



Draft Decision
on Summer 2023 Coordination Parameters
at Dublin Airport

Commission Paper 4/2022

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Commission for Aviation Regulation

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1. Executive Summary

- 1.1 The Commission for Aviation Regulation is the authority charged with declaring coordination parameters at coordinated Irish Airports. In this consultation paper we set out our Draft Decision on the Dublin Airport parameters for the Summer 2023 ('S23') season, which runs from 26 March to 29 October, 2023.¹ The full set of proposed coordination parameters is set out in the Appendix.
- 1.2 Our Draft Decision on the Summer 2023 parameters is to make the following changes relative to the Summer 2022 ('S22') parameters:
- Implement 'Wishlist 2' hourly runway capacity ('R60') limits, which involves a range of increases in the declared runway limits in the day hours due to the new capacity provided by the North Runway.
 - Update the within-hour 10 minute ('R10') runway limits to reflect dual parallel runway operations.
 - Stand counts are updated to reflect expected changes by apron area relative to Summer 2022. Otherwise, the form of this parameter is unchanged from S22.
 - Terminal 2 rolling hourly parameter for departures is reduced to 3,600 passengers, with a reduced load factor assumption of 85% rather than 95%.
 - Maintain the referral parameters on Terminal 2 Check-in desks and US Preclearance.
- 1.3 In arriving at our Draft Decision, we have examined and relied on a large body of evidence. We commissioned fast time simulation modelling of the airfield to assess a range of scenarios relating to potential increases in the runway limits. This work was carried out by Egis Technology Ltd (Egis). The assessment of these scenarios takes the form of a comparison of a range of airfield metrics. The results from this assessment were shared with the Coordination Committee, and the final report is published alongside this document.
- 1.4 We have considered other evidence with which we have been presented, or which we sought. This evidence includes modelling work conducted by Dublin Airport, and its consultants.
- 1.5 Our draft position is to make no changes to the R60 runway limits in the night hours. We would welcome further information or clarity which respondents may be able to provide in relation to the facts and matters we have identified thus far in relation to this aspect of the capacity declaration.
- 1.6 This Draft Decision follows an extensive iterative process of engagement over the past number of months between stakeholders.
- 1.7 Our proposed decision follows the advice received from the Coordination Committee, when voting rights are assigned in line with the Coordination Committee constitution. The Coordination Committee comprises Dublin Airport, the Air Navigation Service Provider (the IAA), and is open to all airlines operating at Dublin Airport.
- 1.8 Alongside this paper we have published the following supporting documents:

¹ As per the worldwide slot calendar: <https://www.iata.org/contentassets/4ede2aabfcc14a55919e468054d714fe/calendar-coordination-activities.pdf>

- A letter received from the Coordination Committee.
- The results of the simulation modelling carried out by Egis.

1.9 We invite evidence-based responses to this consultation paper. They should be titled “Response to Draft S23 Declaration of Coordination Parameters” and sent by email to info@aviationreg.ie.²

1.10 The Commission processes your personal data for the purposes of public consultations, in line with our responsibilities under the General Data Protection Regulation 2018; please view our Privacy Statement for full details.³

1.11 The deadline for responses to this consultation is **5pm, Wednesday 21 September 2022**.

² Respondents should be aware that we are subject to the provisions of the Freedom of Information legislation. Ordinarily we publish all submissions received on our website. We may include the information contained in submissions in reports and elsewhere as required. If a submission contains confidential material, it should be clearly marked as confidential and a redacted version suitable for publication should also be provided. We do not edit submissions. Any party making a submission has sole responsibility for its contents and indemnifies us in relation to any loss or damage of whatever nature and howsoever arising suffered by us as a result of publishing or disseminating the information contained within the submission.

³
<https://www.aviationreg.ie/fileupload/Commission%20for%20Aviation%20Regulation%20Public%20Consultation%20Privacy%20Notice.pdf>

2. Background

Legislation

- 2.1 Section 8(1) of the Aviation Regulation Act, 2001, states that the Commission for Aviation Regulation (CAR) is the competent authority in Ireland for the purposes of Council Regulation (EEC) No. 95/93, as amended (“the Slot Regulation”). The Commission is therefore responsible for:
- The designation of the Coordination status of Irish airports.
 - Appointing a qualified schedules facilitator or coordinator, as appropriate, at airports which have been designated as Schedules Facilitated or Coordinated.
 - The determination of coordination parameters at Coordinated airports in line with Article 6 of the Slot Regulation, taking account of relevant technical, operational and environmental constraints as well as any changes thereto.
 - Deciding whether to approve Local Guidelines proposed by the Coordination Committee.
- 2.2 Dublin Airport is designated as Coordinated by the Commission. Airport Coordination Limited (ACL) is the appointed coordinator. No other airport in Ireland has been designated as either Schedules Facilitated or Coordinated.
- 2.3 Under Article 5 of the Slot Regulation, one of the roles of the Coordination Committee is to advise the Commission on the coordination parameters to be determined in accordance with Article 6. As per Article 5(3), the Commission is invited to attend Coordination Committee meetings as an observer.
- 2.4 Article 6(1) states that the determination of the parameters ‘*shall be based on an objective analysis of the possibilities of accommodating the air traffic, taking into account the different types of traffic at the airport, the airspace congestion likely to occur during the coordination period and the capacity situation*’. Thus, the determination of the parameters is a forward-looking projection in which we must take account of expected demand, capacity (including airspace capacity), and relevant constraining factors, during S23, in an objective manner. This is primarily assessed through simulations of the operation of the forecast S23 flight schedule at the airport, under different permutations of potential capacity parameters which are being considered within the Coordination Committee.
- 2.5 Article 6(3) of the Slot Regulation details the required interaction between the Commission and the Coordination Committee:
- “The determination of the parameters and the methodology used as well as any changes thereto shall be discussed in detail within the coordination committee with a view to increasing the capacity and number of slots available for allocation, before a final decision on the parameters for slot allocation is taken. All relevant documents shall be made available on request to interested parties.”*
- 2.6 In that regard, we consider that in taking account of relevant constraints when drawing up a capacity declaration, we ought to tend towards a maximal rather than minimal approach as regards declaring the airport capacity parameters. This is because of the requirement that discussion within the coordination committee is “*with a view to increasing the capacity and*

number of slots available for allocation.” This framing of the determination of the parameters should be given further weight where a parameter is expected to have a constraining effect on demand, given that Article 6(1) requires the determination to be based on the ‘*possibilities of accommodating the air traffic*’.

2.7 Subsequent sections of this paper detail how these requirements were met by the Commission.

Coordination Committee Engagement Process

2.8 To help inform the Coordination Committee and, ultimately, the Commission’s decision on the parameters, we engaged Egis to carry out simulations of the expected flight schedule for S23, using the Fast Time Simulation model of the apron, airfield, and airspace in the Dublin Airport TMA (Terminal Manoeuvring Area). This model was originally developed by Egis for the Commission in 2017 and has been used for various simulation exercises since, both in relation to the determination of coordination parameters and also to assess the likely impact of airfield projects proposed by Dublin Airport as part of the Airport Charges determination process.

2.9 Prior to running the simulations, Egis re-validated the model. This involves simulating the flight schedule on a recent day of operations, and comparing the simulated airfield metrics (such as taxi time durations and runway throughput) with actual observed metrics on the same day. If necessary, adjustments are made to the model and the process is repeated until a satisfactory result is obtained whereby the model is replicating the actual operation with a sufficient degree of accuracy.

2.10 Airlines were asked to submit growth plans for Summer 2023 to ACL. Analysis carried out by ACL indicated that significant increases in the runway limits would be required to ensure that these plans could be fully facilitated.

2.11 Dublin Airport proposed a number of changes to the hourly runway limits relative to S22, informed by the analysis carried out by ACL, but reduced in scope.⁴ This set of changes, summarised in Table 2.1, is termed Summer 2023 Wishlist 1, to distinguish it from variations subsequently proposed by other Coordination Committee members. There was no proposal for any changes in runway capacity in the hours not listed in Table 2.1.

2.12 Dublin Airport noted the following in relation to its proposal:

- With the North Runway available, the primary capacity constraint shifts from runway to stands/gates. Proposed additional aircraft movements must fit on available stands, which is also necessary to enable modelling of the flight schedule through the full airfield and thus properly test the impact of potential runway limits.
- For the first season capacity release of the North Runway, it is prudent not to increase capacity by more than c10% in the busiest hours.

