

File With _____

SECTION 131 FORM

Appeal NO: ABP 314485-22Defer Re O/H ☐Having considered the contents of the submission dated received 13/12/2023
fromAlan Lynch I recommend that section 131 of the Planning and Development Act, 2000
be/not be invoked at this stage for the following reason(s): no new material issues(Inspector to advise)E.O.: Pat BDate: 29/12/2023

For further consideration by SEO/SAO

Section 131 not to be invoked at this stage. ☐Section 131 to be invoked – allow 2/4 weeks for reply. ☐

S.E.O.: _____

Date: _____

S.A.O.: _____

Date: _____

M _____

Please prepare BP _____ - Section 131 notice enclosing a copy of the attached
submission

to: _____ Task No: _____

Allow 2/3/4weeks – BP _____

EO: _____

Date: _____

AA: _____

Date: _____

Validation Checklist

Lodgement Number : **LDG-069017-23**
Case Number: **ABP-314485-22**
Customer: **Alan Lynch**
Lodgement Date: **13/12/2023 14:06:00**
Validation Officer: **Patrick Buckley**
PA Name: **Fingal County Council**
PA Reg Ref: **F20A/0668**
Case Type: **Normal Planning Appeal PDA2000**
Lodgement Type: **Observation / Submission**



An
Bord
Pleanála

Validation Checklist	Value
Confirm Classification	Confirmed - Correct
Confirm ABP Case Link	Confirmed-Correct
Fee/Payment	Valid – Correct
Name and Address available	Yes
Agent Name and Address available (if engaged)	Not Applicable
Subject Matter available	Yes
Grounds	Yes
Sufficient Fee Received	Yes
Received On time	Yes
Eligible to make lodgement	Yes
Completeness Check of Documentation	Yes

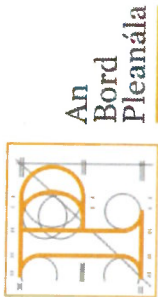
F.k.

29/12/23

Run at: 29/12/2023 11:21

Run by: Patrick Buckley

Lodgement Cover Sheet - LDG-069017-23



Details

Lodgement Date	13/12/2023
Customer	Alan Lynch
Lodgement Channel	Email
Lodgement by Agent	No
Agent Name	
Correspondence Primarily Sent to	
Registered Post Reference	

Lodgement ID	LDG-069017-23
Map ID	
Created By	Karen Byrne
Physical Items included	No
Generate Acknowledgement Letter	
Customer Ref. No.	
PA Reg Ref	F20A/0668

Categorisation

Lodgement Type	Observation / Submission
Action	Processing

PA Name	Fingal County Council
Case Type (3rd Level Category)	Normal Planning Appeal PDA2000

Fees and Payments

Specified Body	No
Oral Hearing	No
Fee Calculation Method	System
Currency	Euro
Fee Value	50.00
Fund Amount	

Observation/Objection Allowed?	Yes
Payment	
Related Payment Details Record	

Observation

A proposed development comprising the taking of a 'relevant action' only within the meaning of Section 34C of the Planning and Development Act 2000, as amended, at Dublin Airport,

Printed at: 19/12/2023 14:10

Printed by: Karen Byrne

Co. Dublin, in the townships of Collinstown, Toberbunny, Commons, Cloghran, Corballis, Coultry, Portmellick, Harristown, Shanganhill, Sandyhill, Huntstown, Pickardstown, Dunbro, Millhead, Kingstown, Barberstown, Forrest Great, Forrest Little and Rock on a site of c. 580 ha. The proposed relevant action relates to the night-time use of the runway system at Dublin Airport. It involves the amendment of the operating restriction set out in condition no. 3(d) and the replacement of the operating restriction in condition no. 5 of the North Runway Planning Permission (Fingal County Council Reg. Ref. No. F04A/1755; ABP Ref. No. PL06F.217429 as amended by Fingal County Council F19A/0023, ABP Ref. No. ABP-305289-19), as well as proposing new noise mitigation measures. 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. The proposed relevant action, if permitted, would be to remove the numerical cap on the number of flights permitted between the hours of 11pm and 7am daily that is due to come into effect in accordance with the North Runway Planning Permission and to replace it with an annual night-time noise quota between the hours of 11.30pm and 6am and also to allow flights to take off from and/or land on the North Runway (Runway 10L 28R) for an additional 2 hours i.e. 2300 hrs to 2400hrs and 0600 hrs to 0700 hrs. Overall, this would allow for an increase in the number of flights taking off and/or landing at Dublin Airport between 2300 hrs and 0700 hrs over and above the number stipulated in condition no. 5 of the North Runway Planning

	Development Description
	<p>Permission, in accordance with the annual night time noise quota. The relevant action pursuant to Section 34C (1) (a) is: To amend condition no. 3(d) of the North Runway Planning Permission (Fingal County Council Reg. Ref. No. F04A/1755; ABP Ref. No.: PL06F.217429 as amended by Fingal County Council F19A/0023, ABP Ref. No. ABP-305289-19). Condition 3(d) and the exceptions at the end of Condition 3 state the following: '3(d). Runway 10L-28R 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.'</p> <p>Permission is being sought to amend the above condition so that it reads: 'Runway 10L-28R shall not be used for take-off or landing between 0000 hours and 0559 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 or where Runway 10L-28R length is required for a specific aircraft type.' The net effect of the proposed change, if permitted, would change the normal operating hours of the North Runway from the 0700hrs to 2300 hrs to 0600 hrs to 0000 hrs. The relevant action also is: To replace condition no. 5 of the North Runway Planning Permission (Fingal County Council Reg. Ref. No. F04A/1755; ABP Ref. No.: PL06F.217429 as amended by Fingal County Council F19A/0023, ABP Ref. No. ABP-305289-19) which provides as follows: 5. On completion of construction of the runway hereby permitted, the average number of night</p>

Case Number

F20A/0668

noise 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. Reason: To control the frequency of night flights at the airport so as to protect residential amenity having regard to the information submitted concerning future night time use of the existing parallel runway'. With the following: A noise quota system is proposed for night time noise at the airport. The airport shall be subject to an annual noise quota of 7990 between the hours of 2330hrs and 0600hrs. In addition to the proposed night time noise quota, the relevant action also proposes the following noise mitigation measures: - A noise insulation grant scheme for eligible dwellings within specific night noise contours; - A detailed Noise Monitoring Framework to monitor the noise performance with results to be reported annually to the Aircraft Noise Competent Authority (ANCA), in compliance with the Aircraft Noise (Dublin Airport) Regulation Act 2019. The proposed relevant action does not seek any amendment of conditions of the North Runway Planning Permission governing the general operation of the runway system (i.e., conditions which are not specific to nighttime use, namely conditions no. 3 (a), 3(b), 3(c) and 4 of the North Runway Planning Permission) or any amendment of permitted annual passenger capacity of the Terminals at Dublin Airport. Condition no. 3 of the Terminal 2 Planning Permission (Fingal County Council Reg. Ref. No. F04A/1755; ABP Ref. No. PL06F.220670) and condition no. 2 of the Terminal 1 Extension Planning

PA Decision Date	08/08/2022
County	
Development Type	
Development Address	Dublin Airport, Co. Dublin
Appellant	
Supporting Argument	

	<p> Permission (Fingal County Council Reg. Ref. No. F06A/1843; ABP Ref. No. PL06F.223469) provide that the combined capacity of Terminal 1 and Terminal 2 together shall not exceed 32 million passengers per annum. The planning application will be subject to an assessment by the Aircraft Noise Competent Authority in accordance with the Aircraft Noise (Dublin Airport) Regulations Act 2019 and Regulation (EU) No 598/2014. The planning application is accompanied by information provided for the purposes of such assessment. An Environmental Impact Assessment Report will be submitted with the planning application. The planning application and Environmental Impact Assessment Report may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy, at the offices of the Planning Authority during its public opening hours of 9.30 - 16.30 (Monday – Friday) at Fingal County Council, Fingal County Hall, Main Street, Swords, Fingal, Co. Dublin. </p>
Applicant	
Additional Supporting Items	Yes

fatmeh

Mary Tucker

From: Bord
Sent: Wednesday 13 December 2023 15:42
To: Appeals2
Subject: FW: Ref- PL06F.217429/314485
Attachments: APB submission December 2023.pdf

From: Alan Lynch <axllynch@gmail.com>
Sent: Wednesday, December 13, 2023 3:16 PM
To: Bord <bord@pleanala.ie>
Subject: Ref- PL06F.217429/314485

Dear Patrick

Please see attached my second observation in connection with the relevant action.

You should have me on record as paying the fee for my first observation.

Many thanks
Alan Lynch
Castlefarm House
Kilsallaghan
Co Dublin
K67WE52
0868577048

**APB ref PL06F.217429/
PL06F. 314485**

13 December 2023

The Secretary
An Bord Pleanála
64 Marlborough Street
Dublin 1
D01V902

**RE Proposed Relevant Action to change conditions 3 and 5 and flightpaths of
North Runway planning permission (APB ref PL06F.217429/314485)**

Dear Sir/Madam

I wish to make another observation on the updated documentation submitted by daa with respect to above.

