tenerife	288,645	↑ 1
Tenerife	66,970	Faro	285,500	↓ 1
Amsterdam	59,629	Barcelona	284,774	↑ 9

7 Runway usage

The runway at Bristol Airport is aligned east/west. The runway designation is derived from the compass bearing of each direction. The westerly runway is known as runway 27 and the easterly runway as runway 09. Runway use is dictated by wind direction. The percentage of movements by direction since 2002 is provided in **Table 6**. The average usage over the last 20 years has been 76% for Runway 27 and 24% for Runway 09. Runway use is dependent on several factors including wind speed, wind direction and visibility.

Table 6: Runway usage 2002 to 2022

Year	Westerly (27)	Easterly (09)
2001	79%	21%
2002	77%	23%
2003	65%	35%
2004	82%	18%
2005	71%	29%
2006	75%	25%
2007	79%	21%
2008	84%	16%
2009	80%	20%
2010	82%	18%
2011	83%	17%
2012	86%	14%
2013	75%	25%
2014	67%	33%
2015	76%	24%
2016	86%	14%
2017	80%	20%
2018	64%	36%
2019	73%	27%
2020	81%	19%
2021	70%	30%
2022	67%	33%
Average	**76%**	**24%**

Flight routings

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Indicative flight routes for easterly and westerly operations are provided in **Appendix A**. Flight routes are shown as 3km swathes for departing aircraft on Noise Preferential Routings (NPRs) and arrivals which are established on final approach.

The NPRs are to be flown by all departing aircraft of more than 5700 kg maximum certified weight, unless otherwise instructed by Air Traffic Control (ATC) or unless deviations are required in the interests of safety and/or weather. The NPR requires aircraft to climb straight ahead for 4.5 nautical miles when departing on runway 27 and 4.7 nautical miles on runway 09 and to be no lower than 3,000ft above sea level before commencing the turn. The obligations of the NPR cease when an altitude of 4,000ft above sea level has been reached.

In 2022, over 99% of monitored departures conformed to the NPRs which demonstrates our continued high rate of compliance in this area.

Bristol Airport reserves the right to levy a surcharge against any operator who, on a persistent basis, fails to operate in-line with the prescribed NPRs as recorded by ANOMS. No such surcharges were levied in 2022.

Bristol Airport's noise and track keeping system, ANOMS, is used to monitor adherence to the NPRs and to record continuous descent approaches. An online flight tracking system is available for public use on the Airport's website.

Bristol Airport works with the airlines and the air traffic services provider, NATS, to promote the use of continuous descent approaches (CDAs). In contrast to conventional airport approaches, aircraft following CDAs descend continuously from as high as possible. A continuous descent requires less engine thrust than level flights and provides additional noise attenuation by keeping the aircraft higher for longer. In 2022, 80% of arrivals used a CDA, which is 4% more than in 2021. An arrival is classified as a CDA if it is below an altitude of 6000ft, no level flight, or one phase of level flight is no longer than 2.5 nautical miles. CDA performance is regularly reviewed with the airlines at the Flight Operations and Safety Committee to improve performance.

9 Noise monitoring

Bristol Airport continually analyses aircraft noise using three monitors located near Felton, Winford and Congresbury. The Congresbury and Winford (known as Littleton Hill) monitors are positioned in accordance with ICAO standards for monitoring noise from departing aircraft. They are positioned 6,500m from the start of roll from Runway 09 (Littleton Hill) and Runway 27 (Congresbury).

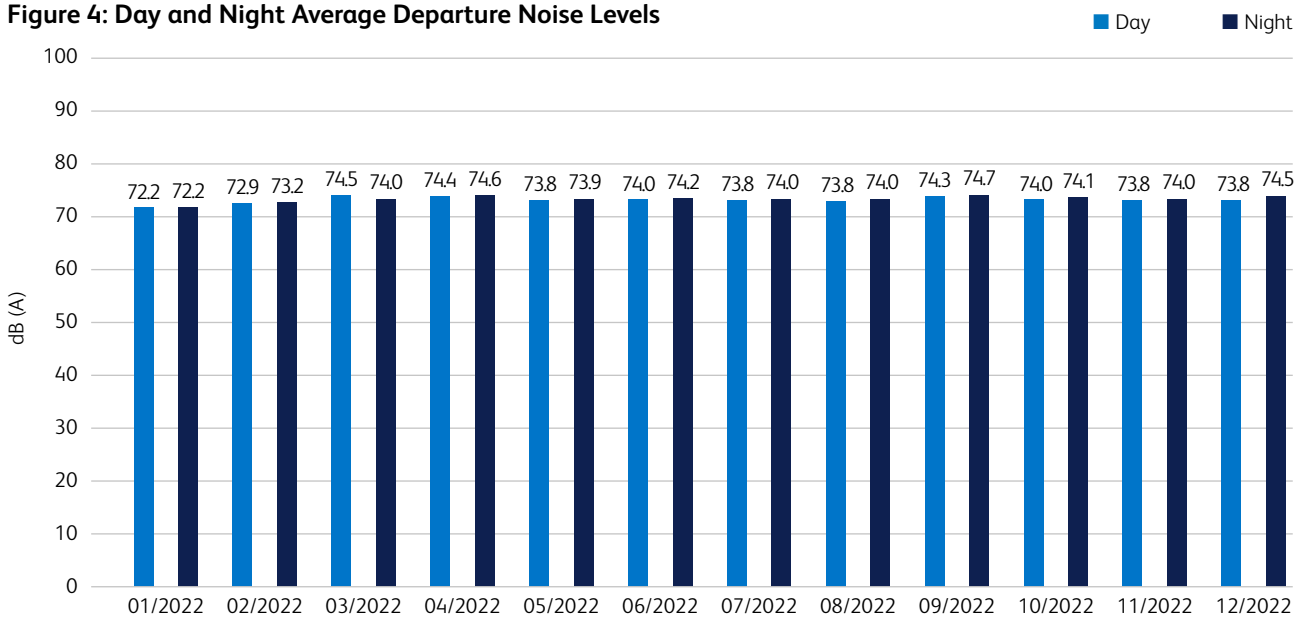
Aircraft using Bristol Airport are required to be operated in the quietest possible manner. Departing aircraft exceeding 90 dB(A) by day (0600 to 2330 local time) and 85 dB(A) by night (2331 to 0559 local time) at the Congresbury and Littleton Hill noise monitoring points will be subject to a penalty as set out in the Airport Fees and Charges. A summary of data relating to departing aircraft from the noise monitoring undertaken in 2022 is provided in **Table 7** with 2021 data represented in brackets. All departing aircraft complied with the noise infringement limits and no penalties were levied in 2022.

Table 7: Noise monitoring - departing aircraft from Congresbury and Littleton Hill noise monitoring points (2021 data in brackets)

	Peak departures noise level Lmax dB(A)		Average departures noise level
Month	**Runway 27 - C**	**Runway 09 - LH**	**Runways 09 and 27**
January	79.6 (79.5)	82.1 (78.6)	72.2 (71.2)
February	81.6 (74.8)	81.2 (76.2)	72.9 (70.5)
March	80.3 (74.2)	81.9 (74.2)	74.4 (70.0)
April	80.5 (75.2)	81.4 (77.3)	74.4 (70.7)
May	80.0 (79.6)	80.2 (79.9)	73.8 (71.7)
June	79.4 (76.4)	80.9 (76.8)	74 (73.2)
July	81.8 (78.9)	79.4 (81.1)	73.8 (72.9)
August	82.6 (79.1)	80.7 (80.6)	73.8 (73.2)
September	80.2 (79.5)	80.7 (80.2)	74.3 (73.1)
October	80.3 (79.7)	81.2 (81.3)	74 (73.1)
November	79.3 (78.6)	82.2 (77.8)	73.8 (72.9)
December	81.2 (79.1)	83.1 (79.8)	73.8 (72.6)

Figure 4 below shows the average departure noise levels split between the day and night period.

Figure 4: Day and Night Average Departure Noise Levels



The noise climate recorded at the three noise monitors is provided in **Table 8** below.

A noise climate is the average sound level experienced over a set period of time. In this case, noise is measured over the 24 hour period then averaged for each month of the year at each of the Airport's static noise monitoring stations.

Table 8: Noise climate

	Congresbury			Littleton Hill			Felton		
	2022	2021	2020	2022	2021	2020	2022	2021	2020
Month	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)	Leq dB(A)
January	57.6	56.2	58.9	54.6	53.7	57.1	58.1	54.3	60.4
February	60.2	57.2	60.1	61.7	55.2	62.5	61.5	52.6	62.6
March	58.2	57.4	57.7	54.3	56.4	57.1	59.0	55.1	66.7
April	58.2	56.2	52.8	56.5	48.6	49.5	60.3	52.0	49.1
May	58.0	56.9	81.7	56.5	56.0	52.0	60.6	55.6	52.3
June	58.0	55.8	68.8	56.5	50.8	50.5	60.9	54.5	51.4
July	57.9	56.4	56.4	56.1	52.2	53.1	60.9	56.9	57.3
August	57.5	57.0	57.7	55.8	53.5	55.6	60.6	58.3	58.5
September	58.0	57.1	56.8	56.2	53.8	53.6	61.0	58.4	57.5
October	58.5	57.6	57.4	56.9	55.1	53.6	61.0	59.2	56.5
November	58.5	57.6	56.8	55.9	55.2	54.3	59.5	58.6	54.0
December	58.6	57.8	57.3	55.4	54.6	53.4	59.5	58.9	55.0

10 Noise contours

The contours produced and analysed in this section were completed in January 2022 in line with the Airport's planning requirement. Conditions 30 and 31 attached to the planning permission for the development of the Airport dated 16 February 2011 require forecast aircraft movements and consequential noise contours over a 92 day period between mid-June and mid-September to be reported to the local planning authority on 31 January each year.