⁴ All references to times or hours are in UTC 24 hour format, unless stated otherwise. Where a reference is made to a particular hour, such as the 0500z hour, this refers to the time period one hour in length commencing from the stated time. To give an example, the 0500z hour spans from 5 am to 6 am UTC.

In each hour, a requested departure slot must not bust the hourly Departures limit or the hourly Totals limit, while a requested arrival slot must not bust the hourly Arrivals limit or the hourly Totals limit.

Table 2.1: Dublin Airport’s Proposal for Summer 2023: Wishlist 1

UTC Hour*	Departures	Arrivals	Totals
0600	+4		+2
0900			+4
1000			+3
1100		+2	+3
1200		+1	+3
1300	+2		+4
1600		+2	+4
1700			+2
1800			+3
2100			+6
Total	+6	+5	+34

Source: Coordination Committee

*During the Summer season, Local time is UTC + 1 hour

- 2.13 Information provided by airlines was used to construct an anticipated flight schedule on a busy day in Summer 2023, ‘the S23 Schedule’. The S23 Schedule was based on the flight schedule on 29 July 2022, with the expected growth for Summer 2023 added in.
- 2.14 The operation of the S23 Schedule was simulated by Egis. To isolate the effect of a potential decision to adjust the parameters from those currently in effect to those proposed under Wishlist 1, the Commission asked Egis to coordinate the S23 Schedule according to both the proposed Summer 2023 Wishlist 1 limits, and alternatively the current Summer 2022 runway limits. Comparisons were provided between simulated taxi times, ground delay and runway holding delay. Further detail and results of this analysis is set out in Section 3.
- 2.15 Dublin Airport proposed a reduction in the limit on Terminal 2 departures based on updated security processor capacity analysis. A reduction in the Terminal 2 load factor from 95% to 85% was also proposed by Dublin Airport to reflect that, with the 2019 traffic profile, c15% of T2 passengers were transfer and thus do not pass through the security processor. It was noted that these adjustments would offset in relation to the ‘at-the-gate’ capacity, such that overall, it would reduce by 2.5%. No other changes were proposed relative to the Summer 2022 limits on terminals or referral limits (except updating the stand count to reflect expected changes in the count since Summer 2022).
- 2.16 The pre-meeting of the Coordination Committee took place on 9 August 2022. Ahead of the initial meeting, Egis circulated the simulation modelling results. Dublin Airport also circulated various pieces of analysis and modelling results to Committee members ahead of the initial meeting, namely:
- Simulation modelling carried out for Dublin Airport by ARUP.
 - An update on actual airfield performance during Summer 2022, prospective projects expected to be delivered for Summer 2023, projects that are expected to be under construction in Summer 2023, and potential operational changes which may be in place for Summer 2023.
 - An update on the North Runway, the planned CONOPS (concept of operations) and the Air Traffic Control transition plan.

- An update from ACL containing an overview of Summer 2022 to date and details of the full collated wishlist demand for Summer 2023.
- Proposed coordination parameters for Summer 2023.

2.17 The Coordination Committee met again on 26 August to arrive at its advice for the Commission.

2.18 The simulations were updated to reflect a revised proposal for the R10 limits developed between Dublin Airport and IAA ANSP. Two additional scenarios were also simulated, Wishlist 2 and Wishlist 3, based on requests from Coordination Committee members. These were both variations of the original Wishlist 1 proposal:

- Wishlist 2 included additional capacity of 2 departures and 2 totals in the 0600z hour, and 2 totals in the 1400z hour.
- Conversely, Wishlist 3 excluded any capacity increases in 0600z.

Table 2.2: Summer 2023 Wishlist 2 & 3

UTC Hour	Wishlist 2			Wishlist 3*		
	Departures	Arrivals	Totals	Departures	Arrivals	Totals
0600	+6		+4			
0900			+4			+4
1000			+3			+3
1100		+2	+3		+2	+3
1200		+1	+3		+1	+3
1300	+2		+4	+2		+4
1400			+2			+2
1600		+2	+4		+2	+4
1700			+2			+2
1800			+3			+3
2100			+6			+6
Total	8	5	38	2	5	34

*Source: Coordination Committee. *Wishlist 3 was modelled by Egis without the additions to 1400z, as we understood the request from the relevant CC member. The difference, in any case, primarily relates to the earlier 0600z hour.*

2.19 The final results of the Egis simulations are published alongside this document.

Coordination Committee Vote

2.20 Following the presentation of all materials circulated by the respective parties, Coordination Committee members voted on the parameter options. Voting rights for Committee members are set out in the Coordination Committee constitution. A set number of votes are allocated to Dublin Airport and the IAA ANSP, with the rest allocated to airlines based on the number of movements flown at Dublin in the preceding year. Only those present can vote. A letter from the Committee to CAR is published alongside this paper.

2.21 There was some disagreement among the Coordination Committee on the appropriate allocation of votes, with some favouring the use of 2019 actual movements or the slot historic

list for 2021, rather than 2021 actual movements. This was on the basis that 2021 was an abnormal year, and exceptional rules for Justified non-use of Slots was in place during 2021 as a result of Covid-19. The Committee, in its published advice, has provided the results on the basis of all three of these scenarios.

- 2.22 There were also mixed views on the appropriate runway parameters with Dublin Airport, Delta, Ryanair, and the IAA ANSP supporting Wishlist 2 in full, while other airlines generally supported various hourly mixes of retaining S22 capacity, Wishlist 1, and Wishlist 3.
- 2.23 In most hours, the voting outcome is insensitive to which permutation of voting rights is used, the exceptions being the 0600z and 2100z hours. In the 0600z hour, the use of the 2019 voting rights results in the S22 option being the most popular, while using the 2021 actual movements or the 2021 slot historics list results in a majority for Wishlist 2. For the 2100 hour, the use of the 2019 voting rights results in a majority for Wishlist 1, and the use of the 2021 actual movements or the 2021 slot historics list results in a majority for Wishlist 2. There are no other differences in the voting outcomes for other hours.
- 2.24 No changes were proposed within the Committee in relation to any hour other than those listed below.
- 2.25 While we understand the rationale for not solely relying on actual movements for 2021, the Coordination Committee constitution is clear that the votes should be allocated based on the flights flown in the previous year. Therefore, in the absence of unanimous agreement among the Coordination Committee for an alternative allocation of voting rights, we consider it appropriate to look at the 2021 voting rights as the primary reference point. The votes are laid out in Table 2.3 based on these voting rights. This shows that, for each hour, Wishlist 2 has received the most votes.
- 2.26 It is important to note that we consider the voting process to be an indicative part of the Coordination Committee's advice to CAR, rather than corresponding to a direct "election" of the parameters. As part of the process, we have sought to take into account all positions set out by Coordination Committee members as well as any associated comments or evidence relevant to the parameter determination.

Table 2.3: Coordination Committee votes on proposed changes to hourly runway limits

Member	Votes	0600	0900	1000	1100	1200	1300	1400	1600	1700	1800	2100
Aer Lingus	255	S22	WL1	WL1	WL1	WL1	WL1	S22	WL1	WL1	WL1	WL1
Air Canada	3	X	X	X	X	X	X	X	X	X	X	X
Air France	19	X	X	X	X	X	X	X	X	X	X	X
IAA ANSP	20	WL2	WL2	WL2	WL2	WL2	WL2	WL2	WL2	WL2	WL2	WL2
British Airways	30	S22	S22	S22	S22	WL1	WL1	S22	WL1	WL1	WL1	WL1
CityJet	2	S22	WL1	WL1	WL1	WL1	WL1	S22	WL1	WL1	WL1	WL1
Daa	40	WL2	WL2	WL2	WL2	WL2	WL2	WL2	WL2	WL2	WL2	WL2
Delta	14	WL2	WL2	WL2	WL2	WL2	WL2	WL2	WL2	WL2	WL2	WL2
DHL	4	S22	S22	S22	S22	S22	S22	S22	S22	S22	S22	WL1
Emerald	0	WL2	WL1	WL1	WL1	WL1	WL1	WL1	WL1	WL1	WL1	WL1
FedEx	7	WL2	X	X	X	X	X	X	X	X	X	WL1
KLM	27	X	X	X	X	X	X	X	X	X	X	X
Lufthansa	28	WL3	WL3	WL3	WL3	WL3	WL3	WL3	WL3	WL3	WL3	WL3
Ryanair	502	WL2	WL2	WL2	WL2	WL2	WL2	WL2	WL2	WL2	WL2	WL2
Swiss	9	S22	WL3	WL3	WL3	WL3	WL3	S22	WL3	WL3	WL3	S22
TUI	3	WL1	WL1	WL1	WL1	WL1	WL1	WL1	WL1	WL1	WL1	WL1
UPS	37	S22	S22	S22	S22	WL3	WL3	WL3	WL3	WL3	WL3	WL3
WL1		3	260	260	260	290	290	3	290	290	290	301
WL2		583	576	576	576	576	576	576	576	576	576	576
WL3		28	37	37	37	74	74	65	74	74	74	65
S22		337	71	71	71	4	4	300	4	4	4	9
Abstain		49	56	56	56	56	56	56	56	56	56	49

Source: Coordination Committee. Totals may not tally exactly due to rounding of voting rights. 'X' is abstention. Voting rights based on 2021 actual movements.

