

File With

SECTION 131 FORM

Appeal No

ABP— 314485-22

Defer Re O/H

☐

Having considered the contents of the submission dated/received 14/12/2023
from Myles Caulfield 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

Section 131 not to be invoked at this stage.

☒

Section 131 to be invoked — allow 2/4 weeks for reply.

☐

Signed

Pat B

Date

10/01/2024

EO

Signed

Date

SEO/SAO

M

Please prepare BP — Section 131 notice enclosing a copy of the attached submission.

To

Task No

Allow 2/3/4 weeks

BP

Signed

Date

EO

Signed

Date

AA



Planning Appeal Online Observation

Online Reference
NPA-OBS-002973

Online Observation Details

Contact Name
Myles Caulfield

Lodgement Date
14/12/2023 13:26:14

Case Number / Description
314485

Payment Details

Payment Method
Online Payment

Cardholder Name
Myles Caulfield

Payment Amount
€50.00

Processing Section

S.131 Consideration Required

☒ Yes — See attached 131 Form

☐ N/A — Invalid

Sí gred

Pat B

EO

Date

10/01/2024

Fee Refund Requisition

Please Arrange a Refund of Fee of

€

Lodgement No

LDG— 068828-23

Reason for Refund

Documents Returned to Observer

☐ Yes ☐ No

Request Emailed to Senior Executive Officer for Approval

☐ Yes ☐ No

Signed

EO

Date

Finance Section

Payment Reference

ch_3ONEvaB1CW0EN5FC1tSVd66p

Checked Against Fee Income Online

EO/AA (Accounts Section)

Amount

€

Refund Date

Authorised By (1)

SEO (Finance)

Authorised By (2)

Chief Officer/Director of Corporate Affairs/SAO/Board Member

Date

Date

For the attention of inspectors assessing Bord Pleanala Case Ref : PL06F.314485

This document is submitted by Myles Caulfield Hon Secretary of River Valley and Rathingle Residents Association, which is the largest residential estate nearest the Dublin Airport.

My address is 18 Hilltown Close, River Valley,, Swords, Co. Dublin K67W985 and my phone number is 0876691006

Very recently a large majority of Fingal councillors voted in favour of keeping the night time flying restrictions on Dublin Airport placed by ABP in 2007. Now local democracy, as well as ABP, has spoken. Indeed, we strongly argue that the case for the enlightened "balanced" approach to Irish aviation industry development, originally set out by ABP in 2007, is very much stronger in 2023. The reasons for this include:

- An estimated 60% increase in daytime airport capacity afforded by the addition of a second parallel runway
- The continuing serious deficiencies with Dublin airport transport links
- The current major and increasing imbalance in the development of our three major airports of Dublin, Cork & Shannon.
- The recent surge in urbanization of the Fingal & Greater Dublin regions which border Dublin airport
- And, most importantly, the imminent existential climate change crisis (Dublin Airport having the dubious distinction in 2022 of being the biggest single CO2 emitter on the island of Ireland).

These arguments hold even stronger weight because of the deficiencies in the Daa submissions purporting to support the proposed changes to the 2007 conditions.

Let us attempt to summarize these deficiencies and then, for each set out the supporting evidence:

- **Aviation Noise Prediction Models without independent validation or peer review are unsound and unsafe.**
- **Aviation Noise Predictions Models relying exclusively on crude time averaging metrics fall unacceptably short of current best practice and hence are unsound and unsafe.**
- **Aviation Models which rely on both obsolete and insufficient historic data without validation as the key source of aircraft ground noise predictions are unsound and unsafe.**
- **The Environmental Report core operational unvalidated "assumptions" for twin parallel runways are materially different from the emerging actual usage data (since full operations commenced) leading to unsound predictions.**

- **The Environmental Report predictions on South Sword's air pollution impacts using obsolete historic and insufficient data are unvalidated and hence unsound and unsafe.**
- **The Environmental Report substantially ignores the technical challenges of a workable night flying residential insulation scheme.**

Supporting evidence:

- **Aviation Noise Prediction Models without independent validation or peer review are unsound and unsafe.**

Rationale

Any predictions should be accompanied by robust validation studies. This is the best practice protocol for noise mapping in accordance with the EU Noise Mapping Directive. We are not aware of any validation study done for Dublin airport (from the various rounds of noise mapping in 2007, 2012, 2017 and again in 2022). The input data used up to now to support this night time flying proposal are demonstrably incorrect, hence we must conclude that the model output is completely unreliable, even though the model itself may be widely used and accepted.