Condition 30 refers to the 57dB(A) Leq16hr (0700-2300) contour and condition 31 refers to the 63dB(A) Leq 16hr (0700-2300) contour. Noise predictions have been undertaken using the latest version of the Federal Aviation Authority noise contour modelling software Aviation Environment Design Tool (AEDT – version 3d), which has replaced the Integrated Noise Model 7.0 used previously. Forecast commercial aircraft movements for summer 2022 have been derived from the airline scheduling system operated and co-ordinated for Bristol Airport by Airport Coordination Limited.

The area of the 57dB predicted contour for summer 2022 was calculated at 10.8 sq. km, the same size as the predicted summer 2020 contour. Both figures are below the limit of 12.42 sq. km set out in the requirements of Condition 30 of the Airport's planning permission. The noise contours are included in **Appendix B**. It is this contour which determines the eligible properties as per the airports Noise Insulation Scheme.

It is important to note, the methodology used to collate this contour does not take into consideration:

- Topographical terrain data for the area.
- Final climb and arrival profiles for airline fleets.
- Adjustments to noise emissions to represent measured noise levels at the airport.

The number of properties within the forecasted summer daytime contours are detailed in **Table 9** below. The number of properties is cumulative. For example, the number of properties in the 63dB contour are also included in the 60dB contour. Although the number of dwellings experiencing aviation noise over 57dB (LAeq 16h) has increased within the assessed contour areas, the number of dwellings experiencing higher levels of aircraft noise, 60 dB (LAeq 16h) and above has reduced in 2022 when compared to 2021.

Table 9: Number of Dwellings in Noise Insulation Scheme contours in 2021 and 2022

Contour Level (dB LAeq,16h)	Dwellings within Summer Daytime Air Noise Contours	
	2022	2021
≥57	531	492
≥60	226	259
≥63	31	52

11 Night noise quota usage

The following information relates to the requirements as set out within the airports Section 106 Conditions 36 to 39, 16th February 2011. Night-time operations at Bristol Airport are controlled by a noise quota system. The restrictions specify a night period (23:00-07:00) during which time the noisiest types of aircraft may not be scheduled to land or take off. In addition, between 23:30 and 06:00, the night quota period, aircraft movements are restricted by a noise quota limit. Aircraft count against the noise quota according to their quota count (QC) classification.

The quota count itself is related to the noise classification of aircraft as set out in a formal notice published by the CAA on a regular basis. The restrictions allow for dispensations to be given in certain circumstances and there are provisions for dealing with delayed departures and early arrivals. The quota limits are set on a seasonal basis, defined by the period of British Summer Time. The summer season is therefore about seven months long for which a current quota count limit of 1,260 applies. The winter season is about five months long for which a current quota count limit of 900 applies. Up to 10% of the noise quota, if not used in the current season, is carried over to the following season. Similarly, up to 10% of the next season's quota may be anticipated in the event of an overrun. Any excess overrun over 10% is penalised in the following season at double the amount of the excess.

The total number of take-offs and landings between the hours of 23:30 and 06:00 shall not exceed 3000 in the summer season and 1000 in the winter season. The total number of take-offs and landings between the hours of 06:00 and 07:00 and between 23:00 and 23:30 shall not exceed 10,500 in any calendar year. **Table 10** records the night movements and quota usage since the system came into use.

Table 10: Night movements and quota use

Year	Night movements		Quota use	
	Summer	Winter	Summer	Winter
2000/01	2564	1371	1239	435.5
2001/02	2999	1536	1230	614
2002/03	2655	1386	1150	444.5
2003/04	2960	1033	1378	413.5
2004/05	2082	786	1288	426
2005/06	2183	891	1225.5	472.5
2006/07	2181	163	1138	88
2007/08	2057	939	974.5	451
2008/09	2322	831	1118.5	326
2009/10	2146	816	940	346
2010/11	2984	559	1375.5	216

continued

Table 10: Night movements and quota use continued

Year	Night movements		Quota use	
	Summer	Winter	Summer	Winter
2011/12	2216	257	1112.5	120
2012/13	1861	253	938	117
2013/14	1888	233	975.5	100
2014/15	2210	232	1145	106
2015/16	2378	244	1180	96.5
2016/17	2704	298	1354	120.5
2017/18	2991	353	1522	152
2018/19	2975	254	1490	117.5
2019/20	2933	305	1408.5	144.75
2020/21	570	290	216	129
2021/22	694	331	366	155.75
2022/23	**2998**	**CURRENT**	**1565**	**CURRENT**

The breakdown of movements in each quota count level throughout Summer 2022 is shown below for arrivals and departures. As the airport has 1000 slots for the winter period, it is not necessary to restrict movements during this time.

Table 11: Quota use by aircraft quota count for Summer 2022

	Movements	Quota count use			
		Exempt	**0.5**	**1**	**2**
Arrivals	**2930**	3	2845	82	0
Departures	**68**	3	9	56	0

Complaints Analysis

Both the Quota Count and Night Movement limit schemes allow the airport to raise dispensations for night flying. These dispensations relate to those identified within Condition 36 of the airports current planning permission.[1] Such dispensations highlight, where applicable, if a movement occurred within the night period but was outside of the airports sphere of control. Such instances include wider air traffic congestion, air strikes and medical emergencies amongst others. For clarity, the 931 exempt movements in **Table 11** are still included in the total night movements. The reason for exemption is due to the aircraft type meeting the criterion of exemption as part of the Quota Count scheme rather than the movement, in its entirety, being granted dispensation as per the criteria in Condition 36.

1 S106 Agreement relating to Bristol Airport, 16th February 2011

11

In 2022, Bristol Airport continued slot coordination for the night period. This ensures compliance with existing planning conditions. This was established by a competent and independent organisation known as Airports Co-ordination Limited (ACL). ACL manage all movements at the larger London airports such as Heathrow. Bristol Airport's use of such services was approved by the Department for Transport in 2017.

ACL designate a certain number of slots to airlines for the night period in accordance with the limits, they also manage dispensation requests whilst actively managing the airlines conformance against our controls. If a movement occurred within the night period, an airline could lodge a request for it to be dispensed via ACL as per the requirements of Condition 36.

Both ACL and Bristol Airport would review these and report any dispensations to the local planning authority. Those requests which did not align to the conditional criteria would be refused.

There were 4,227 movements during the shoulder periods between the hours of 06:00 and 07:00 and 23:00 and 23:30 during 2022. This remains significantly under the legal threshold of 10,500 movements during these times within a calendar year.

12 Environmental complaints

Statistics surrounding noise complaints can be difficult to analyse due to the nature of subjectivity as well as individual perception and tolerance of noise.

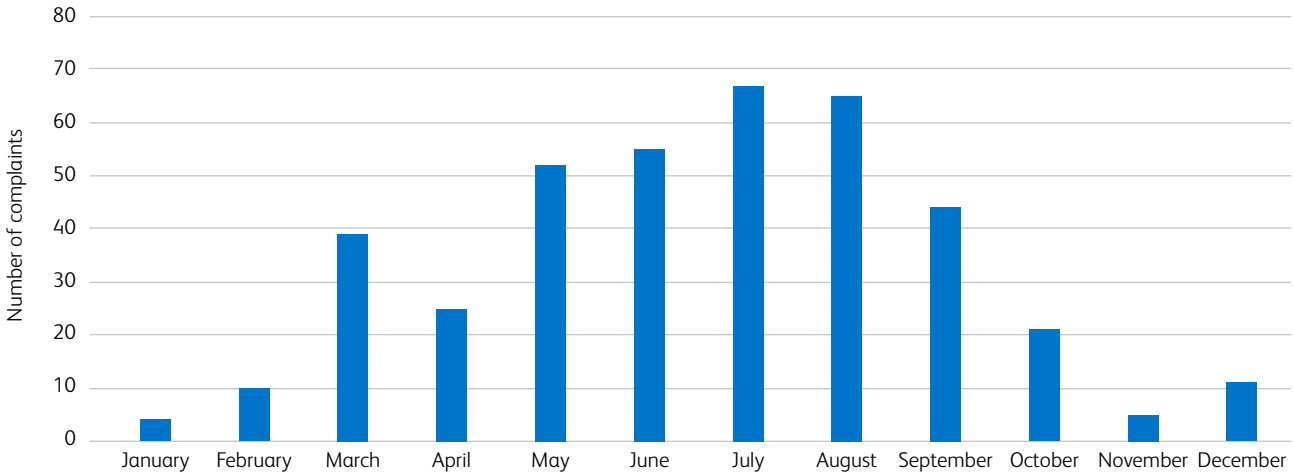
For logging and tracking noise complaints, Bristol Airport operates a web-based system, accessible at /www.bristolairport.co.uk/contact-and-help/noise-and-environmental-concerns/. Alternatively, you can write to Sustainability, Bristol Airport, Lulsgate House, Bristol, BS48 3DW. During 2022, Bristol Airport received a total of 398 complaints through all communication channels. The number of aircraft movements per complaint fell significantly from 203 in 2021 to 165 in 2022, despite an increase in aircraft movements. Noise complaint statistics are shown in **Table 12** below.