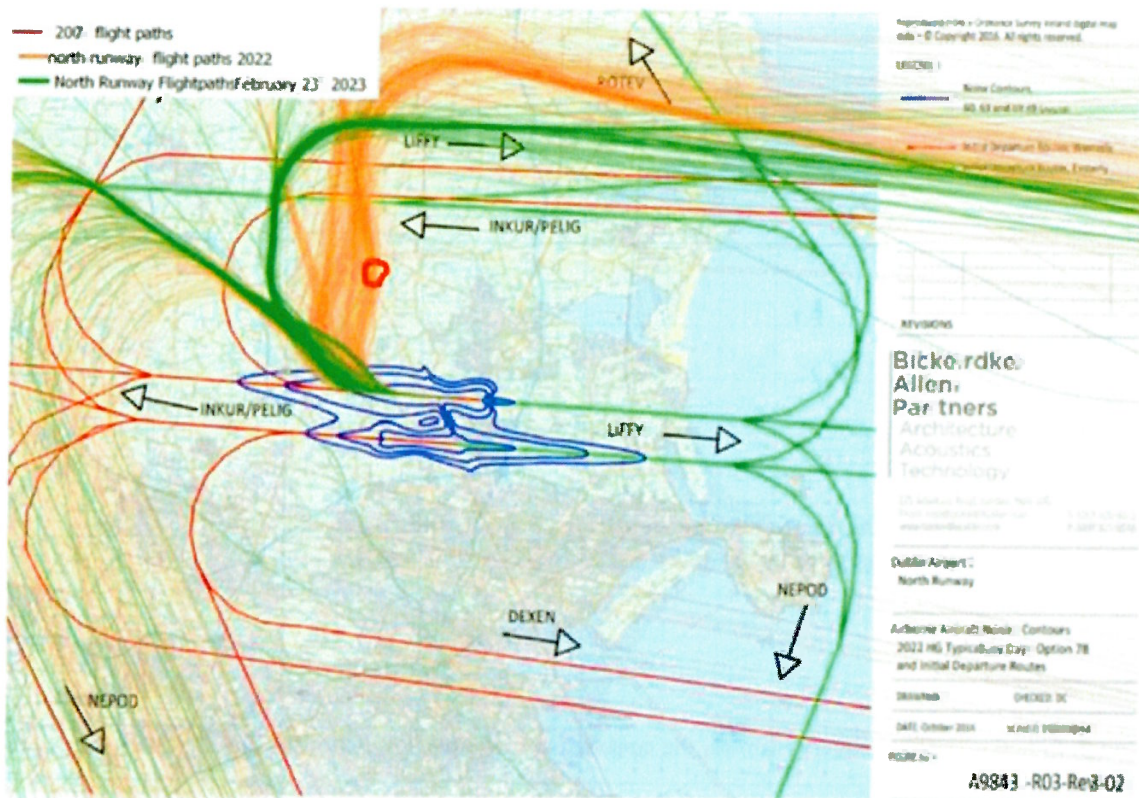
1.0 Introduction

I am one of over 30,000 people who are now living under an illegal flightpath since the opening of the North Runway. The 2007 planning condition documentation includes flightpath assumptions which many people have built their lives around. The flightpaths in the 2007 planning permission are much different to the ones in use today and since it opened.

Everything changed when the North Runway opened as our lives were turned upside down overnight.

My family and I bought our house in Kilsallaghan in June 2021 after reviewing the planning documentation, plans and particulars as per the 2007 planning permission granted to the DAA for the North runway. This documentation shows that flightpaths for the North runway were to be straight out for 5 nautical miles or to an altitude of 3000 feet before diverging. The diagrams and maps

provided within the planning permission show that Kilsallaghan was not in any shape or form under or near to a flightpath. See diagram below for illustration.



When the North runway opened in August 2022, we were astonished to discover that planes were flying directly over our house. It would seem like our house was identified as a fly-over way point which is a point in a flightpath that aircraft must fly over. Instead of using the approved flightpaths, planes were taking a 75 degree turn at the end of the north runway (at several hundred feet) and flying directly over St Margarets, Kilsallaghan and Rolestown.

Since the North runway opened, we've been subjected to thousands of large jet aircraft flying directly over our home. Depending on the route, the frequency of these flights could be every 90 seconds. It is the most horrible experience we've had to endure. It has rendered our garden space useless as it's impossible to stay outside with the noise levels and the noise can't be escaped in the house either (house was built in 1975).

The primary reason we moved to Kilsallaghan was the outdoor space on our property but enjoyment of this has been destroyed by the DAA electing to fly unauthorised flightpaths since the North runway commenced.

We have been experiencing noise levels of 80 to 100 decibels based on our own readings. It is high enough to cause many issues harmful to health which have been well documented. We have five young children and this has created a very negative experience for them in terms of the house move which should not be the case.

We instructed Wave Dynamics Acoustic Consultants to conduct an independent noise monitoring assessment at our home between Friday 23 December and Tuesday 27 December 2022. Their report is attached and it concludes that noise levels during the period exceed the predicted maximum noise levels within the modelling carried out by the DAA.

The situation has had the following consequences for us:

- elevated my wife's blood pressure,
- caused huge levels of stress for us all,
- created a situation of extreme anxiety which carries on and which myself and my wife have required medical intervention for,
- lost valuable time on house projects because we are not going to invest further in a home that is subject to harmful noise levels,
- created a negative experience for our kids in terms of the house move as there is now regret as to the move we made because the reasons for our move i.e. enjoyment of outdoor space have now been destroyed by the DAA using unauthorised flightpaths,
- decreased our property value significantly and puts us in a position where it will be difficult to sell our property which is our single investment.

The flightpaths were changed on February 23 2023 to a new route. The new flightpath is still creating continuous harmful and excessive noise levels. The situation is extremely distressing and these noise levels are not acceptable nor safe.

I have written to the DAA via email on several occasions seeking to arrange a meeting with their community liaison officer but my requests in this regard have been ignored. I have also submitted hundreds of noise complaints to the DAA and not one of those has been answered regarding the unauthorised flightpaths. They've only responded to noise complaints relating to noise levels from permitted South runway flights or propeller aircraft which for some reason are not subject to the same noise contours as jet aircraft. Most of my noise complaints included a request to speak to the DAA community liaison officer about the situation and they have been ignored.

I have made a formal complaint to Fingal County Council (FCC) on 20 September 2022 in respect of the North runway operations which are not in compliance with planning conditions attached to Reg F04A/1755. FCC issued a warning letter to the DAA on 21 September 2022 however this process is still not concluded and meanwhile tens of thousands of people are enduring intolerable noise levels and the associated stress and anxiety unnecessarily.

2.0 DAA Submission

Having read through the daa newly submitted documents, it is clear in the submission from daa, that they have used the current flight paths for their "permitted" drawings instead of the permitted noise zones from the original 2007 planning permission. They seem to be hoping that ABP grants this on the basis of the relatively small difference between before and after with respect to night flights. **If that occurs, ABP would effectively be accidentally granting retention to the current flight paths which are currently illegal and causing untold distress for tens of thousands of people. This means that flightpaths are now a very important element of this relevant action submission and must be considered within it.**

My major areas of observation and concerns are:


1. So-called "permitted" Noise zones in this submission do not match the Environmental Impact Statement for the only granted legal permission.
2. The public consultation in 2016 used different routes and noise zones from the routes in this submission.
3. The so called 2016 public consultation was strictly limited to certain areas in Fingal. Co Meath and areas such as Kilsallaghan were excluded from the list of areas included in the leaflet drop and advertising.
4. The State (Fingal Co Co, Meath Co Co, daa) has taken the position that only Fingal has standing regarding the planning permission. daa insists that the planning permission has nothing to do with the routes. Therefore, citizens in Meath have no means to engage in the planning process while being subjected to the environmental impact.
5. Acceptance of the relevant action by ABP and thus retention of the flightpaths would set a precedent that ABP conditions should be ignored if inconvenient. Far from accepting the relevant action Fingal Co Co should be taking action to enforce the existing noise zone. ABP should admonish Fingal Co Co for granting the relevant action in the first place. I can only assume that Fingal got lost in the detail and approved something they didn't understand.
6. There are alternative routes that conform to the existing noise zone without reducing the capacity of the airport. AirNav's failure to design the procedures well and daa's flagrant ignoring of planning permission should not be rewarded. Daa and certain airlines are not interested in these alternatives as they may add an extra two minutes to each flight. Therefore, they'd rather persecute tens of thousands of people with harmful noise rather than lose a cent in profits. These alternatives are detailed in section 3.
7. The reports and estimates within the daa submission regarding noise impacts from proposed changes are all couched with the language 'no material change' and 'not significant'. It should be noted that this kind of language is all presented to favour the daa's proposal and there's nothing factual about it. None of this can be taken seriously as none of it is tested or factual and the actual lived experience of tens of thousands of people is the reality. The daa are applying to change planning permission conditions while breaching the only valid and current planning permission and flightpaths granted as per below:
 - daa have breached the passenger cap in 2019 and will most likely do so again in 2023.

