George Best Belfast City Airport – 2022 Annual Performance Report

On Compliance with the Requirements of the 2019 Planning Agreement

Contents

1. Introduction 3
2. Summary of Reporting Requirements 3
3. Reports by Requirement 4
4. Appendices 13

1. Introduction

This report has been prepared to meet the requirements of the Planning Agreement (the Agreement) between Belfast City Airport and the Department for Infrastructure (the Department) dated 22 July 2019. Specifically –

Covenant 1.1: To submit the Annual Performance Report by 31st March in each calendar year and within the Annual Performance Report to report on the performance and compliance with the covenants in this Agreement in the preceding calendar year in a form which shall include all the annual reporting requirements contained in this Agreement or as agreed with the Department from time to time and which shall be published on the Company's website.

The report aims to address each of these reporting requirements either directly within the sections of this report or by reference to further reports (or sections of these) which are provided as appendices.

2. Summary of Reporting Requirements

Table 1 summarises the current reporting requirements within the covenants of the Agreement, as understood by Belfast City Airport.

Table 1 – Reporting Requirements

Covenant Reference	Reporting Requirement (summarised)
2.4.2	Written details of every delayed aircraft outside of permitted hours and circumstances for any aircraft during extended hours
2.4.3	Written report of the payments into and out of the Community Fund
6.7.1.1	Noise exposure contours for year x-1* based on actual ATM (air traffic movements) data
6.7.1.2	Forecast noise contours for years x and x+1 based on predicted ATM data
6.7.1.3	Composite graphic superimposing contours for year, x-1, x and x+1
6.7.2	Comparison of the area within the 57 dB $L_{Aeq,\,16h}$ contours for the cases described in 6.7.1.1 and 6.7.1.2 with a 5.2km2 area
6.7.3	Total number of ATM by aircraft type and actual modal split (for year x-1) and assumed modal split (for years x and x+1) for the cases described in 6.7.1.1 and 6.7.1.2
6.7.4	Number of monthly and annual ATM and a comparison against 48,000 in any period of twelve months
6.7.6	The Quota for year x-1 and a comparison against 4,665
6.7.7	Record of movements by aircraft types not permitted to use the Aerodrome in year x-1 (ie to only accept those which meet the requirements of ICAOC Chap 3, Annex 16 and which are not Marginally Compliant Aircraft)
6.7.8	Record of the use by Aircraft of approaches and climb-outs over Belfast Lough in year x-1

6.7.9	Record of ATM within extended hours and fines administered in year x-1
6.7.10	Log of engine ground runs including time & duration for year x-1
6.7.11	Summary of noise complaints received by the Company, the responses given and the actions taken for year x-1
6.7.12	Review of the degree of adherence to any published noise abatement procedures in operation
6.7.13	Information to verify the accuracy and consistency of the operation of the integrated noise and track keeping system
6.7.14	Evaluation of the data reported including a description of any trends and identification of any relevant features of the Aerodrome operation which may have affected the results
6.7.15	Where the results of the comparison described in 6.7.2 show that the area within the 57 dB $LA_{eq,\ 16h}$ contour of 4.68km2 was exceeded in year x-1 or is likely to be exceeded in year x or x+1, submit (and promptly implement) proposed actions to ensure compliance in year x (and report in the subsequent Annual Performance Report)
6.9	In the Annual Performance Report for 2020, provide data showing the percentage of total arrivals in year x-1 that implemented Continuous Descent Approaches and any agreed improvement
6.11	In the Annual Performance Report for 2020, details of the number and type of departing aircraft breaching the departure noise limits (which are to be introduced by 22 July 2020 along with a mechanism to fine breaches of the limits) and a report of payments into and out of the Community Fund in year x-1
6.12.3	Report regarding compliance with the obligation to ensure the availability of fixed electrical ground power (FEGP) (as described in 6.12 and 6.12.1 to 6.12.2.2 in the Agreement) for year x-1 and agreed actions for improvements (if any) in each Annual Performance Report
7	Include a written report on the operation of a noise insulation scheme

*In this report 'year x-1', 'year x' and 'year x+1' refer to 2022, 2023 and 2024, respectively

3. Reports by Requirement

This section provides a report by each requirement – in the order in which these are covered within the Agreement.