Table 12: Noise complaints

	2022	2021	2020	2019	2018	2017
Total number of complaints	398	159	199	451	379	172
Number of individual complainants	253	105	96	229	176	100
Average number of complaints per complainant	1.6	1.5	2.1	1.9	2.2	1.7
Number of aircraft movements per complaint	165	203	148	154	203	443

The distribution of noise complaints by month throughout 2022 is shown in **Figure 5**. As expected, the most complaints were logged during the summer period between May and September, where a large percentage of annual airport movements occur.

Figure 5: Number of complaints by month



12

The nature of complaints, as allocated by complainants, in 2022 is shown in **Table 13**. Complaints in the table below only include those given a specified category by the complainant. Most complaints are in relation to aircraft day and night noise. **Figure 6** shows this data by nature of complaint.

Table 13: Type of Concern and number of complaints raised

Type of Concern	Number of Complaints
Air Quality	29
Aircraft Night Noise	124
Aircraft Day Noise	69
Low Flying	26
Flight Paths	35
Noise Insulation Scheme	5
Pollution	5
Climate Change	3
Helicopter	2
Ground Noise	1
Vortex	1
Odour	1
General Environment	1
Road Traffic	1
Total	**303**

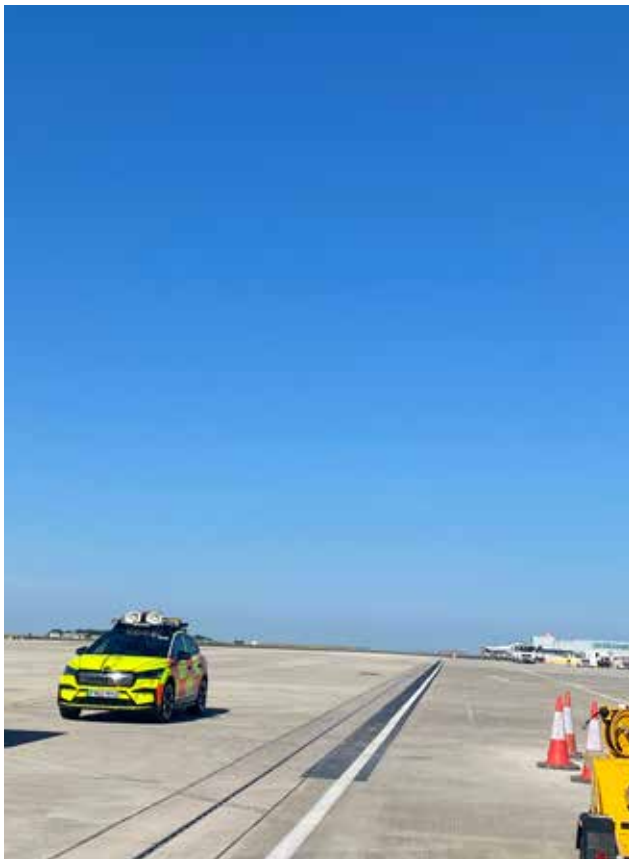


Figure 6: Nature of complaints

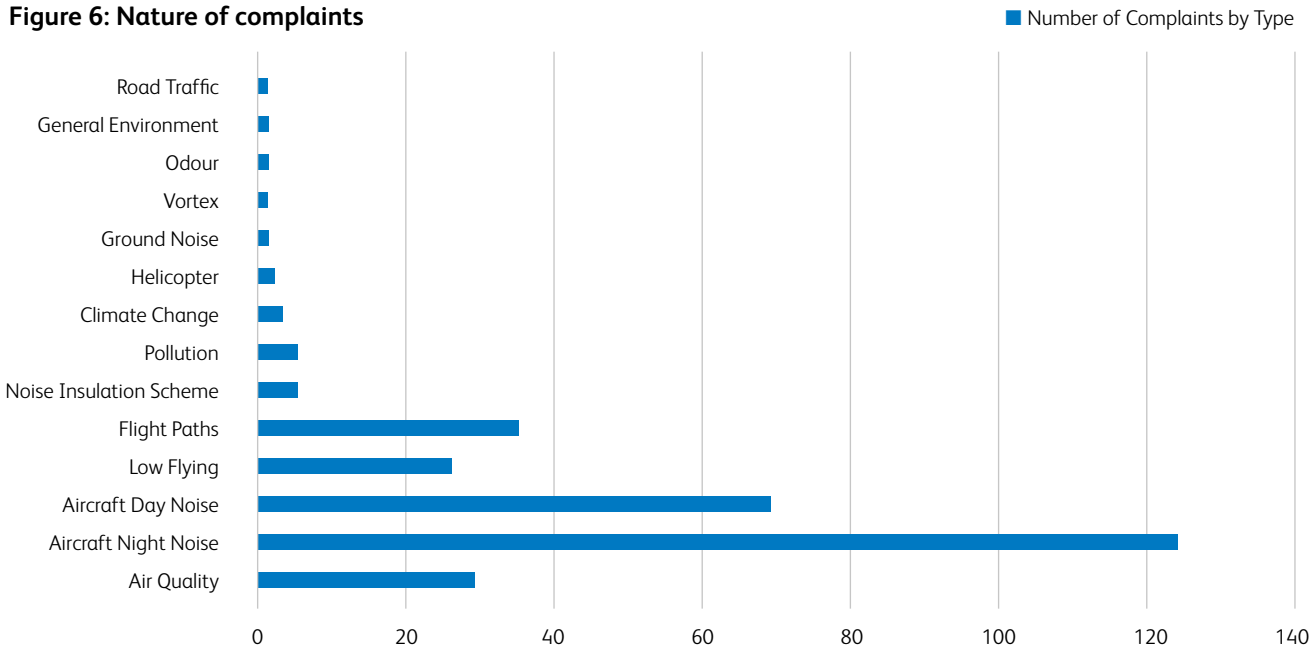


Figure 7: Top 10 locations of noise complaints

Key: note the colour denotes the majority reason for complaints in an area and the larger the size the higher number of complaints

- Night
- Track-keeping
- Day
- Helicopter
- Background
- Training/Circuits
- Low Flying
- Multiple

Table 14: Areas with three or more noise complaints during 2022 and 2021

Location	2021	2022
Backwell	15	9
Bath	5	74
Blagdon	7	4
Bristol	15	42
Chelvey	1	1
Chew Magna	0	3
Chewton Mendip	1	3
Claverham	0	7
Cleeve	21	22
Clevedon	1	7
Compton Dando	1	2
Congresbury	5	7
Dundry	1	3
Felton	21	11
Keynsham	4	27
Long Ashton	1	7
NES/Keynsham Area	0	13
Wraxall	0	0
Wrington	11	7
Yatton	4	7

13 Ground noise management

Measures adopted by Bristol Airport to minimise the effects of ground noise are set out in a Ground Noise Management Strategy prepared in accordance with the Section 106 Agreement dated 16 February 2011. Progress against the areas of action is set out below.

Fixed electrical ground power

- Fixed electrical ground power (FEGP) is provided as a primary substitute for the use of aircraft auxiliary power units (APUs) or mobile ground power units.
- Its use is mandatory where provided and is subject to strict operational rules. Aircraft stands 19, 20, 34, 35, 36, 37, 38 and 39 have been equipped with FEGP. In 2022, 1299 turnarounds were allocated to stands with FEGP.

Ground running of aircraft engines

- Ground running of aircraft engines is necessary as part of the scheduled maintenance undertaken to ensure that aircraft are airworthy and fit for flight. All such activities are subject to strict operational procedures.

Table 15: Ground Running of Aircraft Engines
*(*September to December estimated based on 2017 due to data loss)*

	2022	2021	2020	2019	2018*	2017
Idle	372	566	297	347	412	356
Above Idle	42	36	26	32	33 39	

Aircraft auxiliary power units

- Strict operational procedures are in place to control the use of APUs engine runs. APU engine runs between 23:00 and 07:00 are subject to prior approval. APU engine runs are shown in **Table 16** below.

Table 16: APU engine runs

	2022	2021	2020	2019	2018	2017
APU Engine Runs	10	5	5	20	33 24	

14 Public transport

In the continuing recovery from Covid, the A1 Flyer operated throughout 2022 and by October was at a frequency of up to every 12 minutes. The A3 Flyer service to Weston Super Mare returned in April having been suspended since March 2020. Both Flyer services are operated by First under contract from Bristol Airport. The National Express 216 service to South Wales also returned in 2022.

Bristol Airport continues to work closely with our public transport service providing partners and local authorities to develop services which inspire demand from our passengers. Throughout 2022, Bristol Airport trialled low emission alternatives on our internal staff routes with a view to informing future plans. In October we trialled the electric Mercedes E Citaro, a 12 metre single door bus which has battery capacity of 396KW/hr (NMC level2) giving a range of around 160-170 miles. And in December, we welcomed the world's first hydrogen fuelled double decker bus for a weeklong trial.