- daa are consistently breaching the 65 movement cap per night.
 - daa are not using the flightpaths they used in their 2007 planning permission.
8. daa have failed one of the ANCA 2022 noise objectives.
 9. The representative feedback of the affected communities via their elected representatives was that these changes should not be allowed but this was not taken into account by the Fingal County Council executive in the planning process.
 10. Measures to increase traffic and consequent emissions in the midst of a climate crisis is counter to our international and legal commitments to reduce GHG. Dublin airport is the number one GHG emitter in Ireland in 2022 according to data from Climate Trace.Org at Cop28. Daa prefer not to include scope 3 emissions in their environmental reports, but these should be included in order to provide a true reflection.

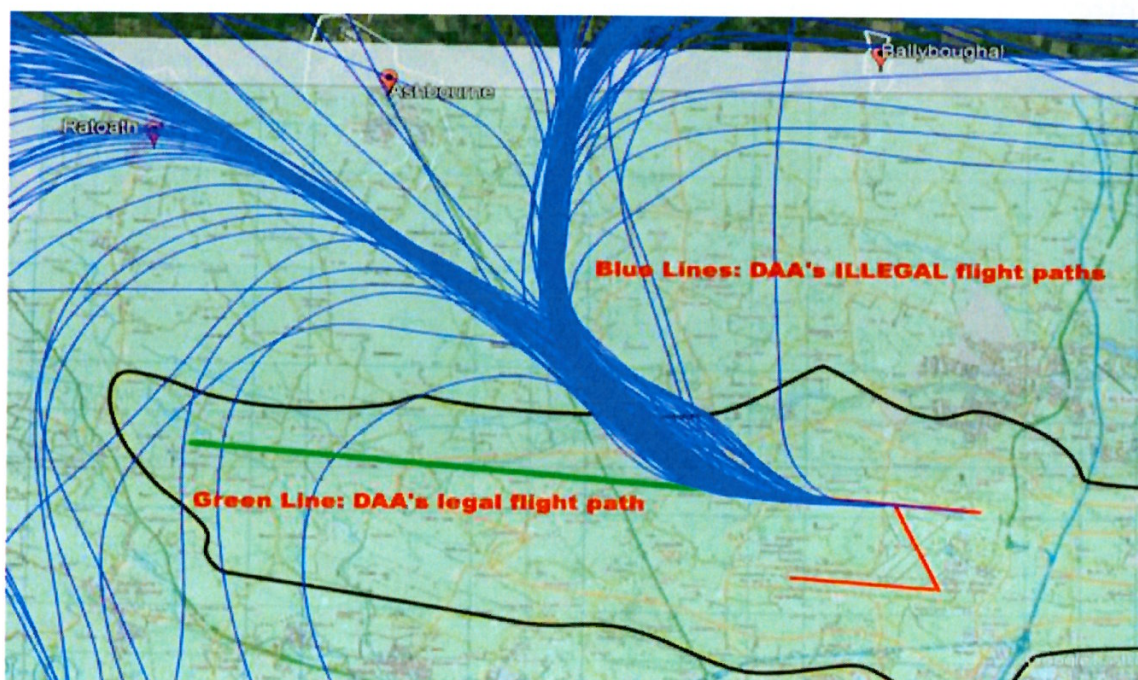
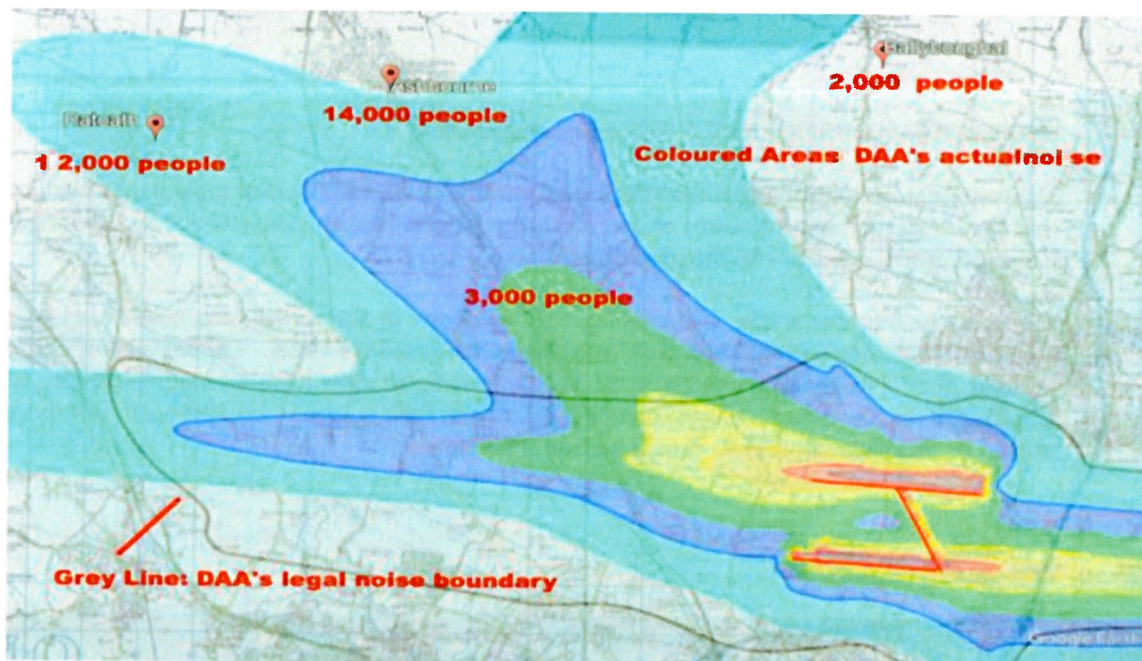
3.0 Alternative Flightpaths

Current Noise Situation

- Departures from 28R are turning early to the north (Red Line) , causing huge noise complaints from residents who were not part of the planning noise consultation.
- Planning application departure procedures were to fly straight ahead (Green line) to a specified distance and altitude before turning.
- The DAA state this cannot be done, here we will look at what can be done to minimise the noise levels.
- The DAA claim they are being forced to fly certain routes by the IAA Irish Aviation Authority, to comply with ICAO (International Civil Aviation Organisation) regulations. But these new routes are not the minimum turn tracks.
- The IAA claim they just approve procedures not dictate them.



The charts below shows how many people are being affected by the flightpaths currently in use by the daa.



Parallel Runway Operations

- All procedures are outlined in the ICAO (International Civil Aviation Organisation) DOC 9643.
- This document has been published since the early 2000's, and requires Airports to comply to these restrictions.
- The DAA would submit departure and arrival procedures to the IAA for approval.
- The current departure (SIDS) and arrival (STAR) procedures are in compliance with these procedures, however departures off 28R with a 10 degree turn are possible under these procedures.



ICAO

Doc 9643

Manual on Simultaneous Operations on Parallel or Near-Parallel Instrument Runways (SOIR)

Second Edition, 2020



Approved to and published under the authority of the Secretary General

INTERNATIONAL CIVIL AVIATION ORGANIZATION

Parallel Runway Operations

- Separation from simultaneous Departures off parallel runways, and
- Separation from a missed approach from one runway, and the departure from the parallel runway.
- Departures from parallel runways must diverge by at least 10 degrees and turn within 2nm of the runway.
- The required divergence between a missed approach from one runway and the departure off the parallel runway must diverge by at least 30 degrees immediately.
- This means that if the DAA wish to depart off 28L and 28R at the same time a departure turn of 10 degrees is required from 28R
- This will require the missed approach off 28L to track left by 30 degrees by the end of the runway.

Chapter 3

INDEPENDENT INSTRUMENT DEPARTURES FROM PARALLEL RUNWAYS (MODE 3)

3.1 GENERAL

Parallel runways may be used for independent instrument departures if:

- both runways are used exclusively for departures (independent departures); or
- one runway is used exclusively for departures, while the other runway is used for a mixture of arrivals and departures (semi-mixed operations); or
- both runways are used for mixed arrivals and departures (mixed operations).

3.2 REQUIREMENTS AND PROCEDURES

3.2.1 Procedures for independent instrument departures from parallel runways are contained in the PANS-OPS, Chapter 4, 6.1.2.2. It states that independent IHD departures may be conducted from parallel runways provided:

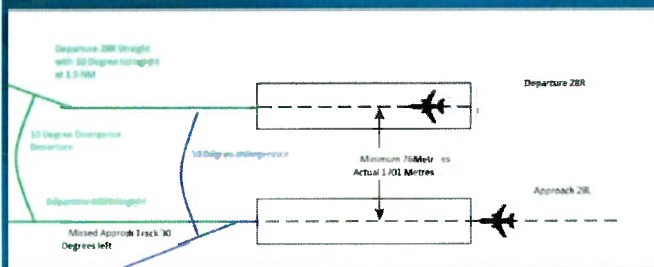
- the runway centre lines are spaced by a minimum distance of 760 m (1/4 mile), less Annex 14, Volume II. However, when the spacing between two parallel runways is less than the specified value (dictated by wake turbulence considerations), the runways are considered as a single runway with regard to separation between departing aircraft. For further detail regarding wake turbulence on departures, refer to Chapter 100, Guidelines for the Implementation of Reduced Displacement Departures.
- the normal departure track diverges by at least (see Figure 3-11):
 - 15 degrees immediately after take-off; or
 - 10 degrees where:
 - both aircraft are flying an RNAV or RNP instrument departure; and
 - the turn commences no more than 3.7 km (2.0 NM) from the departure end of the runway;
- a suitable ATIS surveillance system capable of identifying the aircraft within 1.8 km (1.0 NM) from the end of the runway is available; and
- ATIS operational procedures ensure that the required track divergence is achieved.