2.27 The Committee then voted on Dublin Airport's proposal to adjust the limits for Terminal 2. No other proposal was made in relation to other changes to the terminal building parameters.

Table 2.4: Coordination Committee votes on proposed Terminal limits

Member	Votes	Yes	No	Abstain
Aer Lingus	255	✓		
Air Canada	3			✓
Air France	19			✓
IAA ANSP	20			✓
British Airways	30			✓
CityJet	2	✓		
Daa	40	✓		
Delta	14	✓		
DHL	4			✓
Emerald	0	✓		
FedEx	7			✓
Lufthansa	28			✓
KLM	27			✓
Ryanair	502			✓
Swiss	9			✓
TUI	3	✓		
UPS	37			✓
Total		314	0	686

Source: Coordination Committee

2.28 The advice from the Coordination Committee is therefore to implement the Terminal 2 proposal by Dublin Airport, with no opposition to this proposal.

3. Airfield Coordination Parameters

3.1 This section addresses, in turn:

- Runway parameters during the day time hours.
- Runway parameters during the night time hours.
- Stand parameters.

3.2 In line with the majority advice from the Coordination Committee, the Commission’s Draft Decision is to implement the Wishlist 2 adjustments to the S22 hourly runway limits (‘R60’), as set out in Table 3.1.

Table 3.1: Draft changes to runway limits from Summer 2022

UTC Hour	Departures	Arrivals	Totals
0600	+6		+4
0900			+4
1000			+3
1100		+2	+3
1200		+1	+3
1300	+2		+4
1400			+2
1600		+2	+4
1700			+2
1800			+3
2100			+6
Total	8	5	38

Source: CAR

3.3 We also propose to adjust the 10 minute runway limits (‘R10’) in line with the proposal of Dublin Airport and IAA ANSP, to which there were no objections.

3.4 We propose to retain the stand parameter as a hard constraint. Where demand for stands exceeds supply as per the count in the appendix, movements are referred to Dublin Airport for detailed assessment. If the issue cannot be resolved, a slot will not be allocated.

Runway Capacity in Day Hours

3.5 In this subsection, we consider runway capacity in the hours 0600z to 2200z or 7am to 11pm local time.

Egis Airfield Modelling

3.6 As described above, Egis first validated the airfield model and then simulated the S23 flight schedule under the various sets of options for the hourly runway limits being considered by the Coordination Committee, namely:

- Rolling forward the S22 limits, i.e. making no changes to the limits compared to those

in place for S22.

- Implementing the Wishlist 1 adjustments to the S22 limits.
 - Implementing the Wishlist 2 adjustments to the S22 limits.
 - Implementing the Wishlist 3 adjustments to the S22 limits.
- 3.7 The model validation process was based on 18 April 2022. On this day 100% of operations used Runway 28L.
- 3.8 The simulated metrics (taxi out times, runway throughput, counts of aircraft coming on block, off block, lifting off and touching down) show a close match with the actual data both in magnitude and daily profile. Across the day, the difference between the average simulated and average real taxi out time is 32 seconds, with the simulation generating slightly higher taxi times than were observed in reality. This again demonstrated the ability of the model to accurately replicate the real operation of a given flight schedule.
- 3.9 Efficient towing of aircraft occurs in the model. Taxiway, towing, runway, and runway exit usage restrictions and patterns have been implemented in the model. Given the close match in the model validation outputs, it is our view that no significant airfield capacity affecting element has been omitted from the model.
- 3.10 Taxi out time measures the time elapsed from the aircraft coming off blocks until it crosses the runway stopbar to begin its take-off roll. Departure ground delay is the accumulation of all delay experienced in the same period, i.e. all components of taxi-out time other than unimpeded taxi-time. The estimated effect of proposed airfield capacity increases on these two closely related metrics is, in our view, the best way to assess the physical and operational ability of the airfield to deliver a flight schedule.
- 3.11 Egis first modelled two scenarios to compare the impact of declaring increased capacity in line with the Wishlist 1 proposal, relative to maintaining S22 capacity limits. In both cases it is assumed that the increased demand will materialise for S23. Both scenarios are based on the flight schedule on 29 July 2022, which was an already busy day prior to the addition of any new services planned by the carriers for S23.
- 3.12 There are over 100 new movements in the S23 Schedule. Most of these movements could be accommodated at the times requested without any changes to the runway limits. To isolate the effect of a decision to implement the various wishlists relative to maintaining the Summer 2022 limits, we asked Egis to simulate the S22 Schedule coordinated according to the wishlist scenarios and separately according to a baseline scenario in which no changes are made to the limits. This process isolates the effect of a decision to increase the parameters.
- 3.13 We have previously observed a general pattern whereby airlines may accept sub-optimal slots (whether in relation to timing, series fragmentation, or both) in order to meet demand for an operation. In order to capture this trend, our baseline scenario assumes that this redistribution effect occurs, with these new services operating at the nearest available time in the simulation.
- 3.14 Table 3.2 summarises the final results of the Wishlist 1 and S22 limits scenario simulations, overall and in terms of local averages across various parts of the day, as provided to the Coordination Committee ahead of the final meeting. Further details are set out in the Egis simulations published alongside. For all of the final simulation scenarios, the updated R10 limits are included as proposed by Dublin Airport and IAA ANSP. These limits have the effect

of preventing within-hour bunching.

Table 3.2: Departure Taxi Out Time

Time (UTC)	S23 Wishlist 1 scenario	S22 limits scenario	Difference
Average (0500-0700)	00:16:20	00:15:58	+ 00:00:22
Average (0700-1400)	00:14:46	00:14:52	- 00:00:06
Average (1400-1800)	00:14:20	00:14:58	- 00:00:38
Average (1800-2300)	00:13:02	00:13:13	-00:00:11
Daily average	00:14:13	00:14:29	- 00:00:16
Peak	00:18:19	00:17:41	+ 00:00:38

Source: Egis, Slide 21. Taxi times in minutes and seconds.

Average times are based on a rolling 10 minute window. Peak times refer to the window with the highest average value. Values are in hours, minutes and seconds.

3.15 In summary, relative to maintaining the Summer 2022 limits unchanged, S23 Wishlist 1 is expected to lead to:

- No material impact on taxi-out times on average across the day.
- An increase in average taxi out time of just 22 seconds between 0500z to 0700z; within this period, an increase in the peak taxi time of approximately 40 seconds. On the other hand, retaining the S22 limits is likely to lead to a flatter first wave with an extended duration into the shoulder hours, particularly the 0400z hour.
- Better preservation of schedule firebreaks, specifically, in the 0700z, 0800z, 1500z, and 2000z hours.
- Slightly lower average taxi out times between 1400z to 1800z, likely linked to the preservation of the firebreak in the 1500z hour.
- No material impact on taxi-in times.

3.16 Egis simulated two additional scenarios based on requests from coordination committee members. These were also presented at the Meeting on 26 August. The variations relative to Wishlist 1 were as follows:

- Wishlist 2 included additional capacity of +2 departures and +2 totals in the 0600z hour, and +2 totals in the 1400z hour.
- Conversely, Wishlist 3 excluded any capacity increases in 0600z.

3.17 Thus, the primary difference relates to the 0600z hour. The results for the broader morning departures wave (0400z to 0700z hours) are set out in Table 3.3.