The key public transport services at the airport in 2022 are shown in the table below:

Table 17: Bus Operators and Routes

Service	Route	Operator
A1 Bristol Flyer	Bristol City Centre	First
A3 Weston Flyer	Weston-super-Mare	First
A4 Air Decker	Bath City Centre	Bath Bus Company
Falcon	Plymouth, Exeter to Bristol via BRS	Stagecoach
National Express 216	Cardiff, Newport	National Express

In September, service 54 and service 55 ceased owing to the closure of the operator; HCT group.

The figures below show passenger numbers on the flyer A1 and A3 services.

Figure 8: Bristol City Centre bus travel statistics for A1 flyer.

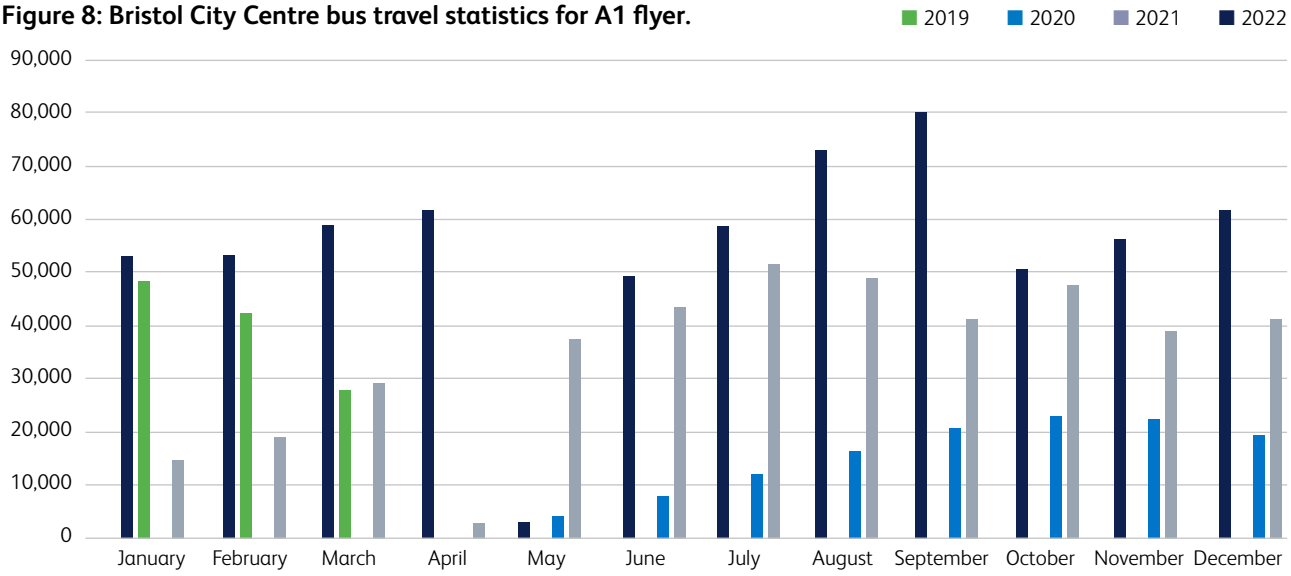
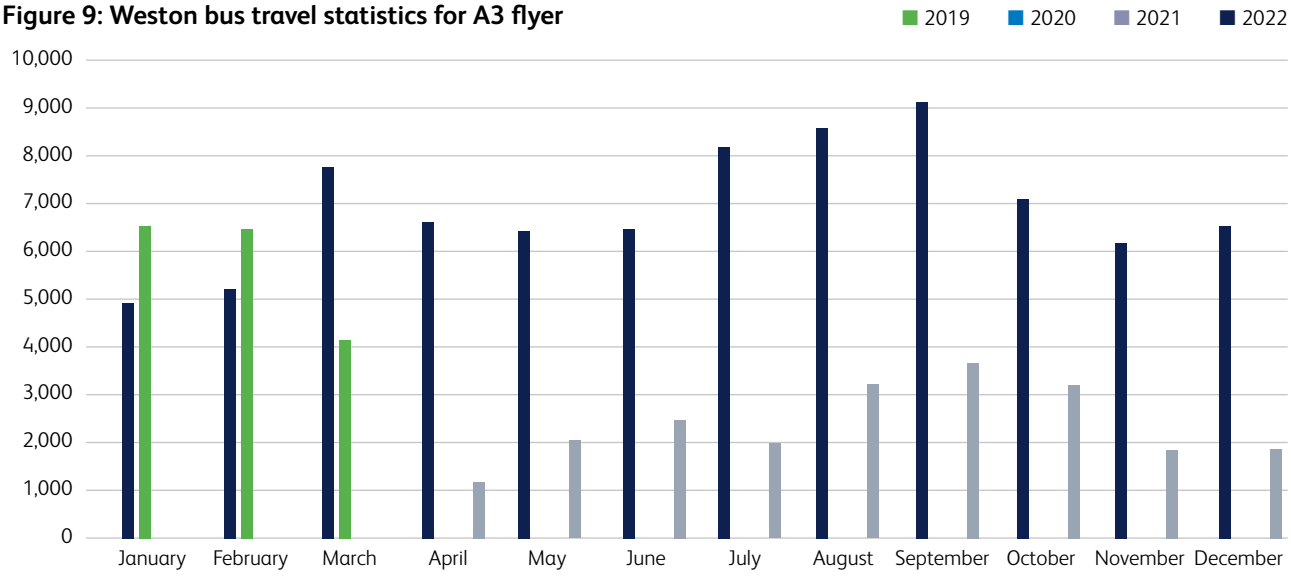


Figure 9: Weston bus travel statistics for A3 flyer



Regarding staff transport, from the 1st of August 2022 Bristol Airport offered free commute travel to all directly employed and business partner staff on the Flyer services. Staff patronage has not been included in **Figures 8** or **9**.

15 Air quality

Air quality can be affected by several pollutants that, in high concentrations, may pose harm to human health. Combustion processes produce Nitrogen Dioxide (NO_2) and Particulate Matter (PM_{10}) with the main potential airport sources coming from vehicle traffic (staff and passenger journeys and airport operational vehicles), aircraft engines (during taxiing, take-off and landing), energy generation (diesel generators and gas boilers), fugitive emissions (evaporation - during fuelling of aircraft and vehicles) and other activities such as fire training.

This section considers air quality at Bristol Airport during 2022, comparing recorded concentrations with the UK's Air Quality Strategy and against the commitments contained within Bristol Airport's S106 Agreement with North Somerset Council.

The National Air Quality Strategy (NAQS) below forms the legislative basis for air quality in the UK, stipulating long and short-term objectives to ensure air quality does not contribute to health issues.

National Air Quality Strategy Objectives

Pollutant	Annual objective (mean limit)	Short term objective (max events per annum)
NO_2	40 µg/m^3	18 hourly means > 200 µg/m^3
PM_{10}	40 µg/m^3	35 daily means > 50 µg/m^3

Section 106 Agreement

- Highlight air quality monitoring locations where monitored levels exceed 90% of the National Air Quality Strategy limit
- Report significant deterioration in air quality, defined as an increase in average annual concentration of more than 15% compared to the average levels recorded between 2007 – 2011 (NO_2) or particulate levels exceeding 50 µg/m^3 in more than 15 days in a calendar year (PM_{10})

15

Monitoring of air quality is undertaken continuously, with real-time monitors recording levels of both NO_2 and PM_{10} at the Airport site. Additionally, passive diffusion tubes are deployed to monitor average monthly NO_2 concentrations at nine locations across the Airport, including the location of the continuous air quality monitor. The locations of the monitors are shown in **Figure 10**.

Figure 10: Location of air quality monitors

Ambient concentrations of NO_2 and PM_{10} recorded by real time monitoring in 2022 are shown in **Table 18** with analysis against NAQS and S106 objectives.