Parallel Runway Operations

The required 30 degree separation between the missed approach of one runway and the departure track of another runway can be achieved by turning the departure or missed approach.

The Blue line shows the missed approach turning south by 30 degrees.

The Green lines show the required divergence for a 10 degree departure off 28R.



Chapter 4

SEGREGATED OPERATIONS ON PARALLEL RUNWAYS (MODE 4)

4.1 GENERAL

4.1.1 Theoretical studies and practical examples indicate that maximum worldwide capacity can be achieved by using parallel runways in mixed mode operations. Many constraints, however, affect capacity such as the time/space available, runway length, approach, environmental considerations, etc.

4.1.2 Other factors (such as non-availability of landing aids) on one of the parallel runways or restricted runway lengths may preclude the conducting of mixed operations at a particular aerodrome.

4.1.3 Because of these constraints, maximum worldwide capacity may in some cases only be achieved by adopting a fully segregated mode of operation, where runway is used exclusively for landings or the other is used exclusively for departures.

4.1.4 The advantages to be gained from segregated parallel operations, as compared with mixed parallel operations, are:

- separate monitoring capabilities are not required;
- no interaction between arriving and departing aircraft on the same runway and consequential reduction in the number of potential missed approaches;
- as general rule, complete ATIS environment for both runways/approaches and aerodrome environment;
- a reduced possibility of pilot error due to selecting the incorrect instrument approach procedure.

4.2 REQUIREMENTS AND PROCEDURES

4.2.1 Segregated parallel operations may be conducted on parallel runways provided:

- the runway centre lines are separated 750 m (2 500 ft) (see Annex 4, Volume I);
- the normal departure track diverges immediately after take-off, by at least 30 degrees, from the missed approach track of the adjacent approach.

4.2.2 The following types of approach/departure may be used in accordance with segregated parallel operations provided that an ATS surveillance system and the associated ground facilities conform to the standard necessary for the specific type of system.

Parallel Runway Operations

Departure from 28R, Arrival on 28L.

- Currently the DAA operate one runway for departures 28R, and one runway for arrivals 28L.
- The DAA could operate departures off both 28L and 28R, spreading the noise equally to residents south and north of the airport
- The only requirement is that the departure tracks diverge by 10 degrees by 3.7 Km.
- However this is dependant on the missed approach of the arrival runway.
- Currently the missed approach off 28L is straight ahead, therefore requiring a 30 degree turn to the right off 28R.
- Changing the go around off 28L to turn to the south would enable straight departures off 28R.



Parallel Runway Operations

Departure from 28R, Arrival on 28L.

- Here we can see a proposed missed approach from 28L in blue. This would give a 30 degree divergence to the departure from 28R.
- The aircraft are required to climb above airspace at Weston and Baldonnel.
- A straight departure off 28R would limit departure off one runway only, therefore a 10 degree turn north off 28R should be used to allow both runways to be used for departure.
- Go arounds are in frequent, so the noise footprint would be 2-3 flights per day, rather than a departure every 90 seconds from 28R.
- Noise generated from a missed approach is very low compared to a departure, as the aircraft reaches the altitude quickly, and then has low power and low speed.



Parallel Runway Operations

Departure from 28R, Arrival on 28L.

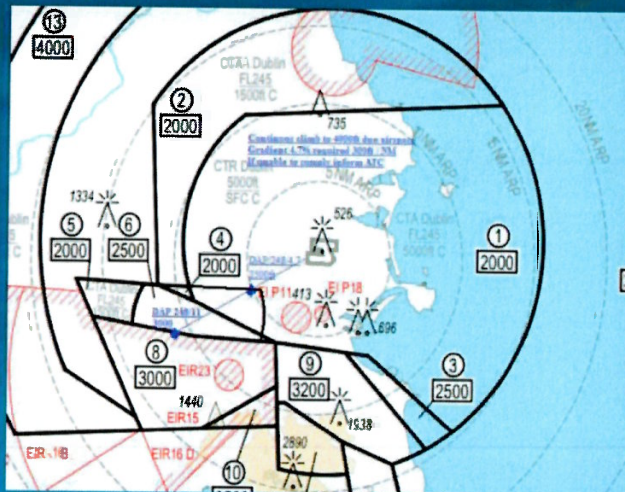
- Here we can see a proposed missed approach from 28L in blue. This would give a 30 degree divergence to the departure from 28R with a 10 degree turn north.
- This 30 degree turn would also allow ATC issue straight departures off 28R due to Weather if in Mixed mode.
- This proposed missed approach is overlayed on the Minimum radar altitude chart, eg this is the minimum altitudes that ATC can use day to day in different areas.
- This would require a climb gradient of 4.37% which is far lower than the achievable gradient with all engines operating.
- Most airlines will not fly a missed approach with one engine failed, and would fly straight ahead instead.
- This would be informed to ATC by the pilot, and Departures would have to stop momentarily until the aircraft lands.
- This is normal practice across the world.



Parallel Runway Operations

Departure from 28R, Arrival on 28L.

- The Aircraft would perform a missed approach to DAP, then track left 30 degrees 248 to 4.7 miles.
- This gives a distance of 6.6 miles to the edge of Weston AOR, with a climb of 4.37% to 2000ft.
- The Missed approach point is at an altitude of 200ft and must climb continuously to 4000ft, eg maintain the go around Flap configuration until level.
- The aircraft can then be radar vectored by ATC.



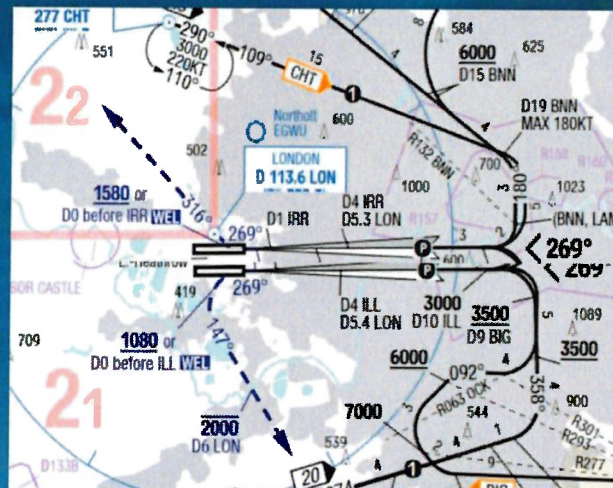
Examples of Missed Approach Turns

- The standard missed approach gradient is 2.5%. Eg 2.5 feet climb per 100 feet forward.
- Airports can apply a higher gradient if required for airspace restrictions, and it must be notified on the chart.
- See an example of LIRF (Rome), 16L has a higher gradient required due to airspace restrictions. This is a similar gradient required for Dublin 28L.
- Pilots must inform ATC if unable to comply.
- If in Dublin 28L if a pilot cannot comply due to engine out operations, this would be an emergency, and ATC would have to stop departures momentarily until the aircraft has touched down.
- This is because the aircraft would normally request a straight ahead missed approach, and would therefore not have the required 30 degrees track divergence required.

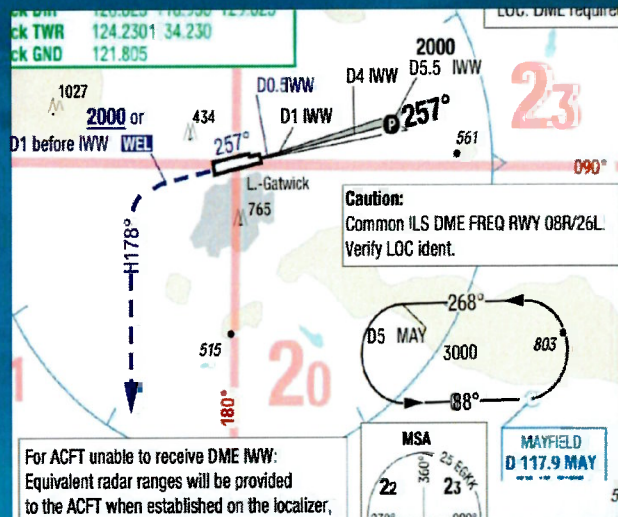


Examples of Missed Approach Turns

- Here is an example of London Heathrow.
- Most airports around the world turn the missed approach track away from the runways immediately, to allow greater flexibility for the departure tracks.
- The missed approach tracks turn away from the runway, enabling the minimum turn of 10 degrees divergence between runway departures.
- London Heathrow uses one runway for take off and one for landing just like Dublin. The runways swap at 3pm daily to spread the noise.