Table 3.3: Departure Taxi out Time

Time (UTC)	S23 Wishlist 2	Difference to S22 Scenario	S23 Wishlist 3	Difference to S22 Scenario
Morning wave peak	00:18:51	+00:01:10	00:16:23	-00:01:18
Morning wave average	00:14:47	-00:00:17	00:14:36	-00:00:28

Source: Egis.

Average times are based on a rolling 10 minute window. Peak times refer to the window with the highest average value. Values are in hours, minutes and seconds.

- 3.18 Thus, on average across the morning departures wave, departure taxi out time seems to be insensitive to either adding the additional movements, or not declaring additional capacity in 0600z. That is, the timing of movements impacts on the peakiness within the period, but this does not have a cumulative effect in terms of increasing or decreasing overall delay, because it is offset by the duration of the wave.
- 3.19 More movements within 0600z increase the absolute peak by 1 minute 10 seconds compared to the S22 scenario baseline, while fewer movements within 0600z decrease this peak by 1 minute 18 seconds.

Other Modelling

- 3.20 Dublin Airport commissioned ARUP to carry out simulation modelling on its behalf, which was also presented to the Coordination Committee. Like the Egis modelling, the ARUP modelling includes the runway, taxiways and apron. The ARUP models display similar results to Egis for the scenarios they modelled, which included all three wishlists. ARUP produced its simulations using CAST software.
- 3.21 We consider that this provides a useful cross-check and cross-validation of both Egis' and ARUP simulation modelling.

Taxi Out times and On Time Performance (OTP) in Summer 2022

- 3.22 At the Coordination Committee pre-meet, Dublin Airport provided an update on outturn 2022 operational performance (up to July inclusive) relative to 2019 performance.
- 3.23 On Time Performance (OTP) is worse than Summer 2019, with arrival OTP down 14% and departure OTP down 15%.
- 3.24 Average taxi-out times have improved over the full day relative to Summer 2019, but the first wave average increased by one minute. Overall, the taxi-out times are in line with the performance seen in Summer 2019. Overall taxi-in times did not change significantly compared to Summer 2019, with an increase of 15 seconds for the average taxi-in for a full day, but showed a decrease of 3 minutes for the first wave average taxi-in time.
- 3.25 When previously considering proposed capacity increases for the forthcoming season, we considered the trends in outturn performance relative to previous years, to get sense of how the airfield is performing under the prevailing limits. However, with the impact of COVID-19 on the performance for S20, S21, and S22, this is less relevant than for previous capacity declarations.
- 3.26 S20 and S21 saw traffic levels far below what we can expect for S23. S22, meanwhile, has been heavily impacted by the challenges faced by operational stakeholders in ramping up the industry following the two-year period impacted by COVID-19. This has led to poor OTP due to factors such as En Route ATFM delay and aircraft rotational delay. We expect that the situation will stabilise by S23 as issues causing the current poor performance are addressed.
- 3.27 Additionally, the North Runway is a major infrastructural change at the airport which will change operations significantly. It is unlikely that the performance trends of S22, before the North Runway was operational, are indicative of what to expect in S23.

Infrastructural developments

3.28 There are a number of infrastructural developments which are already completed or expected to be completed ahead of Summer 2023, specifically:

- North Runway.
- Realignment of MRO Stands.
- West Apron redesign to provide additional stands.
- Redevelopment of the Hangar 1/Hangar 2 stands.
- Gate Post 9.
- Widening of the Pier 2 and Pier 3 underpass.
- Critical Taxiway North (expected completion in Q2 2023).
- Runway 16/34 LVP lighting.
- Terminal 1 and 2 Hold Baggage Screening.

3.29 Furthermore, there are a number of projects which are expected to be ongoing during S23 which will require operational changes. Where relevant (i.e. where they relate to aircraft traffic as opposed to vehicle traffic), these changes have been implemented in the Egis simulations. This includes:

- For construction of Apron 5H, Light Aircraft Parking B is closed and GA parking is moved to the northern section of the West Apron.
- For the critical taxiway project, taxiways F-Outer and P1 are closed.
- Widening of taxiways Z/B1 to facilitate dual code E operations, which requires the closure of B1.

Operational Developments

3.30 Minimum aircraft separations are generally assumed to be in line with previous simulations. Departure-departure separation has been kept at a minimum of 84 seconds for Runway 28L departures. Arrival-arrival separation is at a minimum of 3.5 Nautical Miles. Arrival-departure-arrival separation is kept at a minimum of 5.5 Nautical Miles.

3.31 The North Runway is assumed to be operational in line with the planned Concept of Operations (CONOPS) for S23, which in turn is significantly driven by condition 3 of its Planning Permission. As in previous seasons, the capacity is declared based on westerly operations. Thus, our modelling assumes the following:

- Segregated dual runway operations during the day, with Runway 28R for departures and Runway 28L for arrivals.
- Single runway operations on Runway 28L for all aircraft movements during the night period (which is discussed separately below). That is, the North Runway is in use only between 0600z to 2200z (7am to 11pm local).

3.32 In line with Condition 4 of the North Runway planning permission, which limits the use of the crosswind runway to '*essential occasional use*', our modelling assumes no use of the crosswind runway 16/34 as an active runway.

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- 3.33 As per the Slot Regulation, we are required to review the parameters with a view to increasing the capacity and number of slots available for allocation, based on an objective analysis of the possibilities of accommodating the air traffic. On that basis, the Commission's draft decision is to amend the hourly runway limits in accordance with Wishlist 2. The reasons are as follows:
- It is clear from the Egis simulations that the additional capacity proposed under Wishlist 2 can be accommodated by the parallel runway system without any material causative impact on delay.
 - Based on the Coordination Committee constitution, the advice of the Committee to CAR is to declare runway limits in line with Wishlist 2.
 - With the non-availability of the North Runway during the peak departure hour at 0500z, that hour will remain constrained. Capacity in the 0600z hour will relieve that constraint, and also likely reduce the number of night operations in the 0400z hour.
 - Concerns raised by certain committee members, particularly in relation to the release of capacity at 0600z, in our view relate primarily to matters other than appropriate runway limits for S23.
- 3.34 The simulation results suggest that additional capacity in excess of Wishlist 2 could be handled by the runways/taxiways. Nonetheless we agree with Dublin Airport that it is prudent to limit the initial North Runway capacity release to preclude potentially excessive bunching of the schedule, as the relevant operational stakeholders become acclimatised to the changed operation. We also note that further additional capacity is not likely required to accommodate the air traffic.
- 3.35 Based on observations of the model, dual runway operations will work much better than single runway, with improved traffic flows. The simulation results show that average delay/taxi out times are insensitive to incremental movements as per the various wishlists. Taxi times vary depending on the timing of movements, but this does not significantly accumulate delay. That result is materially different to when we last carried out simulations, ahead of the S20 season, when the single runway operation was subject to a high level of runway capacity constraints and average taxi times were sensitive to incremental movements. Ultimately, for S20, the runway limits were set on the basis of a modelled peak taxi out time of over 26 minutes at 0630z. The equivalent figure under Wishlist 2 for S23 is 19 minutes.
- 3.36 As noted above, we consider that the primary reference point for the Coordination Committee voting rights should be as specified in the constitution. On that basis, the advice to CAR is to implement Wishlist 2. Wishlist 2 was supported in full by both the airport operator and the Air Navigation Services Provider, as well as by Ryanair and Delta.
- 3.37 We note the opposition among some airlines, who supported various hourly mixes of retaining the S22 limit, Wishlist 1 and Wishlist 3. Based on the comments made, which are summarised in the appendix of the letter from the Committee, the primary concern relates to stand capacity, particularly in the 0600z hour and in the context of poor OTP in S22. However, we consider that this relates primarily to the stand parameter, which is discussed below, rather than being a reason to limit runway capacity. The purpose of setting limits on specific parameters is to capture the capacity limits of different processors separately, rather than, for example, slots being refused due to R60 where the real constraint is stands elsewhere on the apron.

- 3.38 There is also a concern raised as to whether the security processor will be sufficiently staffed in time for S23. Again, this relates to the passenger terminal capacity limits, which are discussed in Section 4, rather than the runway limits.
- 3.39 Finally, as noted above, we do not believe that the Wishlist 2 adjustments to the runway limits are likely to significantly impact OTP in S23, or that 2022 OTP is a good guide to likely OTP in 2023.
- 3.40 On that basis, and given the approach to the determination of parameters required by Article 6, we propose to implement the Wishlist 2 adjustments to the runway parameters.