Table 18: Analysis of continuous monitoring data against NAQS and S106 requirements

	5yr Baseline (µg/m³)	Recorded Annual Mean (µg/m³)	NO_2- Hourly Means > 200µg/m³ PM_{10}- Daily Means > 50uµg/m³	NAQS Compliant	Annual Mean <90% NAQS Objective	Significant Deterioration
NO_2	N/A	12.7	0	Yes	Yes	N/A
PM_{10}	N/A	14.7	0	Yes	Yes	N/A

Monthly ambient concentrations of NO_2 and PM_{10} recorded by real time monitoring are in **Figures 11** & **12**. Note that the target PM_{10}/NO_2 is the mean limit set in the National Air Quality Strategy Objectives

Figure 11: Particulate Matter monthly average readings for real time monitoring in 2022

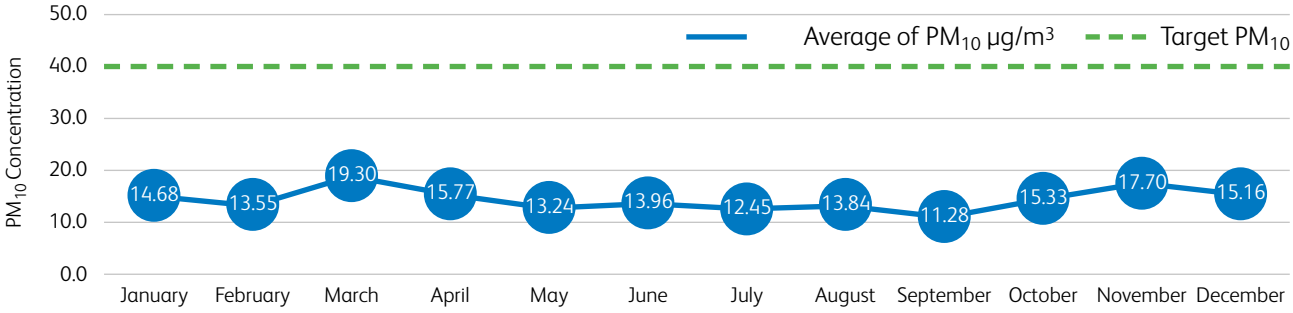
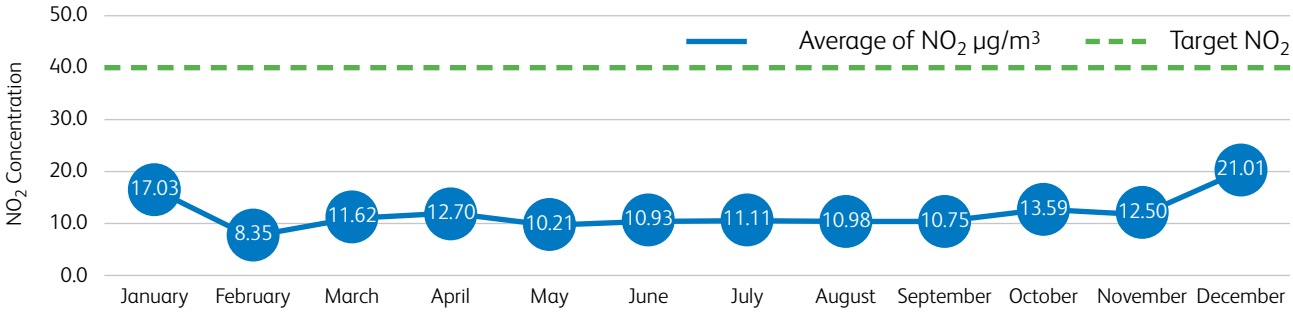


Figure 12: Nitrogen Dioxide monthly average concentrations recorded by real time monitoring in 2022



NO_2 levels recorded by diffusion tube monitoring are shown in **Table 19** with analysis against NAQS and S106 objectives.

Table 19: Diffusion tube monitoring results for 2022

Monitoring Location	Recorded Annual Mean (µg/m³)	NAQS Compliant	Annual Mean <90% NAQS Objective	Significant Deterioration
1	16	Yes	Yes	No
2	29	Yes	Yes	No
3	10	Yes	Yes	No
4	11	Yes	Yes	No
5	22	Yes	Yes	No
6	16	Yes	Yes	No
7	17	Yes	Yes	No
8	24	Yes	Yes	No
9	15	Yes	Yes	No

Waste management

16

All waste streams produced from property under the airport's control is managed by Bristol Airport Limited. This includes all terminal, operation and administration waste. The waste figures for 2021 and 2022 are shown in **Table 20** below.

Table 20: Waste management results for 2022 and 2021

Year	2022		2021	
Waste Stream	**Totals (tonnes)**	**Waste per passenger (kg)**	**Totals (tonnes)**	**Waste per passenger (kg)**
Recycled waste				
· Cardboard	119.79	0.02	36.96	0.02
· Glass	97.11	0.50	32.78	0.02
· Plastic bottles	25.73	0.07	8.25	0.00
· Mixed (incl. paper/plastics/cans)	21.41	0.04	21.41	0.01
· Coffee Cups	4.8	0.01	0.96	0.00
· Other such as wood, metal and electrical	44.47	0.06	32.77	0.02
Total recycled waste	**249.88**	**0.28**	**133.13**	**0.06**
Food waste to Anaerobic digestion	**189.23**	**0.21**	**74.6**	**0.04**
Green Waste	**3.86**	**0.00**	**10.93**	**0.01**
Total Waste diverted from landfill	**499.76**	**0.58**	**218.66**	**0.11**
Waste treated and sent to energy from waste	575.19	0.73	161.97	0.08
Waste not diverted from landfill	226.41	0.50	63.59	0.03
Total waste removed from BAL	1387.76	2.73	444.22	0.22
% waste recycled or recovered	**83.7%**	**-**	**85.7%**	**-**
% waste recycled on site (including food waste)	**50%**	**-**	**49.75%**	**-**

In 2022, passenger numbers were 280% higher than in 2021, which in turn generated 68% more waste in 2022. Passenger numbers experienced in the summer of 2022 are reflected in the volume of total waste removed from BAL. Despite the challenges of the summer period, recycling rates were retained around 50%.

The airport is focused on improving all three aspects of the waste hierarchy. Throughout 2022, several new initiatives to reduce waste volumes and improve onsite efficiency were developed and implemented between the airport's dedicated waste management team at the airport and business partners. Delivery palettes are now collected by the airport's waste management contractor to be reused, and a further retailer focus has been reducing the volume of soft plastic wrapping in deliveries. Within the airport administration building, new schemes to recycle crisp packets and coffee cups have been implemented. 3000 tonnes of rubble from current construction work onsite are also being repurposed in other construction projects at BAL. This statistic is not included in the figure above.

17 Ground water management

Bristol Airport has a number of ground water boreholes across its site as the Airport is situated above an aquifer. The Airport itself sits on high ground with a local geology of black rock limestone. The groundwater level of is between 70 – 100 metres below ground with areas of perched groundwater near the surface.

The Airport has several surface water drains which lead to ground-based soakaways. These soakaways have discharges permits, as issued by the Environment Agency, with requirements to conduct routine sampling boreholes to ensure discharges meet these permit requirements. A map of the Airport showing the perimeter boreholes is detailed in **Figure 13**.

Perimeter boreholes are located strategically to cover key risk areas and are sampled every 3 months. All samples obtained are analysed at a UKAS accredited laboratory. The laboratory results are provided to the Environment Agency every 6 months.

The results include indicators for sewage, heavy metals, hydrocarbons, de-icers and other elements. These are reviewed against the Environmental Quality Standards (EQS) and the Drinking Water Standards (DWS).

Figure 13: Locations of perimeter boreholes at Bristol Airport

The Airport also assess these results against groundwater level and rainfall data to identify any prominent trends between the groundwater level recorded. Total daily rainfall data were provided by the Environment Agency from the Barrow Gurney rain gauge for all of 2021. Groundwater level data were collected by independent consultants on behalf of Bristol Airport using a submersible barometric data logger (Hobo U20L) recording continuously at 15-minute intervals for the full sampling period. Data is also mapped against calculated ground water contours and estimated directional ground water flows.

For 2022, through the sampling undertaken Bristol Airport remains within the requirements of its discharge permits and monitoring will continue for 2023.

Utilities & energy management

18

airport carbon accredited REDUCTION

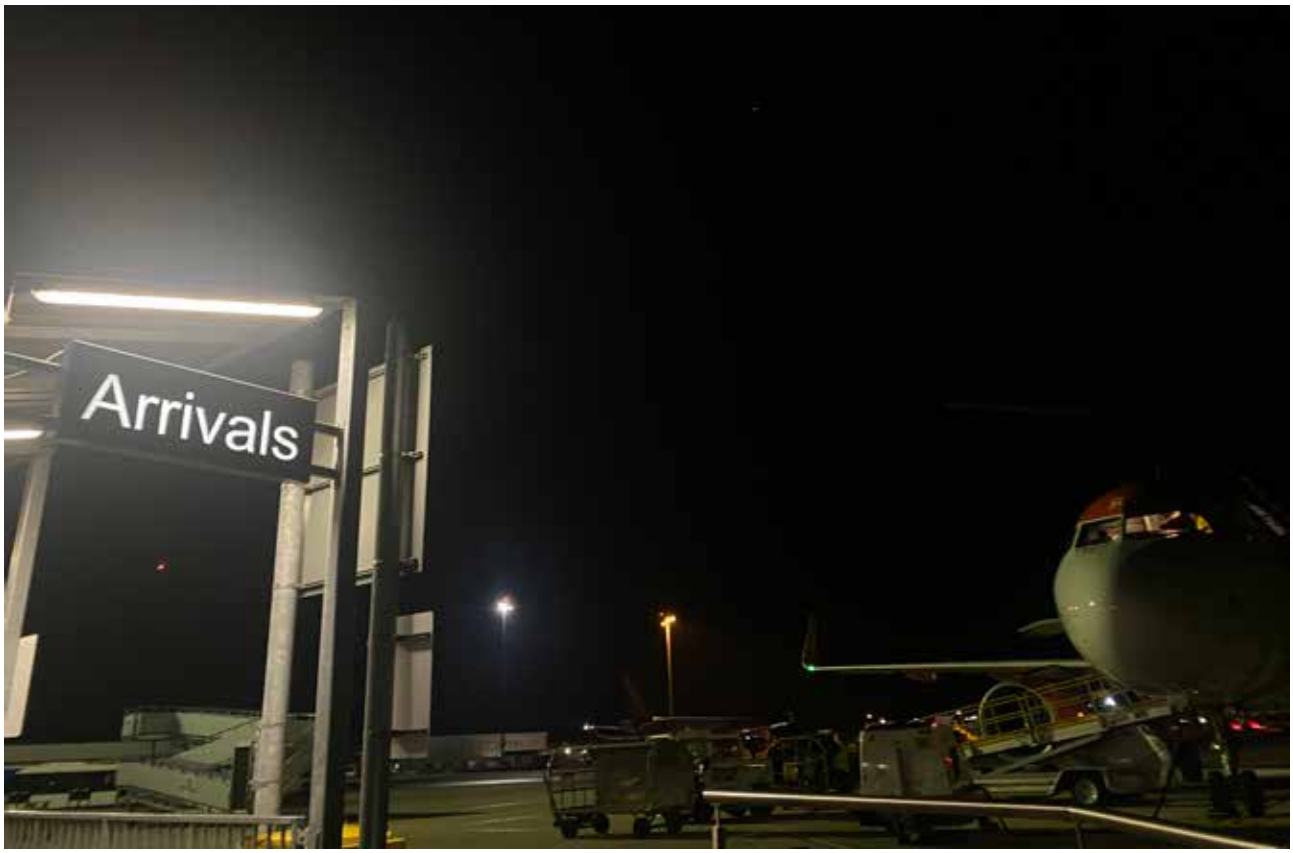
In 2022, Bristol Airport's carbon footprint across scope 1 and 2 emissions decreased by 29% compared with 2019* (baseline year).