- Here is an example of London Gatwick.
- The missed approach turns south immediately once an altitude of 2000ft has been achieved due to obstacle clearance.

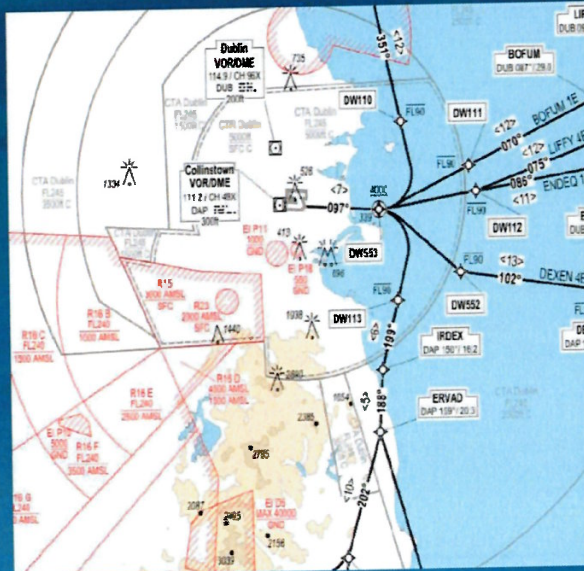


- Here is an example of Amsterdam
- The missed approach turns immediately by greater than 90 degrees to avoid conflict with departing traffic from runway 24.



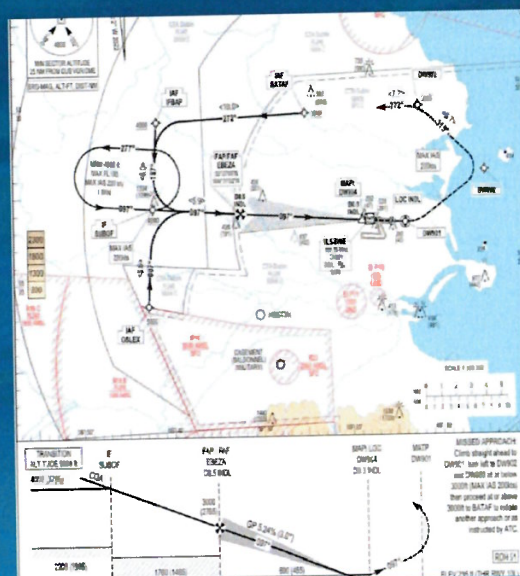
Easterly Operations

- Here you can see the Departure from 10R. This is from the South runway to the east.
- This has the Aircraft climbing straight ahead.



Easterly Operations

- Here you can see the Missed approach procedure from 10L (North runway). This procedure turning 30 degrees to the left allows a straight ahead departure of the south 10R.
- The turns must start by 2 nm from the departure end of the runway.
- This same procedure could be used for the west operations, and allow reduced turns from 28R.



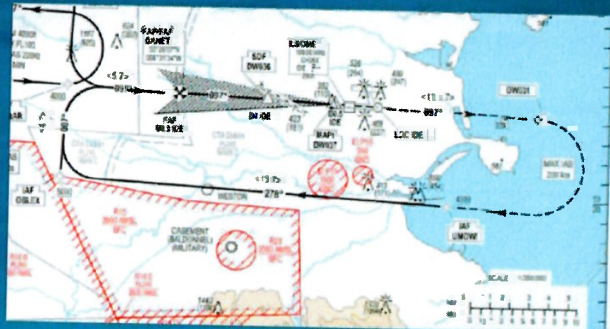
Easterly Operations

- Here you can see the departure track from 10L. It has a turn 10 degrees to the left.
- This does not give the required 30 degrees from the south missed approach, therefore departures off 10L are not allowed if 10R is in use for arrivals.
- All arrivals easterly are on to 10R, and departures are from 10R, therefore the east operations complies with all divergence restrictions, and allows departures from both 10L and 10R simultaneously.



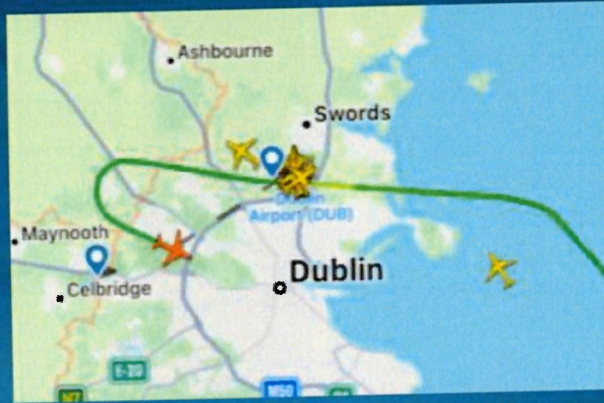
Easterly Operations

- Here you can see the missed approach from 10R. This is from the South runway to the east.
- This has the Aircraft climbing straight ahead, and turning south over Dublin city.
- This is an existing published procedure. The proposed missed approach procedure for 28L will fly in the same airspace.



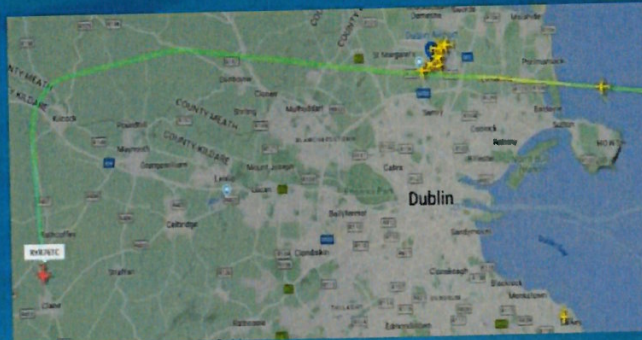
South 28L Proposal.

- The DAA state that this left turn from the south runway is not possible over Dublin city at 4000ft, due to Baldonnel.
- Here is an actual screenshot of an aircraft performing a missed approach from 28L, and ATC instructed them to fly south.
- In this picture you can see the aircraft turned south, while Baldonnel airspace was active.
- Also to note a departure from the north 28R in progress.



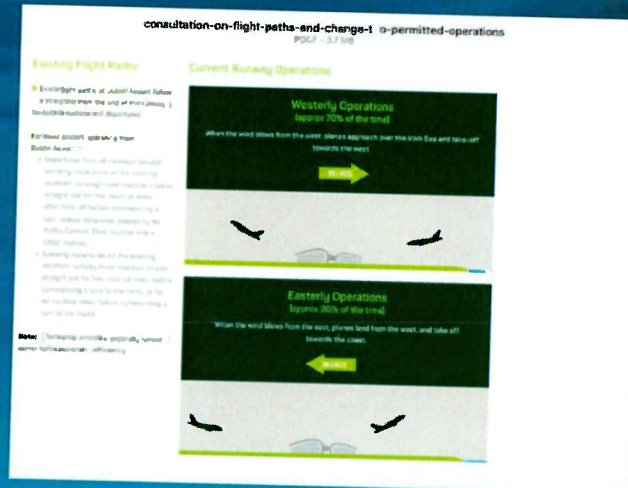
South 28L Proposal.

- Here is another example of an actual missed approach.
- ATC were required to intervene due to departing traffic off 28R.
- This clearly shows that the current missed approach off 28L is not fit for purpose, and the aircraft can be turned south over the city if required.



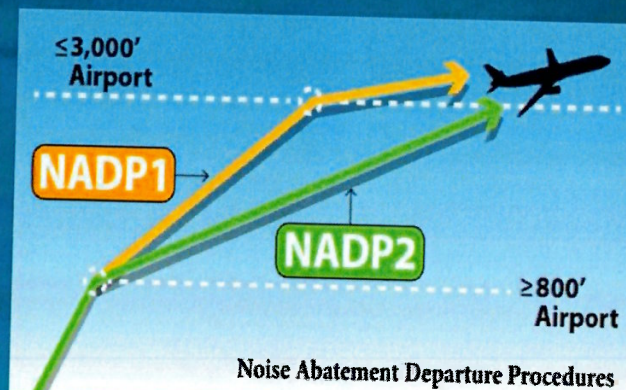
How Can The DAA Reduce Noise?

- Use full runway length for departure as standard.
- The longer the runway available, the lower the power required for take off, and therefore less noise.
- Currently the DAA require ATC to use the westerly runway with up to 10 Kts easterly wind, eg tailwinds.
- The DAA's own published procedures state that the westerly runway will be used with westerly winds, and the east runway for easterly winds.
- The current turn from 28R at 400ft is against the DAA's own published procedures which state that all aircraft must fly straight until 500ft before turning.