Runway Capacity in Night Hours

- 3.41 As set out in Section 2, when determining coordination parameters as per Article 6 of the Slot Regulation, we are required to take account of relevant technical, operational and environmental constraints as well as any changes thereto. Under Article 5, one of the roles of the Coordination Committee is to advise the Commission on the coordination parameters to be determined in accordance with Article 6.
- 3.42 We consider that the determination of the S23 parameters is a forward-looking projection in which we must take account of expected demand, capacity, and relevant constraining factors, during S23, in an objective manner.
- 3.43 In this section, we consider potentially relevant runway constraints, as well as any changes thereto, in the hours between 2200z and 0600z (or 11pm to 7am local time). This requires us to consider potential Operating Restrictions (as defined by Regulation (EU) No 598/2014) pertaining to the completion of the North Runway.⁵ We have identified two such potentially relevant constraints contained in the planning permission for the North Runway:
- Condition 3 (d)⁶
 - Condition 5
- 3.44 While we are not responsible for the introduction or enforcement of Operating Restrictions, any limiting effect on the possibilities of accommodating the air traffic in the relevant scheduling season may be a relevant constraint for the purposes of the Slot Regulation, thus a factor to take account of. This interaction between the determination of airport capacity parameters under the Slot Regulation, and the introduction of Operating Restrictions, is set out in Regulation 598/2014 (the ‘Aircraft Noise Regulation’), in which the introduction of an Operating Restriction is established as an input to the capacity declaration process.
- 3.45 This consultation provides interested parties with the opportunity to make submissions setting out their positions and providing factual information on the matters raised, in order that CAR has such facts and matters before it, and can take those into account when declaring the coordination parameters for S23. We set out below the current framework for our decision-making on this issue, which we will review on the basis of submissions made during this consultation.

⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0598&from=EN>

⁶ With conditions 3(a) to 3(c), which relate to daytime operations, having already been taken account of as described above.

Background

3.46 In September 2021, we published a Draft Decision (CN5/2021) and Final Decision (CN6/2021) on the Summer 2022 capacity declaration.⁷ As part of that process, we noted the expected completion of the North Runway during August 2022, and the potential for certain associated planning conditions (dating from 2007) to crystallise on foot of that event. In particular, we noted that Condition 5 ('C5') states as follows:

'On completion of construction of the runway hereby permitted, the average number of night time aircraft movements at the airport shall not exceed 65/night (between 2300 hours and 0700 hours) when measured over the 92 day modelling period as set out in the reply to the further information request received by An Bord Pleanála on the 5th day of March, 2007.'

3.47 The planning condition as written provides for an average limit on aircraft movements at the entire airport which is below the number of movements on the pre-existing runways prior to completion of the North Runway. It also refers only to a specified 92 day modelling period. There are various undefined terms to which different interpretations could potentially be ascribed, such as '*completion of construction*', and '*aircraft movements*'.

3.48 We reviewed certain available planning documents and materials relevant to the interpretation of C5. We noted that, based on our review of the planning materials, the original intended purpose of Condition 5 was to prevent the North Runway leading to an increase in night flights and consequently an increase in night noise, relative to an estimated counterfactual 'constrained traffic' scenario where the North Runway would not be built.

3.49 We consulted with and sought the views of relevant parties, including daa and the airlines. We commissioned a report from an aviation noise expert (Egis). We then sought views more broadly, through publication of our Draft Decision on the S22 parameters. We concluded that there is uncertainty regarding C5, and how it should be interpreted. In the absence of further clarity in relation to how C5 might be interpreted and applied, we ultimately considered that close alignment with the express wording of the Condition would be an appropriate way to take account of the potential constraining factor represented by C5, for the purpose of declaring scheduling parameters under the Slot Regulation.

3.50 The wording of C5 identifies the constraint as being calculated by way of a single average measurement to be taken in each year over a specified 92 day modelling period, applying prospectively from completion of the runway. This modelling period, which is derived from the noise measurement methodology used in the initial planning process, spans the period from 16 June to 15 September. The terms of C5 do not reference any restriction on the level of night time aircraft movements other than by way of an average to be calculated over this 92 day period.

3.51 We also noted, in particular, that this view is aligned with what had been suggested through the consideration by the Aircraft Noise Competent Authority ("ANCA")⁸ of the *Relevant Action*

⁷ <https://www.aviationreg.ie/fileupload/DraftDecisionS22.pdf>

<https://www.aviationreg.ie/fileupload/FinalDecisionS22.pdf>

⁸ <https://planning.agileapplications.ie/fingal/application-details/88548>

See for example: '*Appendix A ANCA Direction to Tom Phillips*', in particular request number 38, where the applicant was asked to calculate the impact of C5 on current scheduled demand based on average movements over the 92 day period; 'Noise Problem Advice Report', page 61, which states that the wording of the condition would suggest that the limit applies to the 92 day period and not beyond this period while also identifying uncertainty as to how C5 should be interpreted; 'DAA OP Restriction Report ANCA', page 9, which states that the 65/night limit is based on the average over the 92 day modelling period (16 June to 15 September).

application submitted by daa to replace the condition with an annual noise quota system. It also aligned with the view of Egis.

- 3.52 As the North Runway would not be completed by 16 June 2022, the first prospective 92 day modelling period over which such a calculation could be made would be in 2023. On that basis, we concluded that, during Summer 2022, Condition 5 would not serve to reduce the capacity of the airport below the 2021 capacity.
- 3.53 Thus, the declared runway capacity for Summer 2022 was unchanged relative to Summer 2021:
- The runway capacity would remain based on single runway operations for the full season, i.e. it would exclude any potential increases in infrastructural airfield capacity which might be achievable in August-October 2022, once the North Runway is open to traffic.
 - Condition 5 would not serve to reduce capacity below the single runway capacity limits already in place prior to completion of the North Runway.
- 3.54 Similarly, for the Winter 2022 season from October 2022 to March 2022, we noted that no part of the 92 day modelling period is encompassed within a winter season.⁹
- 3.55 Given that, prior to this season, no capacity has been declared off the North Runway, we have not previously considered condition 3(d) as a potentially relevant constraining factor. Condition 3(d) states that Runway 10L-28R (North Runway) shall not be used for take-off or landing between 2300 hours and 0700 hours, except in cases of safety, maintenance considerations, exceptional air traffic conditions, adverse weather, technical faults in air traffic control systems or declared emergencies at other airports.

Developments since September 2021

- 3.56 The North Runway has now become operational as of 24 August 2022, in line with the expected timeline outlined above. The Aircraft Noise Competent Authority (ANCA) has consulted on and, on 20 June 2022, made a Regulatory Decision in application of the *Balanced Approach* to the *Noise Problem* which it identified would arise from the adjustments to Conditions 5 and 3(d) proposed by Dublin Airport.¹⁰
- 3.57 ANCA was specifically set up by legislation to regulate noise at Dublin Airport. This process was carried out over 2020-2022, including a public consultation which received over 1000 responses. On 8 August 2022, Fingal CC granted permission for this *Relevant Action*, in doing so adopting the Regulatory Decision made by ANCA. These documents and associated materials include some further references to C5 which are discussed below.
- 3.58 This Regulatory Decision includes the following:
- Condition 5 is revoked, and replaced by a Noise Quota Count (NQC) scheme. This is an annual night noise 'budget', in which each aircraft movement will use a proportion of the budget based on its noise output.
 - Condition 3(d) is amended such that it applies from 0000 to 0559 (local time), rather

⁹ <https://www.aviationreg.ie/fileupload/W22%20Parameters/Final%20Decision%20W22.pdf>

¹⁰ <https://www.fingal.ie/aircraftnoiseca/documents-f20a0668>

than 2300 to 0700 as originally specified in 2007.