More information on Bristol Airport's carbon footprint can be found in the airport's new sustainability strategy, which will be released by the end of 2023.

Bristol Airport is committed to continuing to reduce carbon emissions across the airport site. In 2021, Bristol Airport achieved carbon neutrality, 4 years ahead of our previous target of 2025. A range of actions are taking place to reduce the carbon intensity of the airport infrastructure. For example, development is taking place across the Airfield to construct a 2.8 acre solar farm which will be expected to increase the renewable energy generated on site to at least 16% of the Airport's direct energy needs over the year. All power generated would be consumed onsite. The success of this is normally measured through reducing carbon emissions per passenger, however, during 2021, with passenger levels effected by the pandemic, BAL has focused on absolute emissions reduction.

Bristol Airport achieved the first level of certification in the ACA scheme during 2015, 2016 and 2017. In June 2018, Bristol Airport gained ACA Stage 2 Certification of the four-stage programme by successfully reducing its carbon emissions year-on-year. We are delighted to announce we have progressed another two levels, to Stage 3 + Neutrality, in 2021.

*Due to the global pandemic, the data for 2021 is incomplete and does not give a fair assessment of the airport's carbon footprint.



19

Electric vehicle charging points

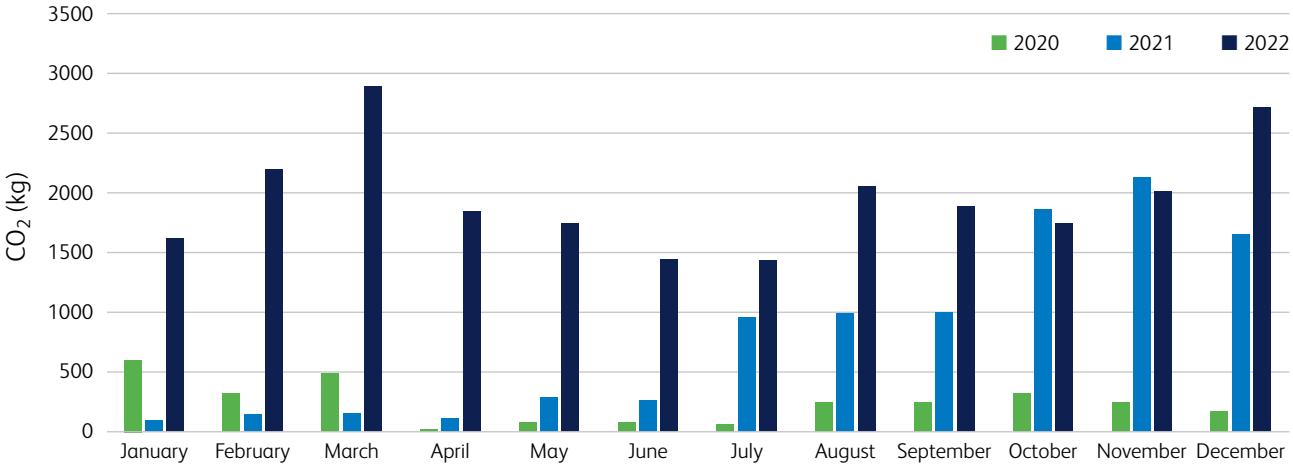
Bristol Airport has 16 EVCPs on site, distributed across the multi-story car park, long stay car park and administration building. Installed in 2019, these charging points are available to both staff and customers. The EVCPs are operated by Pod Point who provide information on locations and facilitate charging via an app.

Table 21: Energy consumed by electric vehicles charged on site, expressed in kilowatt hours

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2021 Energy used (kWh)	165	269	286	224	522	490	1706	1758	1764	3301	3762	2942	**17,189**
2022 Energy used (kWh)	2872	3912	5130	3289	3105	2548	2534	3617	3341	3080	3568	4815	**41,811**

As operations resumed in 2022 almost back to pre-covid levels and passengers returned to the airport, an increase of 143% was seen in kWh consumed through charging, in comparison to 2021, as shown in **Table 21**. Also captured was the number of vehicles using the EVCP facilities in the multi-story carpark. A slight drop of 0.5% of EV penetration using the charging stations was recorded in 2022, despite overall site savings of CO_2 increasing by 13,790kg.

Figure 14: CO_2 saved from EVCP charging points on site



Podpoint also provide a figure of the amount of CO_2 saved. This is calculated using the following assumptions: the average EV consumes 1kWh every 4 miles; the average petrol car emits 0.28kg of CO_2 per mile; and the electricity used by an EV will create the equivalent of 0.14kg of CO_2 per mile. The DEFRA figure of 0.49kg per kWh of electricity produced is used. Across 2022 this was a total of 23,416 kilowatt hours (kWh) of electricity and 23,416 kg of CO_2 saved. The graph above shows a large increase in the CO_2 saved each year after services began to resume post-covid in Summer 2021.

Employment

20

Bristol Airport is a critical employment generator within North Somerset. The number of staff working at the Airport between 2011 and 2015 is reported in the 2018 Annual Monitoring Report. The impact of the COVID-19 pandemic has meant collating the 2021 and 2020 information from our business partners has not been possible.

As expected in the recovery following COVID-19, the total number of direct employees in 2022 was higher than in 2021. 307 individuals were directly employed by the Airport in 2022, compared to 259 in 2021. 2022 saw 123 vacancies filled, of which 84 were new roles. Regarding the breakdown of business partner employment, the airport didn't have this level of granularity through the pandemic, which the airport will be exploring in the future. 2022 was a difficult year, as in Q1 business partners were recruiting and travel did not fully open up until the Easter half term. Therefore, the stats below are not representative of a full year of business partner employment numbers. 2023 should provide a more accurate reflection of business partner employees.

Table 22: Details of employment at the airport.

	2022	2018	2017	2016	2015
Total number of staff	3,401	3978	3918	3,470	3,392
Number of companies	50	56	54	52	52

Bristol Airport's Skills and Employment Plan aims to provide opportunities for local residents, particularly young people, to access jobs at Bristol Airport. The airport acknowledges the importance of connecting with the local community and advertising employment opportunities through careers fairs. The airport held one fair last year and attended a further three fairs. In 2023, the airport aims to host at least three careers' fairs onsite.

A new set of corporate values were curated in 2019, shown below, which became the foundation for a new induction programme for new employees. This included updates from various roles across the business and presentations on Health and Safety and Sustainability.

As a business we will be incorporating our values and behaviours, alongside our vision and strategy, into how we recruit, develop, engage, and measure performance across the airport.

We have continued to embed this in all of our people policies right through from recruitment, onboarding, to our new policies such as flexible working and supporting family life and wellbeing. Also, we are planning to relaunch a recognition scheme across the Airport that will have the values embedded within it.

21 Community relations

In 2022, Bristol Airport paid £171,000 into the Airport Environmental Improvement Fund, also known as the Bristol Airport Local Community Fund. The main purpose of the Fund is to mitigate the environmental and social impacts of the Airport's operations and give something back to the surrounding communities affected by being situated near an international airport. It reflects our aim to develop the airport in a sustainable way, respectful of the local community and the environment.

The fund supports projects in several areas. Examples include: initiatives to mitigate the impact of aircraft and ground noise on the local community which may include (but not be limited to) noise insulation for schools and homes in affected areas, the construction of additional noise insulation barriers and the funding of school trips; the on-going improvement of transport infrastructure and services to and from Bristol Airport with an emphasis on reducing the impact of airport traffic in the community and villages surrounding the Airport which may include (but not be limited to) road improvements, public transport initiatives and measures to reduce community severance; and Nature conservation, educational projects and sustainability initiatives in the locality of the Airport.

The Fund's area of benefit concentrates on the areas most affected by aircraft operations and comprises the parishes of Winford, Wrington, Backwell, Brockley, Cleeve and Barrow Gurney.