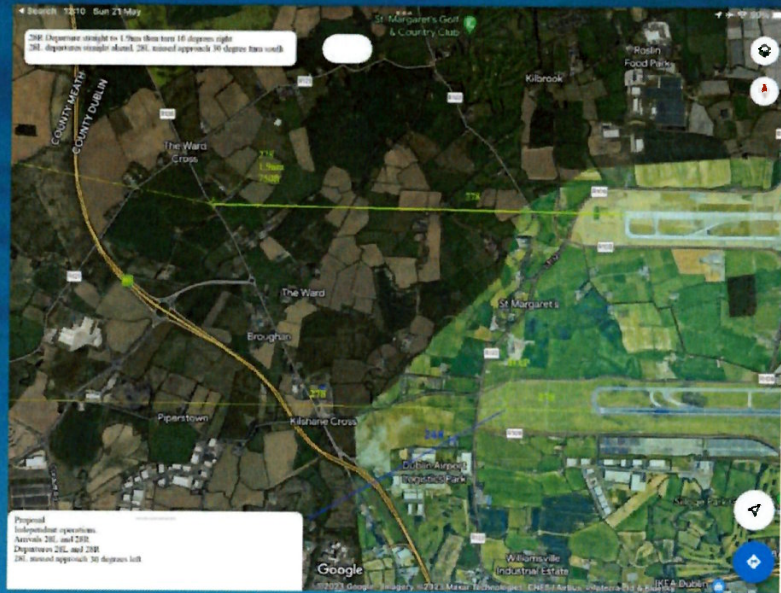
How Can The DAA Reduce Noise?

- Use noise abatement departure procedure 1 (NADP1)
- The current procedure in Dublin airport is to use NADP 2. The aircraft climbs to 1500ft above the runway, reduces power and accelerates. Retracting the take off flaps. This combined with the turns, means the aircraft cannot climb fast.
- Using NADP 1 will enable the aircraft to climb continuously to 3000ft above the runway before accelerating. This reduces noise dramatically, which is in use around Europe.



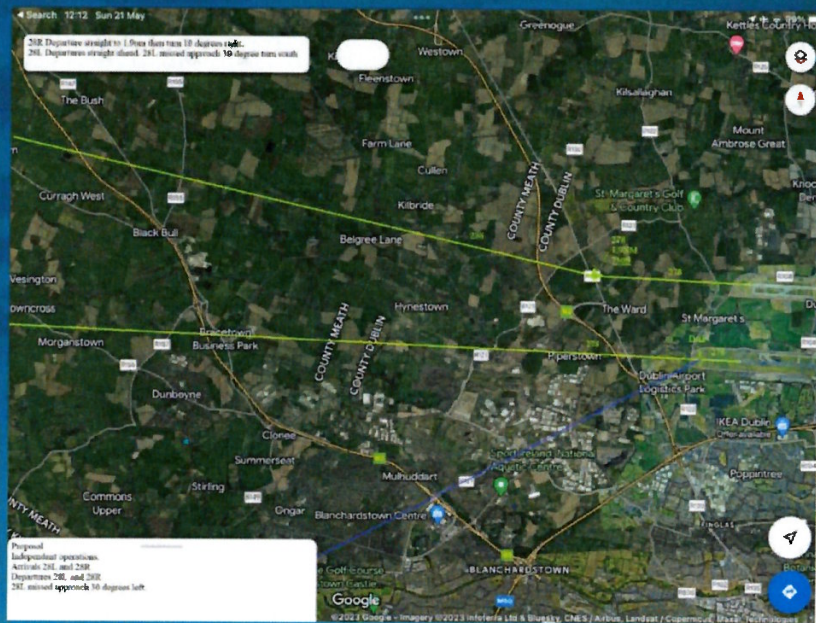
Proposed Routes 10 Degree Turn 28R

- 28R Departure 10 degree turn at 1.9 miles.
- Turn must be started by 2 miles / 3.7km.
- Missed approach 30 degrees left 28L.
- Angle between Departure track and missed approach 30 degrees required.
- This would allow departures on 28L and 28R.
- Missed approach would climb above, and avoid Baldonnel and Weston airspace.
- Missed approach track would also be above the Baldonnel VOR 28 Approach.



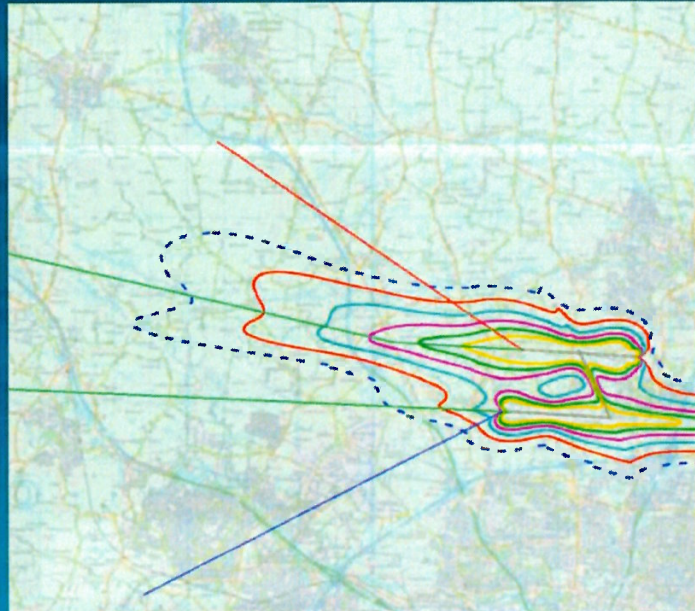
Proposed Routes 10 Degree Turn 28R

- 28R Departure 10 degree turn at 1.9 miles.
- Turn must be started by 2 miles / 3.7km.
- Missed approach 30 degrees 28L.
- Angle between Departure track and missed approach 30 degrees required.
- This would allow departures on 28L and 28R.
- Missed approach would climb above Weston, and avoid Baldonnel airspace.
- Missed approach track would also be above the Baldonnel VOR 28 Approach.



Proposed Routes 10 Degree Turn 28R

- The red Line is the actual departure track off the new North runway. It can be clearly seen it is well outside the planned noise contour chart.
- The proposed 10 degree turn shown in green would allow departures from both runways at the same time, and fly through the area defined in the noise contour chart.
- The Blue line is the required change to the missed approach track.
- This proposed procedure will allow the DAA to expand with their goals into the future while protecting residents from noise.
- This is a win for all parties concerned, and protects the expansion of Dublin Airport into the future.



Summary

- Use Full length runway 28R as standard
- Use NADP 1 as standard in Dublin airport
- Use maximum 5 kts of tailwind for departures
- Change the missed approach for runway 28L to fly to the south as proposed.
- Departures off 28R to straight ahead to 1.9 nm, then fly to 10nm and above 3000ft before turning on track, or
- Departures off 28R climb ahead to 1.9nm, then turn north by 10 degrees and climb to 10nm before turning.
- Instruct ATC to enforce speed restrictions. Currently ATC demand an increase to 290 kts airspeed soon after departure.
- Make 250kts below 10000ft mandatory.
- Instruct ATC to not direct aircraft off the published routes until above 5000ft.
- Introduce a penalty to airlines that do not comply with speeds and track keeping. This is standard practice across Europe.

4.0 Sleep Disturbance

As per an EPA research paper number 423 entitled 'Environmental Transport Noise and Health: Evidence from Ireland (Noise-Health)' by authors: Enda Murphy, Jon-Paul Faulkner, Ciarán Mac Domhnaill, Seán Lyons, Anne Nolan and Owen Douglas (referenced below), sleep disturbance caused by environmental noise has the potential to adversely affect the immune system and, therefore, is a major health concern. Sleep disturbance and awakening caused by exposure to transport noise disrupts SWS, which is essential for the body's recuperative process, and also disrupts REM sleep (Belojevic et al., 1997). According to Spiegel et al. (2003) and Ising et al. (2004), a disruption in recuperative sleep results in an increase in cortisol levels in subsequent waking hours. Fundamentally, noise-related sleep disturbance is not mitigated by habituation, but in fact is exacerbated by long-term habituation. This is because long-term exposure to environmental noise results in overproduction of cortisol (Maschke, 2003), resulting in the accumulation of cortisol (so-called hypercortisolaemia) (Tobías et al., 2015), which in turn can lead to atherosclerosis (Recio et al., 2016), widely considered the primary pathological state associated with cardiovascular disease (Münzel et al., 2018).

The report concludes that studies concerning the relationship between environmental noise and annoyance tend to report that exposure to aircraft noise causes the highest annoyance response, followed by road traffic noise and lastly railway noise. For example, in an analysis of 823 participants in eight metropolitan regions in France, Gille et al. (2017) found that aircraft noise was reported to be the most annoying, followed by road traffic noise and finally railway noise. In addition, in a study investigating the cumulative impact of transport noise on a population of 10,000 in the Frankfurt Rhine-Main metropolitan district of Germany, Wothge et al. (2017) found that aircraft noise was significantly more annoying than either road traffic or railway transport noise at a standardised sound level, in terms of loudness and frequency, suggesting that the perception of noise annoyance is heavily influenced by average sound pressure. Such conclusions are also reflected in recent research by Sung et al. (2016), who analysed noise annoyance among a stratified random sample of 2000 participants of the metropolitan regions of Seoul and Ulsan in South Korea.