3.59 ANCA gives the following rationale for the decision in relation to Condition 5:

*'Replacing Condition 5 with a Night-Time Noise Quota and associated aircraft type restrictions is a much more cost effective means of managing and limiting aircraft noise impacts in line with the NAO.¹¹ It allows the airport to meet its movement forecasts whilst guarding against any risk that the Applicant's noise forecasts are optimistic with respect to fleet modernisation. For example, should the aircraft fleet mix not improve as forecast, the Night-Time Noise Quota will limit the number of night flights.'*¹²

3.60 FCC's decision has been appealed to An Bórd Pleanála (ABP), by appeal lodged on 24 August 2022.¹³ The statutory timeframe within which ABP ought to determine an appeal is 18 weeks; as per the ABP website, the case is currently expected to be decided by 5 January 2023. However, this 18 week period may be extended by ABP if it considers such an extension to be necessary. ABP will also be required to follow the Balanced Approach, and, should ABP be considering an Operating Restriction which was not included in the ANCA consultation, it must engage in further dialogue and consultation requirements.

3.61 For an Operating Restriction in the form of an NQC scheme to be introduced within the meaning of Regulation (EU) No 598/2014, it must follow the introduction process as outlined in that Regulation and also the Aircraft Noise (Dublin Airport) Regulation Act 2019.¹⁴ Article 8 of the Aircraft Noise Regulation obliges competent authorities such as ANCA to give to the Member States, the Commission and the relevant interested parties six months' notice, ending at least two months prior to the determination of the slot coordination parameters for the relevant season in which the Operating Restriction is to be introduced.

3.62 As the NQC Operating Restriction has not yet been notified to relevant parties (and in any case is subject to appeal), it has not been introduced in time for Summer 2023 and is therefore not a relevant constraint for Summer 2023.

Potential Operating Restrictions for Summer 2023

3.63 CAR is not itself responsible for enforcement of or compliance with such planning conditions or Operating Restrictions. We must take account of relevant Operating Restrictions on the basis of submissions and evidence concerning the potential constraining factor represented by such restrictions which are made to us by the relevant parties, and/or positions that are likely to be adopted by those parties.

3.64 For CAR to be able to make its decision, these positions ought to be clearly stated, as is the case with conditions 3 and 4, such that we could then in good time build the constraining factor into our capacity analysis and/or the coordination parameters for the relevant scheduling season. We have built Condition 3(d) as currently stated into our simulations, which prevents the use of the North Runway between 2200z and 0600z, or 11pm to 7am local time. While FCC has decided to shorten this window to 12am to 6am (local), we continue to assume that it is in effect from 11pm to 7am (local) for the S23 capacity declaration. No party, to date, has proposed any alternative approach to taking account of condition 3(d) for S23.

¹¹ Noise Abatement Objective

¹² <https://www.fingal.ie/sites/default/files/2022-06/Regulatory%20Decision.pdf>, page 9

¹³ <https://www.pleanala.ie/en-ie/case/314485>

¹⁴ <https://www.irishstatutebook.ie/eli/2019/act/12/enacted/en/print#sec10>

3.65 In relation to C5, it appears to us that the positions of relevant parties can be summarised as follows:

- There is uncertainty/disagreement over how C5 should be interpreted.
- Certain interested parties appear likely to take the view that C5 may not be capable of being enforced against them for S23.

3.66 We ask interested parties for views of and evidence concerning each of these positions. Our preliminary view of these positions and what they constitute are considered below.

Interpretation of C5

3.67 As set out above, ahead of the S22 declaration, we concluded that there is uncertainty in relation to the interpretation of C5. This followed engagement with daa and airlines, and also a report we commissioned from an aircraft noise expert (Egis), as well as a review of the published materials made available by ANCA relating to the *Relevant Action* application submitted by daa. We then sought views more broadly, through publication of our Draft Decision in September 2021. We are not aware of any changes in the positions of relevant parties from whom we initially sought views in 2021, including daa and airlines, either as part of, or subsequent to, our capacity parameter consultations in September 2021 and April 2022.

3.68 In the published 'Noise Problem Advice Report' for ANCA, NCL states the following:

'Condition 5 is potentially badly worded as it refers to the '92-day modelling period' which is established through UK aviation noise policy as a period from mid-June to mid-September i.e. the 'average summer period'. The wording of the condition would suggest that the limit applies to this period and not beyond this period.

Regardless of how this condition should be interpreted, it must be considered a noise-related operating restriction in the context of EU598. The reason for the condition also highlights it as means of controlling night time use.'

3.69 In its Regulatory Decision of 20 June 2022, ANCA states that '*Conditions no. 3(d) and 5 have not yet come into effect or operation, as the construction of the North Runway on foot of the North Runway Planning Permission is ongoing.*'¹⁵ C5 is further described as a '*numerical cap on the number of flights permitted between the hours of 23:00 and 07:00 daily*'.

3.70 The FCC decision of August 2022 uses similar language in relation to the *Relevant Action*. Like the ANCA material which we reviewed in 2021, FCC also notes that the effect of the *Relevant Action* would be to '*replace the average 65 aircraft movements/night (averaged over the 92 modelling days) cap*'.¹⁶ The Regulatory Decision Report from ANCA variously describes C5 as an average calculation, but does not state whether this averaging period is viewed as the 92 modelling period specified in C5 or whether C5 should be interpreted to imply an average restriction longer than, or outside, this period.

3.71 Both ANCA and FCC state that the *Relevant Action* would lead to an increase in the number of night flights relative to the counterfactual. NCL identifies C5 as an Operating Restriction, as does ANCA, who links the coming into effect of same to the completion of construction of the North Runway. This suggests that C5 is considered to represent an Operating Restriction of

¹⁵ <http://documents.fingalcoco.ie/NorthgatePublicDocs/00742818.pdf> , page 4

¹⁶ <http://documents.fingalcoco.ie/NorthgatePublicDocs/00747949.pdf> , 162

some type which is in effect, and further, that it is constraining on night flights, at some point, relative to forecast demand.

- 3.72 This presumption that C5 represents some form of restriction leads to the question of the specific scope/interpretation of that restriction and how it might be enforced (or objected to) by the interested parties during S23. We do not see that clarity in relation to whether and how it might be enforced is available to us from the above published materials, NCL being the only party (to our knowledge) to have addressed the interpretation of C5 directly. Unlike conditions 3 or 4, NCL did not, or was unable to, conclude on how C5 should be interpreted as per the above quotation from the NCL report.
- 3.73 No proposal was, however, contained within the Coordination Committee's advice to make any adjustments to the runway parameters within the hours relevant to C5 for S23. Further, as noted below, it appears that airline members of the Coordination Committee may take the position that C5 cannot be enforced on them for S23, rather than consider how it should be interpreted.
- 3.74 Liam O'Grádaigh, in his response to our Winter 2022 parameters draft decision, states that it was never the intended purpose that the 65 limit be applied to the 92 day period only.¹⁷
- 3.75 We have not seen anything to suggest how the uncertainty may be addressed by the respective parties, particularly as to whether and how C5 would be enforced/complied with/challenged/irrelevant for S23. We ask that parties clearly set out their positions on this issue to allow us to consider the implications of any such views for the purposes of finalising the declaration of parameters for S23.
- 3.76 As we explained previously, based on our own review of the original planning materials from 2007 and earlier, the original intended purpose of C5 was to prevent the North Runway leading to an increase in night flights relative to an estimated counterfactual constrained traffic scenario where the North Runway would not be built. C5 can be traced to 'Information Request 5', issued to Dublin Airport by ABP on 9 January 2007. This required Dublin Airport to quantify *'the potential for increase in night flights on the existing 10R/28L runway which could derive from the growth of air traffic at the airport arising from the proposed runway relative to that which would occur without the new runway.'*
- 3.77 As part of its response, Dublin Airport stated that, in a 'constrained' scenario whereby the North Runway would not be built, it estimated that the number of night flights would be constrained to an average of 65 over the 92-day modelling period. On the other hand, should the North Runway be progressed, the average number of flights over the 92 day modelling period would increase to 95. It is apparent, then, that ABP used the 'constrained' estimate to set out a limit of 65 flights, on average, over the 92 day modelling period. Given that Condition 3(d) would already prevent the use of the North Runway for night flights, in practice C5 would solely constrain the use of the pre-existing main runway.
- 3.78 Thus, ABP believed that, even though the North Runway would not be used during the night period due to condition 3(d), its presence and availability in the day time would cause an increase of almost 50% in the *'potential'* number of night movements on the pre-existing main runway. This belief, in turn, was generated by Dublin Airport's response to Information Request 5, as well as the various forecast scenarios underpinning the 2004 Environmental Impact Statement, which states at paragraph 16.1.5.5 that *'the number of night movements*

¹⁷ <https://www.aviationreg.ie/fileupload/W22%20Parameters/Liam%20O'Grady%20response.pdf>