The Local Community Fund has been set up as a Community Interest Company dedicated to the purpose of investment in local community projects. A partnership approach has been taken to the management of the fund which involves community representatives in determining how funds are allocated. Applications for funding are considered four times a year by a Management Committee comprising four representatives from Bristol Airport Limited and four elected members of North Somerset Council. The Management Committee is independently chaired, and the Chairman has a casting vote on funding decisions. The Management Committee evaluates each application carefully and uses its local knowledge and expertise to ensure that the fund is used to deliver the greatest possible benefit to the local community.

School presentation and naming of the fourth electric co-bus on site with Winford Primary School

Bristol Airport 'Runway Run' for Breast Cancer Now, Teenage Cancer Trust and Aviation Action.

21

In 2022, the Fund provided grants totalling £122,621.36 to 38 local projects. This sum is £48,660 more than in 2021, supporting double the number of projects. A list of the organisations and projects that have been supported follows:

Table 23: Locations and projects introduced through the community fund in 2022

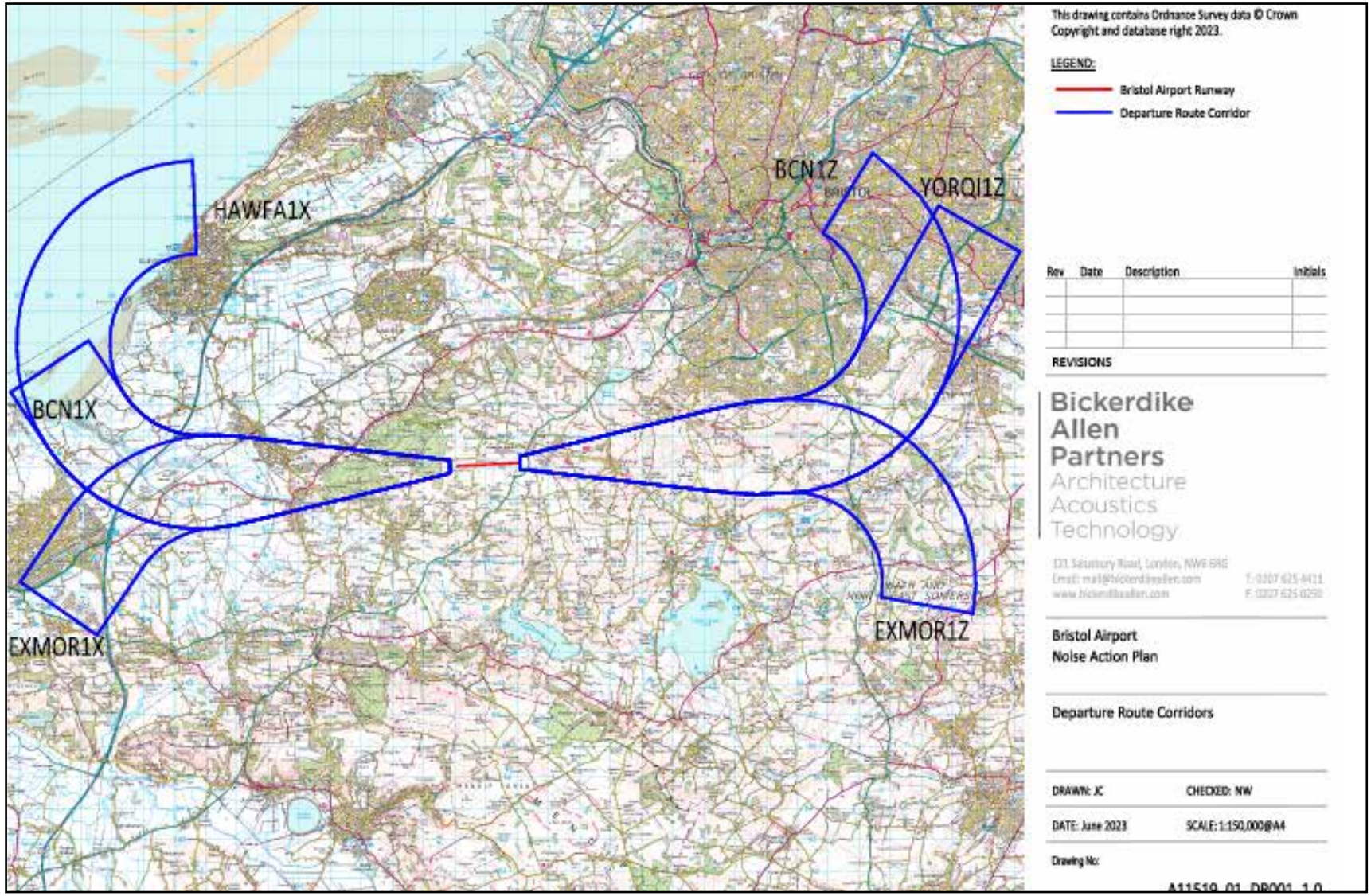
Project Location	Project Description
Holly Hedge Animal Sanctuary	Solar panels installation
Ravenswood School	Children's playground area
Avon Wildlife Trust	Equipment improvements
Backwell Parish Hall	Hall improvements
FarmLink Education Ltd	Pond dipping platform project
Backwell Playing Fields Charity	Playground area improvements
Winford Parish Council	Car park signage
Winford Primary School	Playground area improvements
Congresbury Cricket Club	Equipment improvements
Backwell Baby and Toddler Group	Play equipment
Winford/Old Cathedralians Cricket Club Pavilion Committee	Pitch improvements
Brockley Parish Council	Information noticeboard
Winford Parish Council	Children's playground area improvements
Wrington Parish Council	Children's playground area improvements
The Woodland Warrior Programme CIC	Beehive project
Congresbury Football Club	Equipment improvements
Wrington CofE Primary School	Children's playground area project
Wrington Parochial Church Council (PCC)	Window improvements
Holly Hedge Animal Sanctuary	Solar panels installation

Our chosen charity throughout 2022 was the Teenage Cancer Trust. Teenage Cancer Trust is a cancer care and support charity that exists to improve the cancer experience of young people aged 13–24. The charity funds specialised nurses, youth workers and hospital units in the NHS, so young people have dedicated staff and facilities to support them throughout treatment. Throughout 2022, the Airport raised over £3,600 for the charity.

In December 2022, over 100 participants took part in the Bristol Airport 'Run the Runways' challenge. The event was held to raise funds for Breast Cancer Now, Teenage Cancer Trust and Aviation Action. In total, the event raised over £1,600 for the three charities.

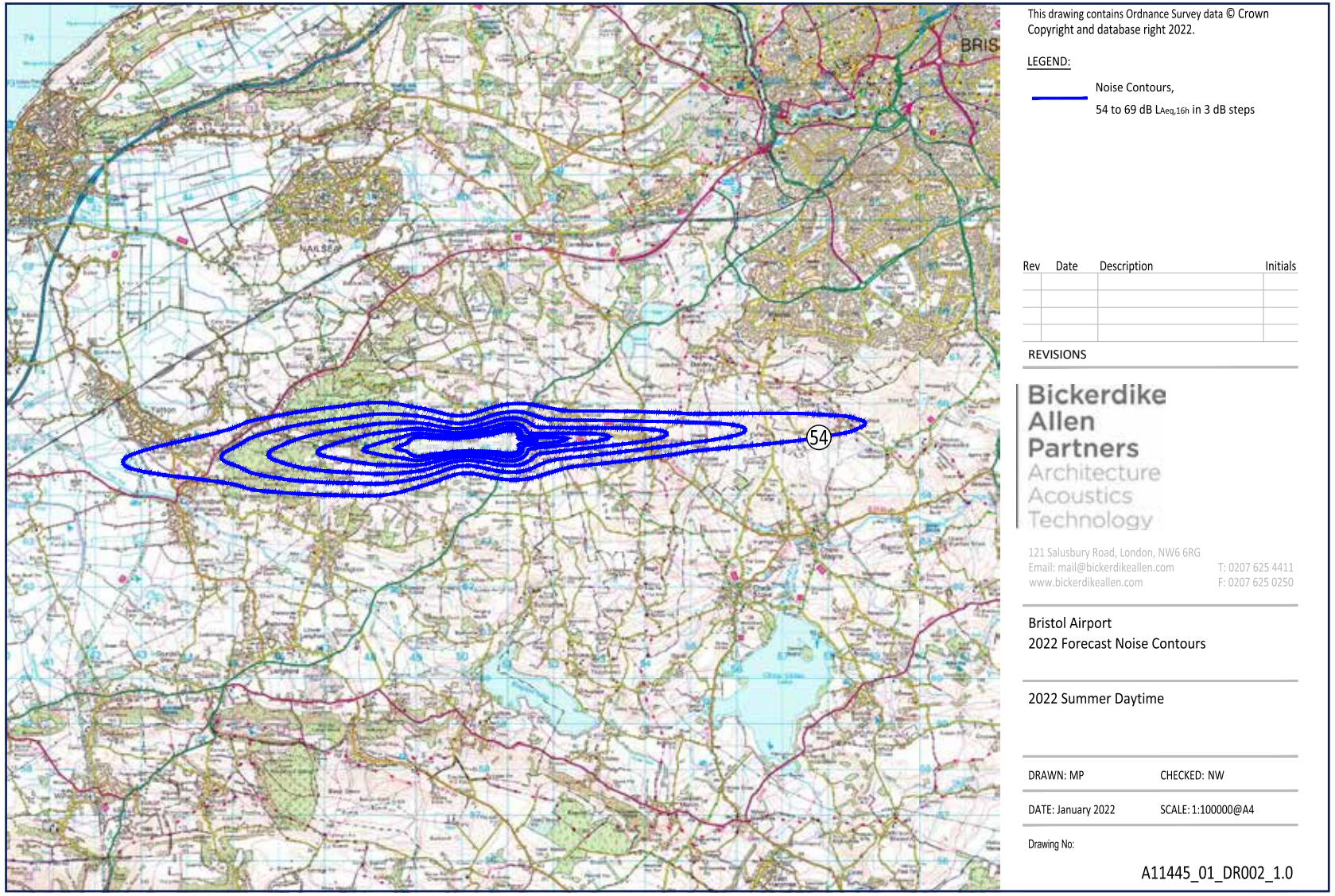
Other notable charitable donations in 2022 was a food donation to the Bristol North West Foodbank in Avonmouth in October. The food was kindly donated by Bristol Airport colleagues and Business Partners across the airport. In the Autumn, the Airport held its annual Poppy Appeal collection which raised £345.64 for the Royal British Legion. Also, the Airport partnered with the Rotary Club in Bristol and collected £1,000 for Ukrainian medical equipment.