The epidemiological evidence associating sleep disturbance with negative health events is well documented (Watson et al., 2015), and sleep disturbance is regarded as one of the most significant negative health impacts associated with environmental noise (Fritschi et al., 2011).

https://www.epa.ie/publications/research/environment--health/Research_Report_423.pdf

Matt Walker – extract from his TED talk on sleep in 2019.

Matt Walker is a brain scientist specialising in the benefits of good sleep and the negative consequences of bad sleep.

Sleep is your life-support system and Mother Nature's best effort yet at immortality, says sleep scientist Matt Walker. In this deep dive into the science of slumber, Walker shares the wonderfully good things that happen when you get sleep -- and the alarmingly bad things that happen when you don't, for both your brain and body.

https://www.ted.com/talks/matt_walker_sleep_is_your_superpower/transcript

5.0 Conclusion

ABP must reject this relevant action on the basis that it includes a revision to flightpaths which are causing untold distress to tens of thousands of people. There are also many inaccurate statements of the proposed changes having little effect on noise.

The argument presented by daa and airlines about economic impact and loss of jobs must be put aside and taken with a pinch of salt. The truth is our economy and aviation bounce-back after covid is extremely buoyant.

The fact is that the daa are breaking their current planning permission and this must be taken very seriously. It is having a profound negative impact on residents health, quality of life and ability to sleep.

In our view, any growth must be sustainable and balanced with national policy and not a nuisance to local communities.

An oral hearing is absolutely necessary.

Yours sincerely

Alan Lynch

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Appendix 1



Technical Note

Project:	Castlefarm, Kilsallaghan, Dublin	Title:	Noise Assessment
Job Number:	WDA230104	Prepared By:	James Cousins
Date:	30/03/2023	Reviewed By:	Sean Rocks
Reference:	WDA230104TN_08_A_01	Client:	Alan Lynch

1 Introduction

Following the commencement of operations of the new Dublin Airport North Runway, Wave Dynamics were engaged by Alan Lynch, to review the noise measurements from the baseline survey undertaken at Castlefarm House, Castlefarm, Kilsallaghan, Co. Dublin, K67 WE52.

The objective of the assessment was to quantify the existing noise environment and the current noise levels from aircraft noise following the commencement of the operation of the North Runway. The measured noise levels have been compared with the predicted noise levels from the DAA noise contours and industry criteria.

1.1 Statement of Competence

This assessment and report were completed by James Cousins, Managing Director | Principal Consultant with Wave Dynamics who has extensive experience in assessing noise impact. His qualifications include BSc (Hons) in Construction Management and Engineering, Pg Cert in Construction Law and Diploma in Acoustics and Noise Control (Institute of Acoustics) and an IOA Competence Cert in Building Acoustic Measurements. James is a member of both Engineers Ireland (MIEI) and the Institute of Acoustics (MIOA) and is the current SITRI Chairman.

The assessment and report were peer reviewed by Sean Rocks, Director | Senior Consultant, Sean has experience of aircraft noise particularly for planning and complaints investigation. Sean's qualifications include BEng (Hons) in Mechanical and Manufacturing Engineering, Diploma in Acoustics and Noise Control (Institute of Acoustics), IOA Certificate of Competence in Environmental Noise Measurement and SITRI certified sound insulation tester. Sean is a member of both Engineers Ireland and the Institute of Acoustics.

2 Baseline Noise Survey

An unattended noise survey was undertaken to quantify the existing noise environment and current noise levels experienced. On review of the data the measurements commenced at 14:19pm on Friday the 23rd of December 2022 and finished at 10:25am on Tuesday the 27th of December 2022. The measurement duration was set to 1-minute intervals.

2.1.1 Site Description and Measurement Locations

The site is located on the R122 in Castlefarm, Kilsallaghan, Dublin. The area is mainly agricultural with sporadic residential dwellings and commercial properties. Dublin Airport is located to the Southeast of the residence approximately 4.5km from the edge of the new North Runway.



Figure 1: Site location and monitoring location L1



Figure 2: Site location in relation to Dublin Airport and the new North Runway

Unattended Noise Measurements

An unattended noise logger was deployed in location L1 as per Figure 1 to the rear garden of the residence. The logger was calibrated before and after the measurements and no significant drift was noted. The logger was deployed at a height of approximately 1.5m above the ground.

On review of the measurement data by WDA it was filtered for periods of unsuitable weather conditions where required.



Figure 3: Noise Logger Setup

2.1.2 Survey Period

Based on our review of the data, the measurements commenced at 14:19pm on Friday the 23rd of December 2022 and finished at 10:25am on Tuesday the 27th of December 2022. The measurement duration was set to 1minute intervals. It is understood that flights were operational from the North Runway from 9am to 6pm throughout the measurement period with the exception of the 25th December 2022.

2.1.3 Noise Measurement Equipment

A Class 1 sound level meter/noise logger in general accordance with IEC 61672-1:2013 was used for the attended measurements. Table 1 below summarises the measurement equipment used.

Table 1: Noise Measurement Equipment

Description	Model	Serial No.	Calibration Certificate No.	Calibration Due Date
Calibrator	B&K Type 4231	2205805	UCRT22/1592	03/05/2023
Sound Level Meter	Rion NL-52	764925	UCRT21/2107	09/09/2023

2.1.4 Subjective Noise Environment

Based on the information provided during the attended noise survey and logger deployment the following noise sources were identified:

- Aircraft Noise from Aircraft Fly Overs.
- Road noise from the R122
- Birdsong
- Occasional activity from residents (cars arriving/departing, voices etc)

2.2 Noise Measurement Results

This section outlines the results of the unattended noise survey.

Unattended Monitoring Results

Based on the data provided, Table 2 outlines the results of the noise measurements at the unattended monitoring location L1. A full breakdown of all the unattended measurement results is available on request.

Table 2: Unattended Measurement Results

Start Date	L _{Aeq,18hour} dB (07:00 - 23:00)	L _{Aeq} dB (L _{Aeq,9hour} 09:00 - 18:00)	L _{Aeq} dB (L _{Aeq,7hour} 07:00 - 09:00, 18:00 - 23:00)	L _{night} dB (L _{Aeq,1hour} 23:00 - 07:00)	10th highest night-time L _{AFmax} ⁽¹⁾
23/12/2022	60 ²	61 ²	57 ²	42	61
24/12/2022	60	59	55	36	61
25/12/2022	68 ³	70 ³	58	37	58
26/12/2022	62	63	59	42	56
27/12/2022	57 ²	60 ²	49 ²	N/A	N/A

- (1) Where night-time period is referred to the date is the date the measurement commenced on at 23:00hrs and finished at 07:00hrs on the following calendar day.
- (2) Shortened Measurement Duration
- (3) Measurements affected by Dogs barking on Christmas Day.

2.2.1 L_{AFmax} Noise Levels

The frequency of L_{AFmax} noise events for the four most common aircraft types over the monitoring period are shown below. The number of occurrences for these aircraft types are as follows:

- Airbus A330: 19 flights
- Airbus A320: 110 flights
- Boeing 737: 174 flights
- Boeing 737 MAX 8: 24 flights

Information regarding aircraft types and flight times have been adapted from the following online flight tracker: https://sbeaney.com/track/v2/dublin_flights.html