*will be restricted if the new runway is not built as the overall use of the airport is constrained.*¹⁸

- 3.79 The forecast that the 92-day average demand for night movements would not grow beyond 65 if the North Runway were not built has been shown to be inaccurate, given that it had grown to over 100 by 2019 in the absence of the North Runway.¹⁹ Thus, rather than preventing an increase in night movements on the southern runway due to the existence of the North Runway, the condition as worded would require a reduction by over 35% relative to the pre-existing number of night movements.
- 3.80 The Dublin Airport approach to estimating the ‘constrained’ scenario appears to have suggested that the available capacity on the pre-existing runway would remain unused in a scenario where, at the same time, the number of flights is supposedly driven by the same runway being “full”. Given condition 3(d), we consider it more likely that the ‘constrained’ scenario would continue to broadly track the ‘unconstrained’ scenario during the night. In both the ‘constrained’ and ‘unconstrained’ scenarios, once demand exceeds the operational capacity of the pre-existing main runway (with a given level of service), the operational capacity of the pre-existing runway will be the key driver of the number of night flights.
- 3.81 If anything, we consider that the reverse is more likely, i.e. the average number of night flights would be somewhat higher in the ‘constrained’ scenario relative to the ‘unconstrained’ scenario. This is because capacity constraints during the day would mean that airlines must operate into the adjoining night hours. For example, between 2015 to 2019, when the airport experienced a strong period of growth, we observed significant increases in the number of flights in the 0400z hour, likely linked to the increasing constraints in the preferred hours for the first wave of departures, namely the 0500z and 0600z hours.
- 3.82 As set out above, we propose to declare the day-time parameters in line with Wishlist 2 due to the capacity provided by the North Runway. The Egis modelling of a busy day in S23 shows that the availability of same from 0600z is likely to lead to a reduction in night movements in the 0400z hour relative to the counterfactual ‘constrained’ scenario. Comparing slide 19, which is analogous to the ‘constrained’ single runway scenario, with slide 30, in which the parameters are based on the North Runway being available from 0600z, we anticipate that approximately 5 additional movements would be pushed into the 0400z hour in the ‘constrained’ scenario.

Introduction of an Operating Restriction

- 3.83 A number of cargo aircraft operators have stated that C5 must follow the rules for the introduction of new noise-related measures, as set out under the 2014 Regulation. As we understand it, the principal points which might be made by certain aircraft operators in the context of potential action to enforce the provisions of C5 on them, would be that:
- The 2014 Regulation uses the term ‘introduction’ to mean the putting into effect of the restriction. On that basis, given that C5 was not put into effect before the end of the transition period set out in the 2014 Regulation, C5 would need to follow the process for assessment and notification to the European Commission and other Interested Parties, as set out in the 2014 Regulation, in order to be put into effect.
 - Furthermore, C5 was neither introduced, or notified to the European Commission, in

¹⁸ Dublin Airport Environmental Impact Statement; Northern Parallel Runway; Part 2 – Text. December 2004

¹⁹ Noting that the 2019 level of movements, does not, either, represent the limit of night movements which might occur in the absence of the North Runway.

line with the requirements of Directive 2002/30/EC and the associated implementing SI from 2003.

- 3.84 This, in turn, means that these operators (or other interested parties) might argue that they have not at any point had the benefit of a consultation and notification process in relation to the time-specific introduction of a clearly defined Operating Restriction, nor of the application of the Balanced Approach to the development of same.
- 3.85 We invite aircraft operators to indicate whether they still maintain these possible interpretations and positions on this issue in particular.
- 3.86 We note that Directive 2002/30/EC was the precursor to the 2014 Regulation, in establishing rules and procedures for the introduction of noise-related operating restrictions such as C5 at Community airports.²⁰ It was transposed into Irish law by S.I. No. 645/2003.²¹ This SI appointed the Irish Aviation Authority (IAA) as Competent Authority for ensuring compliance with the requirements specified. Specifically, for an Operating Restriction to be introduced, the following was required:
- Adoption of the ICAO Balanced Approach to addressing noise problems at airports. This requires *'careful assessment of all different options to mitigate noise, including reduction of aeroplane noise at source, land-use planning and management measures, noise abatement operational procedures and operating restrictions.'*²² It also required an assessment of the cost effectiveness or cost/benefit analysis of the introduction of specific measures, and that such measures not be more restrictive than necessary in order to achieve the environmental objective established for a specific airport.
 - Consultation and notification of interested parties in relation to the introduction of Operating Restrictions, and the application of the Balanced Approach in relation to same.
 - A requirement for the IAA to inform the Minister, the European Commission, and other Member States of the European Communities of the introduction or modification of operating restrictions.
- 3.87 We are not aware of the specified consultation with interested parties taking place, nor, as far as we are aware, was any such notification made by the IAA to the European Commission and other Member States, nor of any IAA involvement in the process.
- 3.88 We note also that CAR has been assigned the role of the Member State for the purposes of the Slot Regulation, and no such notification of the introduction of C5 has been received by CAR.
- 3.89 We would welcome any confirmation from interested parties as to their positions on this point. We would also welcome any further factual information in relation to any introduction or notification process of C5 to the European Commission, and if that did not yet occur, what the potential implications of this might be for S23.
- 3.90 Other aircraft operators have more broadly stated non-acceptance of either the Commission's right to declare a reduced capacity at Dublin Airport on foot of condition 5, nor of the

²⁰ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02002L0030-20081211>

²¹ <https://www.irishstatutebook.ie/eli/2003/si/645/made/en/print>

²² 2002 Directive, Recital 10

Commission's, ACL's, and/or daa's right to withdraw historic slots from carriers on foot of a reduced capacity declaration. This suggests that they might similarly object to any attempt to impose C5 on them in a manner which reduces their operations at Dublin, based on the reason raised by the cargo operators, or otherwise. For example, in its response to our Draft Decision on the S22 parameters, Aer Lingus states:²³

'Aer Lingus will continue to assess all options to avoid or mitigate the potential impact of Condition 5 on capacity at Dublin Airport and the above is entirely without prejudice to any legal remedies which Aer Lingus may have in this regard.'

CAR Draft Decision

- 3.91 In summary, in making the S23 capacity declaration, we must make a forward-looking projection in relation to the possible existence of night-time runway capacity constraints at Dublin Airport due to the North Runway. We consider that we have a clear view on the appropriate way to take account of condition 3(d). Given the uncertainty as to the positions which may be taken in relation to C5, as well as the potentially complex interactions between such positions and the capacity limits in place, we are less clear on how we should take account of C5. In any event, we require views from interested parties as to how we should take account of C5.
- 3.92 Given the facts and matters outlined above, and in the context of no advice from the Coordination Committee to adjust the relevant runway parameters and the general obligation under the Slot Regulation to tend towards a maximal rather than minimal declaration of the available capacity, our provisional view is to make no adjustments (either decreases or increases) to the R60 limits between 2200z and 0600z.
- 3.93 On that basis, the previously declared S22 capacity, which was based on single runway operations off Runway 28L, would remain unchanged for S23. Thus, no more night flights on the pre-existing southern runway would be possible in S23 than were already possible before the North Runway was completed (and over the entire S23 season, rather than just the 92 day modelling period within it). We also assume that condition 3(d) is in effect, meaning that the North Runway is itself unavailable between 2200z and 0600z. As per the Egis simulations, we consider that the daytime availability of the North Runway is likely, if anything, to lead to a marginal reduction in night flights in the 0400z hour relative to the counterfactual 'constrained' scenario whereby the North Runway is not operational in S23.

Parking Stands

- 3.94 We propose to retain the hard constraint on stands, while updating the stand count relative to S22 to take account of anticipated changes to stand availability in the various apron areas. Dublin Airport proposed maintaining the current parameter while updating the count, as usual, to reflect seasonal changes. There was no objection or alternative proposal made within the Coordination Committee.
- 3.95 In the letter of advice from the Coordination Committee, concerns relating to stand constraints are referenced by Aer Lingus and by Swiss. Aer Lingus considers that the addition of runway capacity for S23 after the first wave will compound pressure on stands.