2.4.2 Written details of every delayed aircraft outside of permitted hours and circumstances for any aircraft during extended hours

Details of each delayed aircraft are provided at Appendix 1 - *Extensions Log for 2022.*

During 2022 there were 437 flights during extended hours. Of these, 315 were arrivals and 122 were departures. The following summarises the delay causes:

- Aircraft technical issues/damage (122)
- Weather-related (26)

- Security-related (7)
- Boarding/de-boarding passengers with reduced mobility (5)
- Passenger medical issues (2)
- Staff/crew-related issues including rotation and hours limitations (35)
- Ground handling including documentation, loading/un-loading requirements, cleaning, missing passenger (51)
- Traffic issues including Air Traffic Control restrictions, missed slot, congestion at destination station (29)
- Other reactive delays due to issues in earlier sectors (160)

In 2022, the COVID-19 restrictions on travel were lifted and the aviation sector began to recover. However, airports throughout the UK and beyond faced networking issues as a result of understaffed airlines and ground handling operations teams. Consequently, 2022 saw an increase in the number of flights during extended hours at BCA. In 2019, flights during extended hours represented 0.15% of total movements which rose to 1.71% in 2022.

2.4.3 Written report of the payments into and out of the Community Fund

Table 2 shows the payments made into the Community Fund within 2022 and the payments out so far, including a summary of the types of projects receiving funding (in due course further allocations will be made which will meet or exceed the total payments into the Community Fund). This should be viewed in conjunction with Appendix 3 – *Extension & Departure Noise Charges for 2022*.

Table 2 – Community Fund Payments

	£	£
Payments In		
Extensions Jan-Dec		90,300
Extensions over 480		0
Departure Noise Exceedances		2,500
Subtotal		92,800
Payments Out		
Local schools support (4 schools)	6,490	
Community education initatives (4 initiatives)	35,729	
Community events/awards (2 awards)	9,000	
Local sports (1 event; 2 clubs)	3,100	
Local charities/community groups support (3 groups)	5,724	
Subtotal		60,043
Balance		**32,757**

6.7.1.1 to 6.7.1.3 Noise Exposure Contours

These are discussed in Section 4 and shown in tables 4 to 8 of the report prepared by Bickerdike Allen Partners on behalf of Belfast City Airport, provided at Appendix 2 – *Bickerdike Allen Partners Report 2022.*

6.7.2 Comparison of the area within the 57 dB LAeq, 16h contours for the cases described in 6.7.1.1 and 6.7.1.2 with a 5.2km^2 area

Table 3 shows a comparison of the area within the 57 dB LAeq,16h contour with a 5.2 km^2 area for 2022 with forecasts for 2023 and 2024. Further details are provided in Section 4 of *Bickerdike Allen Partners Report 2022* (Appendix 2).

Table 3 – Area of the 57 dB LAeq,16h contour compared with a 5.2km^2 area

Contour Level (dB $L_{Aeq,16h}$)	Area of Daytime Air Noise Contours (km^2)			Contour Area Limit (km)^2
	2022	2023	2024	
57	2.61	3.12	3.40	5.2

6.7.3 Total number of ATM by aircraft type and actual modal split (for year x-1) and assumed modal split (for years x and x+1) for the cases described in 6.7.1.1 and 6.7.1.2

Total number of ATM by aircraft type for the cases described in 6.7.1.1 and 6.7.1.2 is provided at *Table 1: 2022, 2023 and 2024 Summer Fixed Wing Movements* in Section 2 of *Bickerdike Allen Partners Report 2022* (Appendix 2).

The term 'modal split' refers to the split of movements by runway – at Belfast City Airport this is between Runway 04 (c 040° bearing) and Runway 22 (c 220° bearing). This is generally determined by wind direction as aircraft will take off and land into a headwind to maximise lift - so variation is likely between individual years.