Appendix A - Flight routing maps



Appendix B – Predicted Noise Contours for Summer 2022

B



Note: contours are at 3dB intervals with an outer contour of 54dB

Appendix C – Noise Action Plan

Noise Action Plan 2019-2024

Our first Noise Action Plan covered the period from 2010 to 2015, and our second from 2014 to 2018. This is our third Noise Action Plan covering the period 2019 to 2024 and where applicable, includes actions beyond this time period.

The Noise Action Plan (2019 – 2024) was fully adopted on 11th February 2019 by the Department for Environment Food & Rural Affairs for Bristol Airport as required by the Environmental Noise Directive and the Environmental Noise (England) Regulations 2006 (as amended). The main purpose of an airports Noise Action Plan is to effectively plan, manage and where possible reduce the adverse effects of aviation noise associated to our operations.

Within the Noise Action Plan, 19 new actions were developed and progress are as follows:

Action No	Action	Define Success	Timescale	Status
1	Complete a feasibility study for the further installation of FEGP provision to service stands which currently rely on MGPU use by December 2020. Once completed any actions derived will be presented to the airports Consultative Committee.	Completed Feasability Study	Dec-20	**Achieved** - Bristol Airport has completed this and is now seeking ways to implement further FEGP at the Airport including testing with a fully electric turnaround
2	We will review the Bristol Airport Ground Noise Management Strategy prepared in 2012 in 2019.	Review of Ground Noise Management Study	Dec-19	**Achieved** - The review of the Ground Noise Study was completed as part of the Airports Planning Application and the only main revision was the ability to provide FEGP to the East Stands in 2019 This will be revised at a suitable time, no later than 2024.
3	By June 2020, the Airport will review the aeronautical fee differentials based on aircraft noise certification to further enhance incentives for quieter aircraft to operate from Bristol Airport. The resulting findings and actions will be published within our Annual Operations Report for the year 2021.	Review the aeronautical fee differentials based on aircraft noise certification	Jun-20	**Reconsidering timing** - This pending due to the impact of COVID19 on the industry. Will seek to complete the review and through contract renewals in 2023.

Action No	Action	Define Success	Timescale	Status
4	We will assess the mechanics of the Penalties Scheme and update, where applicable, in line with latest guidance and best practice in 2019. Reviews of the application of the scheme and if required alterations applied, every two years thereafter.	Completed assessment of the mechanics of the Penalties Scheme	Dec-19	**Achieved** - The mechanics of the Penalties Scheme using daytime and night-time Lmax levels continues to be best practice as emulated by other airports. This will be reviewed as further guidance provided by industry bodies to highlight best practice in this area as and when available.
5	In conjunction with the above, in association with a successful planning application, the penalty system will be reviewed.	Review of Penalty System	Dec-20	**Achieved** - Review has been carried out and changes implemented with revised penalty charges.
6	We will seek to achieve an 85% CDA compliance rate by 2023.	Achieving 85% CDA success rate	Dec-23	**On Track** - Work will continue with our customer airlines to promote CDA compliance as part of the airports Flight Operations Sub Committee. In 2021, the customer airlines with the biggest presence at Bristol Airport achieved a rate of over 90%.
7	We will begin looking at alternative flight paths for respite purposes with a view for implementation by 2026/27.	Review and Implementation of Airspace Change	Dec-27	**On Track** - This is essential area for airspace change which Bristol Airport consulted extensively in 2019 albeit, due to COVID19, the entire FASI South Programme was paused for the majority of 2021.
8	In association with a successful planning application the night quota count system will be reviewed.	Review of Night Quota Count system	Dec-20	**Achieved** - The airports night quota count scheme was reviewed and changes were proposed as part of Bristol Airports Planning application.
9	We will review our approach with the General Aviation (GA) community and how best to deliver best practice in conjunction with future airspace change work.	Enhancements gained through Airspace Change	Dec-27	**On Track** - This is essential area for airspace change which Bristol Airport consulted extensively in 2019 albeit, due to COVID19, the entire FASI South Programme is paused.

Action No	Action	Define Success	Timescale	Status
10	The Airport will provide localised guidance to CDA's and will issue to airlines by 2020.	Localised Guidance on CDAs	Dec-20	**Achieved** - This has been made clear within the updated Aeronautical Information Package (AIP) for Bristol Airport available online within a specific section for Noise Abatement Controls. The Airport will also produce a localised booklet to pilots during the life of this iteration of the Noise Action Plan.
11	The Airport will seek to introduce RNAV routes for arrivals and departures by 2026/27 (subject to consultation).	Review and Implementation of Airspace Change	Dec-27	**On Track** - This is essential area for airspace change which Bristol Airport consulted extensively in 2019 albeit, due to COVID19 the entire FASI South Programme is paused.
12	We will, based on the findings of the noise climate generated from the monitor data, consider suitable noise mitigation measures, as per the current Noise Insulation Scheme, on a case by case basis. This will be introduced from 2019.	Provide Noise Insulation Grants based on localised noise monitoring	Dec-19	**Achieved** - The airport provided several noise insulation grants based on findings from localised temporary noise monitoring in 2019.
13	The Airport will continue to engage with North Somerset Council as and when local planning policy is developed.	Engagement with North Somerset Council to inform local policy	Dec-24	**Achieved and ongoing** - This continues at an officer and district Councillor level where applicable.
14	In 2019, we will be updating our noise insulation scheme guidance to allow for two opportunities to apply and enhancements to treatments it can cover.	Two opportunities to apply and treatment enhancements	Dec-19	**Achieved** - The airport allowed for applications to occur both in June 2021 and when local noise monitoring occurred. For simplicity it is decided only one application timeframe for eligible properties will be allowed for going forward. In addition, the airport also allowed eligible properties to fund noise reduction loft insulation and doors hung on masonry walls as part of the scheme in 2019.

Action No	Action	Define Success	Timescale	Status
15	By 2020, we will review our current noise and track keeping system and upgrade where necessary.	Review and upgrade the airports Noise and Track Keeping System	Dec-20	**Achieved** - The airport reviewed its Noise and Track Keeping System capabilities and removed the need for complaint reporting due to the launch of a new Customer Relation Management System, up dated maps and improved the frequency of data download from nightly to hourly.
16	By 2020, we will introduce a new interactive online tracker tool presenting, with a minimal delay where possible, of live information to aid members of the public to understand the proximity of aircraft to their location and enhance the ability of improvements of track keeping to be made.	Publication of Online Tracker Tool for public use on the airport's website	Dec-19	**Achieved** - This is now on the Airports website under the 'Tracker Tool' heading: Noise management policies at Bristol Airport | Bristol Airport
17	In 2019, we will refresh how this information (aircraft and airline track keeping) is presented and reported i.e. citing particular instances and associated improvements where relevant.	Update and refresh track keeping performance	Dec-19	**Achieved** - As part of the Environment Effects Working Group, close views of tracks to highlight flight profiles in the local community are now reported on a quarterly basis. This will continue to be worked on and refreshed with the group.
18	From 2019, the Airport will host every 6 months a community feedback session at the airport to update residents directly on airport matters including noise abatement measures in order to receive feedback on how these are perceived.	Hold Community Feedback Sessions	Dec-19	**Achieved** - In 2022 we hosted an event for 79 parish and district councils in December; arranged 3 community drop-in sessions (Backwell, Wrington, and Cleeve) and attended 6 meetings with Winford and Backwell Parish Council representatives.
19	In 2019, we will review the Annual Operations Monitoring Report content and presentation to make it even more accessible.	Improve the Annual Monitoring Report and availability	Apr-19	**Achieved** - The Annual Monitoring Report for 2019 was published with fresh artwork and included more data than previous reports, in particular regarding complaints analysis as requested by local community representatives. In the 2021 Annual Monitoring Report, we expanded it further with Ground Water Monitoring being included for the first time.

Contact us

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