²³

<https://www.aviationreg.ie/fileupload/20210916%20Aer%20Lingus%20response%20to%20CAR%20draft%20Capacity%20Declaration%20at%20Dublin%20Airport%20for%20Summer%202022.pdf>

- 3.96 Aer Lingus further states that it can only support additional runway capacity if there is a realignment of the stand allocation plan in the '*core widebody and CBP demand period of 1000z to 1400z*'. Finally, Aer Lingus considers that this issue will be compounded in S24 if the West Apron Underpass is being constructed, as stands will need to be removed from service.
- 3.97 As noted above, we do not consider that runway parameters should be used as proxy to address limiting factors which themselves can be (and in the case of stands, already are) the subject of a constraint.
- 3.98 The current stand parameter operates such that where demand for stands exceeds supply (as per the stand count in the appendix), flights are referred to Dublin Airport for detailed assessment. This is a hard coordination parameter as opposed to a referral parameter. Thus, if the issue cannot be resolved, a slot will not be allocated. We did not receive a specific proposal to adjust the stand parameters or determine it in a different manner.
- 3.99 We note that the forecast S23 schedule has been facilitated in Dublin Airport's stand planning analysis for S23. The Egis modelling includes the operation of aircraft off/on stand also. While in practice that would be impacted if OTP does not improve relative to S22, we expect that it is likely to improve as set out above. We note that poor OTP can lead to aircraft which are due on stand having to hold until their stand becomes available. The S22 operation is likely not a true reflection of the airfield in a more stable year, i.e. S23.
- 3.100 If Coordination Committee members continue to consider that stand constraints are not being adequately reflected in the parameter in S23, this may warrant a more objective review of the stand parameter and/or the allocation rules. This might include an objective review of the causes and potential short/longer term remedies; for example, excessive holding off stand in a particular area of the apron may be impacted by insufficient buffer, or differences in OTP by carrier, or various other factors.
- 3.101 We do not consider that potential constraints in S24 are relevant factors for the S23 capacity parameters. Should there be a requirement to adjust the capacity for S24 due to works on the underpass, or otherwise, this should be considered as part of the S24 capacity determination process.

4. Terminal Building Coordination Parameters

- 4.1 Our Draft Decision is to roll forward the S22 limits for arrivals, which are set out in Table 4.1. For departures, we propose to maintain the S22 limits for Terminal 1. However, in line with advice of the Coordination Committee, we propose to reduce the limits for Terminal 2 departures, while also adjusting the load factor assumption for Terminal 2 departures from 95% to 85%.
- 4.2 We propose to maintain the load factor assumptions of 95% for scheduled services in Terminal 1, and 100% for charter services. We propose to maintain the referral parameters in relation to Terminal 2 check-in desks and US Preclearance as per the S22 capacity.

Table 4.1: Hourly Terminal Limits - Draft Decision

	Summer 2023- Passenger Terminal Buildings Draft Limits	
	Departures	Arrivals
Terminal 1	4,130	3,960
Terminal 2	3,600	3,400

Source: CAR. Hourly limit rolled every 10 minutes

Proposed Hourly Limits – Dublin Airport

- 4.3 Dublin Airport proposed the rolling forward of the Summer 2022 terminal limits for arrivals and to maintain the limits for departures in Terminal 1 while reducing the limits for departures in Terminal 2. These proposed changes were supported by Aer Lingus, CityJet, Delta, Dublin Airport, and TUI, while all other members, broadly those unaffected by Terminal 2 capacity, abstained from the vote.

Proposed Referral Limits – Dublin Airport

- 4.4 Referral limits are not hard coordination parameters. If a proposed operation hits a referral limit, it is referred to the airport to attempt to find a workable solution.
- 4.5 The airport proposed retaining the referral parameter for Terminal 2 check-in desks 1-28 (Terminal 2 operators excluding Aer Lingus) – where demand exceeds 28 desks. It also recommended retaining the referral for US Preclearance, which applies to any new flights, or time changes to pre-existing flights, intending to use this facility.
- 4.6 There were no objections or alternative proposals in relation to these limits.

Draft Decision on Terminal Capacity

- 4.7 As part of our decision on the Summer 2018 limits, the Commission assessed the processing capacity of the different passenger terminal building processors with reference to the proposed Summer 2018 limits, and determined that the proposals were feasible.²⁴ However, Dublin Airport has conducted analysis which has led it to conclude that, for S23, the T2 departing capacity may be less than that which has previously been declared (in the context where the runway capacity was in any case the constraining factor on overall airport capacity).

²⁴ [https://www.aviationreg.ie/fileupload/s18/Decision%20Summer%202018%20Coordination%20Parameters\(1\).pdf](https://www.aviationreg.ie/fileupload/s18/Decision%20Summer%202018%20Coordination%20Parameters(1).pdf)

- 4.8 Terminal 1 has longer lanes, newer technology, and larger trays which allows a higher processing rate than (currently) in Terminal 2. Based on this analysis, Dublin Airport has proposed to reduce terminal 2 capacity from 4130 to 3600.
- 4.9 Dublin Airport also conducted a complementary analysis of 2019 transfer volumes, showing that 15% of passengers did not depart through security in T2. As such, it proposed to lower the load factor assumption for Terminal 2 from 95% to 85%. While the declared capacity of security would be lower, the reduction in assumed load factor offsets this, leaving the overall 'at-the-gate' capacity at 2.5% lower than the equivalent figure in the S22 declaration. The S23 schedule can still be accommodated with these changes to Terminal 2 departure parameters, with capacity available.
- 4.10 No Committee member objected or proposed a higher level of declared capacity. The proposed T60 parameters are not expected to be constraining on the forecast S23 schedule. We therefore see no reason not to adjust the parameters as proposed by Dublin Airport and supported by the Coordination Committee without objection.
- 4.11 We note the concern raised in relation to the ASU resourcing issues experienced by Dublin Airport and potential issues continuing into S23, raised primarily in the context of the discussions on the runway limits. We do not consider it likely that this issue will continue into S23. Nor that the capacity of the infrastructure should be constrained due to a staffing issue unless it would not be possible to address this issue in time for the relevant season. We note the significant improvements observed in performance across the summer. We note also that there was no objection to the proposed terminal parameters.
- 4.12 We also propose to roll forward all referral parameters from S22 which are detailed in the Appendix. There was no objections or alternative proposals put forward by the Coordination Committee on this.

5. Appendix: Proposed Summer 2023 Coordination Parameters

The Commission for Aviation Regulation proposes the following limits for the Summer 2023 season.

Runway Scheduling Parameters:

Runway Hourly Limits			
Time UTC	Arrivals Limit	Departures Limit	Total Limit
0000	23	25	32
0100	23	25	32
0200	23	25	32
0300	23	25	32
0400	23	25	32
0500	23	36	40
0600	20	37	46
0700	25	25	41
0800	25	25	45
0900	25	24	48
1000	27	27	48
1100	29	28	51
1200	24	27	49
1300	27	26	50
1400	23	27	47
1500	26	25	47
1600	27	29	52
1700	23	27	47
1800	23	26	43
1900	23	22	39
2000	25	22	38
2100	30	25	42
2200	28	25	32
2300	23	25	32
Totals	591	633	997

Maximum number of movements per 10 minute period	
Maximum Total	13
Maximum Arrivals	6
Maximum Departures	7

Passenger Terminal Parameters:

	Departures Hourly Limit	Arrivals Hourly Limit
Terminal 1	4,130	3,960
Terminal 2	3,600	3,400

Notes:

- The hourly limit for passengers is rolled every 10 minutes.
- Load factors of 95% are applied to Scheduled services for Terminal 1.
- Load factors of 85% are applied to Scheduled services for Terminal 2.
- Load factors of 100% are applied for Chartered services for both Terminal 1 and Terminal 2.

Stand Parameters:

	GA		Non-Turnaround		Turnaround Stands								All	
	W.A.N	W.A.S	Total	5G	MRO	P1	P2	P3	P4	S.A	Triangle	Total	Total	
Contact							22	11	11	21	9		74	74
Remote	8	16	24	15	6	3					5	29	53	
All	8	16	24	15	6	25	11	11	21	9	5	103	127	

Note: Stands defined based on ICAO Code B and C size.

Area	Constraint
Stands	Where demand for stands exceeds supply based on coordination allocation, flights to be referred to Dublin Airport for detailed assessment.

Referral Parameters:

Area	Flag
T2 Check-in Desks 1-28 (T2 Operators excluding EI)	Demand exceeds 28 desks
US Preclearance	New flights and schedule changes