Table 4 shows the actual modal split for 2022 and the long-term average summer modal split for 2018-2022 (the assumed modal split for the cases described in 6.7.1.1 and 6.7.1.2). The actual modal split and the long-term average modal split were used to produce the 2022 contour and the forecast contours respectively, as discussed in Section 3.2 of *Bickerdike Allen Partners Report 2022* (Appendix 2).

Table 4 – 2021 and Long-Term Average Summer Modal Split

Runway	% of Summer Movements			
	2022		2018-2022 Average	
	Arrivals	Departures	Arrivals	Departures
04	41%	45%	35%	39%
22	59%	55%	65%	61%

6.7.4 Number of monthly and annual ATM and a comparison against 48,000 in any period of twelve months

Table 5 shows the monthly ATM in 2021 and 2022 along with the rolling 12-month total from January 2022 onwards – which remained lower than the upper limit of 48,000 movements.

Table 5 – Rolling 12 Month ATM

ATM 2021		ATM 2022		Rolling 12 month ATM
Jan-21	542	Jan-22	1,076	13,383
Feb-21	288	Feb-22	1,090	14,185
Mar-21	328	Mar-22	1,327	15,184
Apr-21	509	Apr-22	1,410	16,085
May-21	711	May-22	1,846	17,220
Jun-21	1,234	Jun-22	2,168	18,154
Jul-21	1,497	Jul-22	2,787	19,444
Aug-21	1,692	Aug-22	2,914	20,666
Sep-21	1,525	Sep-22	2,886	22,027
Oct-21	1,553	Oct-22	2,905	23,379
Nov-21	1,531	Nov-22	2,539	24,387
Dec-21	1,439	Dec-22	2,541	25,489

6.7.6 The Quota for year x-1 and a comparison against 4,665

The Quota Count total for the Quota Period 2022 was 1,641, which is lower than the upper limit of 4,665. Details of how the Quota Count has been calculated are provided in *Table 9: Summer 2022 Quota Count* in Section 5 of *Bickerdike Allen Partners Report 2022* (Appendix 2) including details of how the Quota Count has been calculated.

6.7.7 Record of movements by aircraft types not permitted to use the Aerodrome in year x-1

In 2022 there were no movements of aircraft that do not meet the requirements of ICAOC Chap 3, Annex 16 or are only marginally compliant. Details are provided in Section 6 of *Bickerdike Allen Partners Report 2022* (Appendix 2).

6.7.8 Record of the use by Aircraft of approaches and climb-outs over Belfast Lough in year x-1

The Agreement requires Belfast City Airport to maintain a bias in favour of approaches and climb-outs by aircraft over Belfast Lough (the 'Lough Bias'). Whilst direction of approach/climb-out is generally determined by wind direction, Air Traffic Control aims to maximise additional opportunities to direct aircraft over Belfast Lough (for example during light wind conditions, if safe to do so) ie departure using runway 04 and arrival using runway 22. Table 6 shows the number of arrivals and departures over both the City and Belfast Lough throughout 2022. There were 12,645 movements over the Lough from a total of 24,387 movements. On average over the year, 52% of movements were over the Lough, so a bias in favour of arrivals and departures over Belfast Lough was maintained, in compliance with the Agreement.

Table 6 – Arrivals and Departures over the City and Belfast Lough

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Total
Arrivals over City (04*)	49	49	215	307	243	325	542	573	772	157	82	315	**3,629**
Departures over City (22)	466	490	420	390	652	701	808	797	626	1,261	1,145	905	**8,661**
Total over City	*515*	*539*	*635*	*697*	*895*	*1,026*	*1,350*	*1,370*	*1,398*	*1,418*	*1,227*	*1,220*	***12,290***
Arrivals over Lough (22)	490	496	448	397	681	760	852	884	670	1,295	1,187	957	**9,117**
Departures over Lough (04)	71	55	244	316	270	382	585	660	818	192	125	364	**4,082**
Total over Lough	*561*	*551*	*692*	*713*	*951*	*1,142*	*1,437*	*1,544*	*1,488*	*1,487*	*1,312*	*1,321*	***13,199***
Total ATMs	1,076	1,090	1,327	1,410	1,846	2,168	2,787	2,914	2,886	2,905	2,539	2,541	**25,489**
Percentage over Lough	52%	51%	52%	51%	52%	53%	52%	53%	52%	51%	52%	52%	**2022 average 52%**

*Runway in use

6.7.9 Record of ATM within extended hours and fines administered in year x-1

Appendix 3 – *Extension & Departure Noise Charges for 2022* provides a record of ATM within extended hours and associated fines administered.