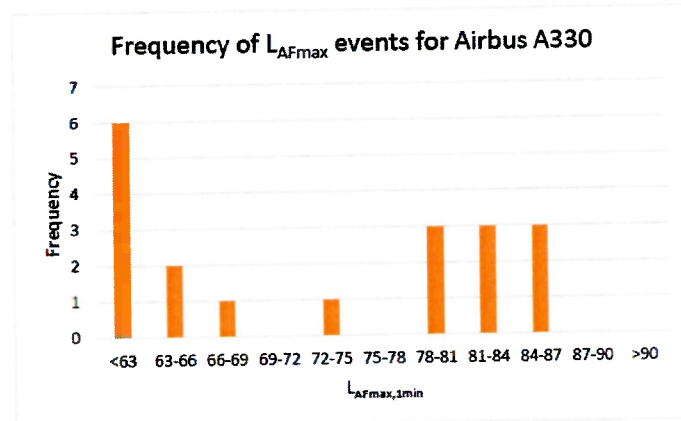


Figure 4: L_{AFmax} noise events for Airbus A330

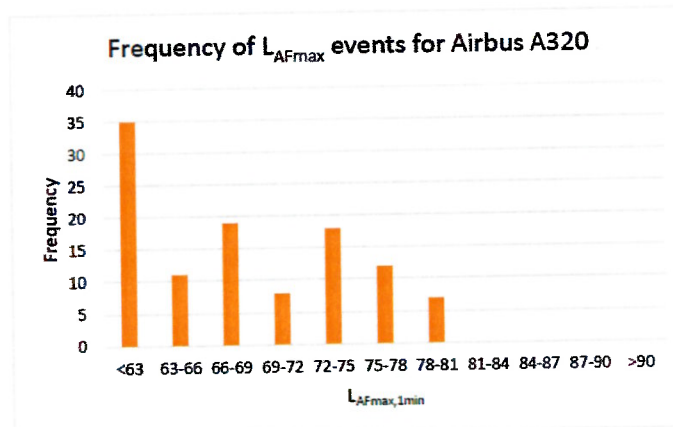


Figure 5: L_{AFmax} noise events for Airbus A320

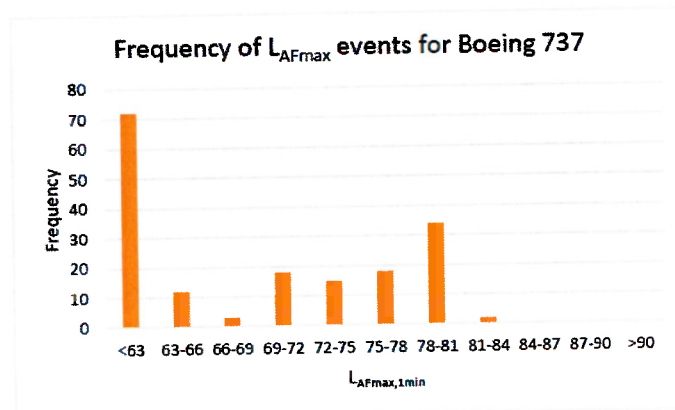


Figure 6: L_{AFmax} noise events for Boeing 737

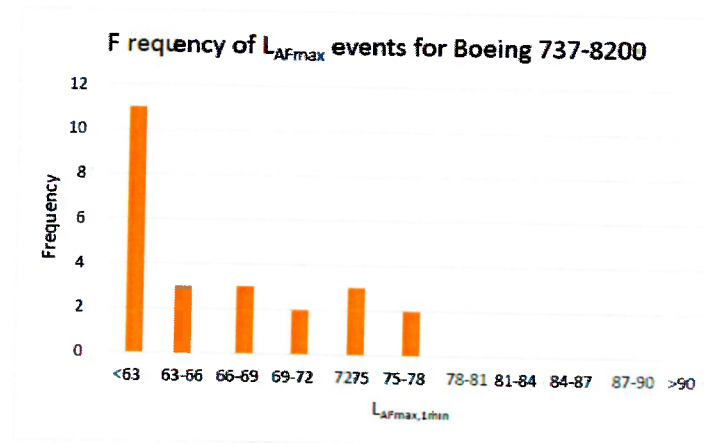


Figure 7: L_{AFmax} noise events for Boeing 737-8200

3 Analysis of Results

3.1 External Amenity Spaces

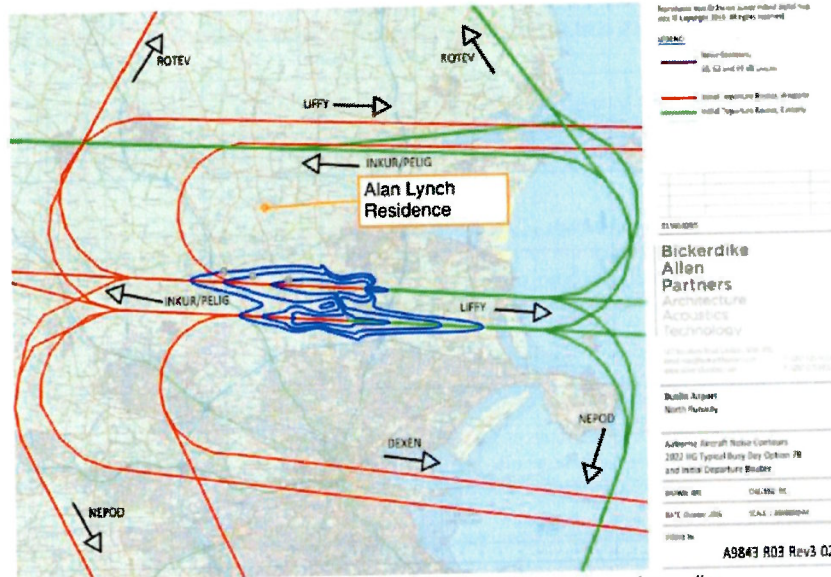
To consider the noise impact of the aircraft noise on the residence, the recorded noise levels have been compared to the industry criteria for the external amenity spaces. ProPG 2017 and BS8233:2014 provide the following guidance in relation to external amenity spaces which state that:

"the acoustic environment of external amenity areas that are an intrinsic part of the overall design should always be assessed and noise levels should ideally not be above the range 50 – 55 dB $L_{Aeq,16hr}$."

It was not possible to assess the full 16-hour range without contribution of the North Runway at this location. Instead consideration was given to the noise levels during the daytime periods outside of the North Runway operational time (07:00 – 09:00 and 18:00 – 23:00), for these periods the measured L_{Aeq} typically measured 55-59 dBA. Given the location of the residence and its proximity to local noise sources and consideration of the night-time data, the external amenity spaces would be expected to achieve noise levels in line with or marginally above the ProPG guidance without the effect of the North Runway operations.

3.2 L_{Aeq} Noise Levels

The most recently predicted noise contours for the North Runway operations per the 2007 planning permission is the compliance contours submitted to Fingal County Council in 2016. Here predicted daytime noise contours (07:00 – 23:00) for Dublin Airport with the North Runway operational can be seen below in Figure 8. From the predictions it can be seen that Alan Lynch's residence is located significantly outside the predicted contours of 60dB $L_{Aeq,16hr}$. From the results of the noise measurements outlined in Table 2 above, the corresponding $L_{Aeq,16hr}$ measured at the residence was typically 57-62dB, however this includes a period of 7 hours when the North Runway was not operational. The average noise level rises slightly to 59-63dB for the North Runway operational hours (09:00 – 18:00).



3.3 L_{AFmax} Noise Levels

Table 3 below outlines the predicted L_{Amax} noise at intervals from the western-most point of the North Runway. The data has been extracted from Bickerdike Allen Partners report "A11219-NO1-DR" dated 29th August 2018.

Alan Lynch's residence is located approximately 4.5km from the western-most point of the North Runway. A comparison of the recorded L_{AFmax} noise with those predicted in Table 3 below indicate that the predicted noise levels were exceeded.

Table 3: Predicted L_{Amax} noise levels at longitudinal distance from North Runway (most western point)

Operation	Aircraft Type	Noise Level, dB L_{Amax}							
		0.5km	1km	1.5km	2km	2.5km	3km	3.5km	4km
Departure	Airbus A320	86	83	78	78	77	77	76	76
	Airbus A330-300	91	90	89	88	87	83	82	81
	Airbus A380	89	88	87	86	85	84	83	83
	Boeing 737 Max8	87	84	81	79	78	77	77	76
	Boeing 737-800	90	87	83	81	80	80	79	79
	Boeing 737-200	96	94	93	92	90	87	86	85
Arrival	Airbus A320	94	90	87	85	83	81	80	79
	Airbus A330-300	97	93	90	87	86	84	83	82
	Airbus A380	95	91	89	87	85	83	82	81
	Boeing 737 Max8	94	90	87	85	83	81	80	79
	Boeing 737-800	94	90	87	85	83	81	80	79
	Boeing 737-200	84	90	88	86	84	82	81	80

The Airbus A320 is predicted to have an L_{Amax} of 76dB at 4km from the North Runway for departures. There was a total of 6 flight departures from the A320 over monitoring period which exceeded the predicted noise level. This figure corresponds to 14% of all Airbus A320 flights recorded over the monitoring period exceeding the L_{Amax} predicted noise levels.

The Airbus A330 is predicted to have an L_{Amax} of 81dB at 4km from the North Runway for departures. There was a total of 6 flight departures from the A330 over monitoring period which exceeded the predicted noise level. This figure corresponds to 32% of all Airbus A330 flights recorded over the monitoring period exceeding the L_{Amax} predicted noise levels.

For the Boeing 737 flights the predicted L_{Amax} at 4km from the North Runway for departures is predicted to range from 76- 79dB for Boeing 737 Max8 and 737-800, up to 85dB for 737-200. The total number of flights for Boeing 737 exceeding 79 dBA was 21. This figure corresponds to 2% of all Boeing 737 flights recorded over the monitoring period exceeding the 76- 79dBA predicted noise levels.

4 Conclusion

Following the commencement of operations of the new Dublin Airport North Runway, Wave Dynamics were engaged by Alan Lynch, to review the noise measurements from the baseline survey undertaken at Castlefarm House, Castlefarm, Kilsallaghan, Co Dublin, K67 WE52

The objective of the assessment was to quantify the existing noise environment and the current noise levels from aircraft noise following the commencement of the operation of the North Runway. The measured noise levels have been compared with the predicted noise levels from the DAA noise contours and industry criteria.

From the baseline noise survey it is evident that the noise levels at the residence are impacted by the operation of the new North Runway.

A comparison of the daytime predicted noise levels and the measured noise levels indicate that the predicted L_{Aeq} noise levels at the Alan Lynch residence are exceeded with the North Runway in operation.

When comparing the recorded maximum noise levels and predicted L_{Amax} noise contours it was noted that the measured noise levels exceed the predicted maximum noise levels with the North Runway in operation for a number of passbys.

For the purpose of the assessment and data review WDA have relied on the accuracy and data provided.