6.7.10 Log of engine ground runs including time & duration for year x-1

Belfast City Airport operates restrictions on engine ground runs. These are prohibited between 22:30 and 06:00 and require prior approval by Airfield Operations, with further restrictions in place according to location and the power level of runs. All engine ground runs in 2022 complied with these requirements. Details of engine ground run requirements are provided in Appendix 4 – *AOI-07 Aircraft Ground Running and Use of Auxiliary Power Units and Ground Power Units.* A log of engine ground runs is provided at Appendix 5 – *Engine Run Log 2022*. It should be noted that no ground runs were required during August 2022 (as recorded at Appendix 5).

6.7.11 Summary of noise complaints received by the Company, the responses given and the actions taken for year x-1

A summary of noise concerns logged in 2022 is provided at Appendix 6 – *Noise Concerns Summary 2022*. All noise concerns received are acknowledged upon receipt and responded to by letter, email or telephone within 14 days.

Various responses are provided according to the nature of the concern lodged. In the case of general queries, information on the procedures and standards applied at the airport will be provided. In the case of concerns relating to specific noise events, the results of investigation will be provided. In the case of concerns relating to movements during extended hours, our response will include reference to the relevant requirements of our Planning Agreement and to the guidance issued by the Department of Infrastructure relating to extensions.

In 2022, 73% of concerns were received from June to August and 47% of the total concerns throughout the year were associated with extended flights. 31% of the total concerns were associated with track keeping. 44% of all concerns were raised by two individuals. As discussed previously, the aviation sector faced networking difficulties when COVID-19 restrictions were lifted, which ultimately led to an increase in the number of flights during extended hours at BCA. All track keeping concerns are investigated by the Environment and Sustainability manager and action is taken where necessary including dialogue with airlines to ensure effective implementation of the noise abatement procedures in place at the aerodrome.

6.7.12 Review of the degree of adherence to any published noise abatement procedures in operation

Belfast City Airport's noise abatement procedures are published at https://www.aurora.nats.co.uk/htmlAIP/Publications/2020-01-30-AIRAC/html/eAIP/EG-AD-2.EGAC-en-GB.html#AD-2.EGAC. These determine specific paths to be flown by aircraft on departure/arrival to minimise the impact of noise on local populations. 'Track violations' occur when aircraft deviate from these paths. Whilst the incidence of track violations is relatively low, in certain situations adherence

to the noise abatement procedures may prove problematic, for example in poor weather conditions. Belfast City Airport reports track violations to Airlines on a monthly basis and maintains dialogue with Airline representatives with the aim of minimising the number of occurrences.

Table 7 summarises the occurrence of track violations in 2022.

Table 7 – Track Violations

Runway	A / D	Number Flights	Number Violations	Percentage
04	D	4082	47	0.9%
04	A	3629	6	0.1%
22	D	8661	26	0.3%
22	A	9117	6	0.1%
	Total	**25489**	**85**	**0.33%**

At only 0.33% of all flights, the number of track violations is well below the target level of 5% set out in the Airport's Environmental Noise Directive Noise Action Plan 2019-2023 *(available at https://www.belfastcityairport.com/our-community/environment/noise)*.

6.7.13 Information to verify the accuracy and consistency of the operation of the integrated noise and track keeping system

Belfast City Airport operates a Noise & Flight Track Monitoring System which provides ongoing data on aircraft movements including noise levels and tracks flown. An ongoing maintenance and support contract has been in place with Topsonic Systemhaus GmbH since 2007 when the system was installed. This includes daily system checks by Topsonic (further details are available on request). Third-party calibration of microphones and monitoring equipment is conducted on a two-yearly basis. A record of current equipment calibration status is provided at Appendix 7 – *Calibration Records 2022*. In 2022, there were eight periods during which radar maintenance was undertaken (BCA radar withdrawn from use to facilitate).

During these periods a substitute radar feed was provided by the nearby Crow Hill installation and the Noise & Flight Track Monitoring System continued to record data on flight movements and noise events.

6.7.14 Evaluation of the data reported including a description of any trends and identification of any relevant features of the Aerodrome operation which may have affected the results

Belfast City Airport has fully complied with the requirements of the Agreement during 2022.

The Airport has continued to provide bi-monthly performance reports to the Department since the Agreement came into effect in July 2019, including details of delayed aircraft using the aerodrome outside permitted hours (06:30 to 21:30) and the circumstances for any aircraft using the aerodrome during extended hours (21:31 to 23:59). The following summarises key data and trends:

- In 2022, delayed flights after 21:30 constituted only 1.71% of all movements
- In 2022, 79% of delays after 21:30 were due to the late arrival of aircraft from another flight or previous sector.

In 2022, the aviation sector began to recover from the effects of the COVID-19 pandemic as restrictions were lifted throughout the year. However, the continuing impact can still be seen. In 2021, there were 21,849 ATMs which increased to 25,489 in 2022. Meanwhile, there were 35,382 ATMs in 2019, the last 'full' pre-pandemic year. The passenger numbers have not yet reached pre-pandemic levels either. In 2022 there were 1,656,450 passengers, compared to just 813,426 in 2021 and 2,456,580 in 2019. It is expected that these figures will increase as the sector continues to recover from the COVID-19 pandemic.

This is reflected in a number of aspects of performance in relation to the Agreement, including the following:

- The size of the 57 dB LAeq, 16h noise contour area in 2022 was 2.61 km^2, a slight decrease of 0.17 km^2 from 2.78 km^2 in 2021. This decrease can be attributed to a change in fleet mix, with the quieter turboprop aircraft types being used more frequently.
- The Quota Count total for summer 2022 was 1,640.88 - remaining lower than the 2019 total of 2,216.375.

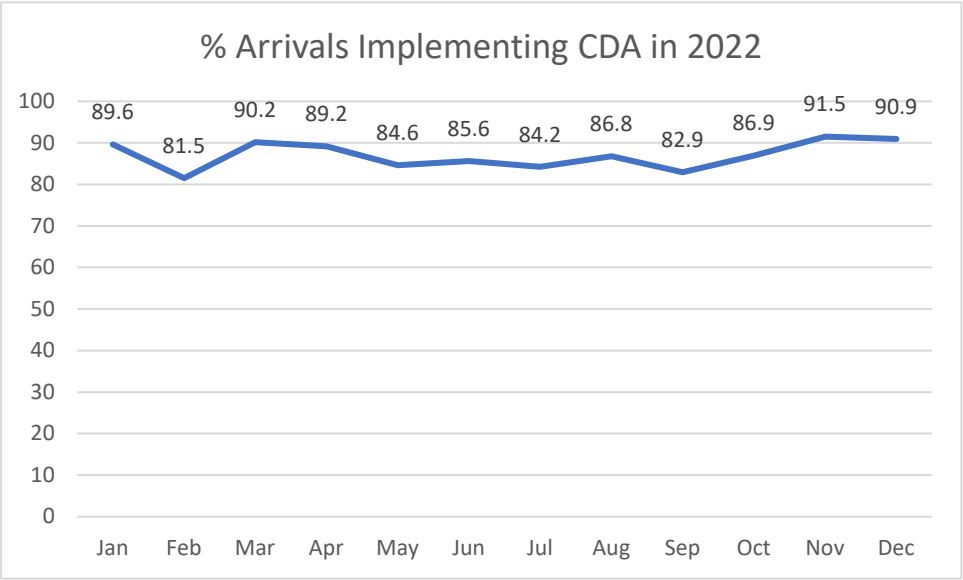
6.7.15 Where the results of the comparison described in 6.7.2 show that the area within the 57 dB LAeq, 16h contour of 4.68km2 was exceeded in year x-1 or is likely to be exceeded in year x or x+1, submit (and promptly implement) proposed actions to ensure compliance in year x (and report in the subsequent Annual Performance Report)

The area within the 57 dB LAeq, 16h contour of 4.68km2 was not exceeded in 2022 and is not forecasted to be exceeded in years 2023 or 2024. The areas of the 2021 contour and forecast 2023 and 2024 contours are shown in Table 3 (above).

6.9 In the Annual Performance Report for 2022, provide data showing the percentage of total arrivals in year x-1 that implemented Continuous Descent Approaches and any agreed improvement

Continuous Descent Approach (CDA) is an operating technique in which arriving aircraft follow a constant-angle descent (rather than a series of steps) in order to reduce noise and fuel consumption.

The chart below shows the percentage of arrivals implementing Continuous Descent Approaches by month. On average, 87% of arrivals in 2022 implemented CDA (down slightly from 87.6% in 2021 and up from 82.1% in 2020). Subject to safety constraints and the operational requirements of individual aircraft, the Airport will continue to maximise implementation of CDA.



Data provided by NATS (Air Traffic Control provider at Belfast City Airport)

6.11 In the Annual Performance Report for 2021, details of the number and type of departing aircraft breaching the departure noise limits and a report of payments into and out of the Community Fund in year x-1

The following departure noise limits are in place at Belfast City Airport: 83 dB LAsmax for aircraft departing towards the City and 87 dB LAsmax for aircraft departing towards Belfast Lough (as measured by the Airport's noise monitoring terminals). Any breaches of these noise limits will be identified through the Airport's Noise and Track Monitoring System.

During 2022, there were five beaches of the departure noise limit, three of which occurred in April. On 10th April, at 07:00, an A319 aircraft departing on runway 22 exceeded the 83dB LAsmax limit by 0.2 dB(A). On 14th April, at 11:53, a small jet aircraft departing on runway 22 exceeded the LAsmax limit by 2 dB(A). On 20th April, at 06:46, an E190 aircraft departing on runway 22 exceeded the LAsmax limit by 2.8

dB(A). On 4th October, at 10:04, a small jet aircraft departing on runway 22 exceeded the LAsmax limit by 1.5 dB(A). On 21st November, at 09:04am, an A320 aircraft departing on runway 04 exceeded the LAsmax limit by 0.4dB(A). Details of the applicable payments into the Community Fund are provided in Table 2 (above) and at Appendix 3 – Extension & Departure Noise Charges for 2021.

6.12.3 Report regarding compliance with the obligation to ensure the availability of fixed electrical ground power (FEGP) (as described in 6.12 and 6.12.1 to 6.12.2.2 in the Agreement) for year x-1 and agreed actions for improvements (if any) in each Annual Performance Report

All stands at Belfast City Airport are equipped with FEGP. In 2022, 97% of flights overall used FEGP. Occasions when FEGP was not used were due to the following: aircraft parked in non-standard orientation due to weather; aircraft parked in remote locations for operational reasons; and a period of five weeks when FEGP No. 4 was operating on reduced capacity. Whilst operational and available for use at the stand, FEGP in these cases could not be reached due to aircraft orientation.

FEGP at Belfast City Airport is subject to an ongoing maintenance regime aimed at achieving maximum serviceability.

7 Include a written report on the operation of a noise insulation scheme

At present, no residential dwellings are affected by the level of noise at which a noise insulation scheme must be implemented (ie as defined by the 63 dB LAeq, 16h contour). For this reason, the scheme is not yet operating.

4. Appendices

Appendix 1 - *Extensions Log for 2022*

Appendix 2 – *Bickerdike Allen Partners Report 2022*

Appendix 3 – *Extension & Departure Noise Charges for 2022*

Appendix 4 – *AOI-07 Aircraft Ground Running and Use of Auxiliary Power Units and Ground Power Units*

Appendix 5 – *Engine Run Log 2022*

Appendix 6 – *Noise Concerns Summary 2022*

Appendix 7 – *Calibration Records 2022*