It should also be noted that ANCA state the following: "The noise model shall be validated using local noise and track keeping performance data from Dublin Airport's systems" – in their NAO document "Noise Abatement Objective Report for Dublin Airport, November 2021". It should be highlighted that this has not been done, nor has it been made available.

- **Aviation Noise Predictions Models relying exclusively on crude time averaging metrics fall vastly short of current best practice and the current majority consensus view is that this simplistic approach is unsound and unsafe.**

Rationale

The use of Lden and Lnight alone would not be considered current best practice, and any assessment of noise from Ireland's largest, busiest (and most important) airport must use best international practice in its assessment. In particular, the removal of the current movement cap in the new night time flying proposals is almost unique among all large international airports and is felt to almost certainly lead to significantly increased sleep disturbance for a large number of residents.

Also, in support of this assertion please review the attached paper¹ from Canada which states *"As a complement to cumulative indicators, the use of single-events indicators that address maximum sound levels must be favoured in future studies on environmental equity, but also in diagnostic and monitoring studies. The latter are considered to be more representative of the disturbance experienced by the surrounding population"*.

- **Aviation Model predictions which rely on both obsolete and insufficient historic data as the key source of aircraft ground noise are unsound and unsafe.**

Rationale

Any assessment of airport noise, should include an assessment of ground operations at the airport. According to EU Directive 2015/996, even noise produced during basic ground operations (i.e excluding ground noise based take-off and landing) should be considered in a similar manner to road and industrial noise, and should be modelled. In fact, the Dublin Airport Noise Action Plan 2019-2023 includes the consideration of ground operations, as it states "noise from aircraft (basic) ground operations can also give rise to adverse effects". The Action Plan also notes that noise from "basic" ground operations may be particularly intrusive during the nighttime.

Further and uniquely, noise from aircraft during take-off mode, but while still accelerating on the ground, is the main source of the very significant noise pollution in South Swords for a number of reasons. These would include the local terrain geography, the north runway elevation, the standard north runway ground based take-off trajectory which tracks just north of South Swords from east (power up) to west (lift-off), the absence of a protective noise mitigation earth berm, the south westerly prevailing wind direction, the downward noise refractive effect of this supporting prevailing headwind, the concentration of 80% (based on the DAA's own data since full operations commenced) of take-offs on the northern runway etc. It is hence impossible for the current model predictions to arrive at a realistic balanced assessment of the inevitable additional South Swords ground noise pollution, as they are based on missing recent (e.g no Boroimhe) or obsolete historic (Rivervalley) data based solely on a runway 1.6km further south and using a completely different single runway based takeoff/landing protocol.

Chapter 13 of the Daa sponsored environment impact assessment report attempts to focus without distinction on airborne & "ground noise" for aircraft "while using the runway system". However, the "ground noise" measurements presented as relevant were taken before the new runway commenced and the predicted "future" model conclusions have not been validated against current South Swords full operational ground noise data. Hence, any conclusions drawn from these models are palpably unsafe.

¹ Thomas Audrin, Philippe Apparicio, Anne-Marie Séguin, Aircraft noise and environmental equity in Montréal: A comparison of noise indicators and an analysis of the impacts of COVID-19, Transportation Research Part D: Transport and Environment, 106, 2022,

Chapter 14 of the DAA sponsored environment impact assessment report attempts to focus on "basic" ground noise "as mainly aircraft taxiing and aircraft using auxiliary power units". This analysis is based on even older data before operations on the new runway commenced, appears to ignore the primary ground noise source for South Swords being aircraft in take-off mode and ignores completely the radically changed noise dynamic of dual runway operations. As a result any conclusions based on this data are also completely irrelevant for South Swords.

Sadly, as a result of these deficiencies, the models are unable to explore any practical ground noise amelioration measures, such as earth berms, as no proper technical model validation analysis has been done. By way of illustration of the importance of this consideration, the attached link to a simple ground noise mitigation calculator illustrates the potential benefits of earth mound mitigation: (see <https://www.wkcgroup.com/tools-room/sound-barrier-calculator/>)

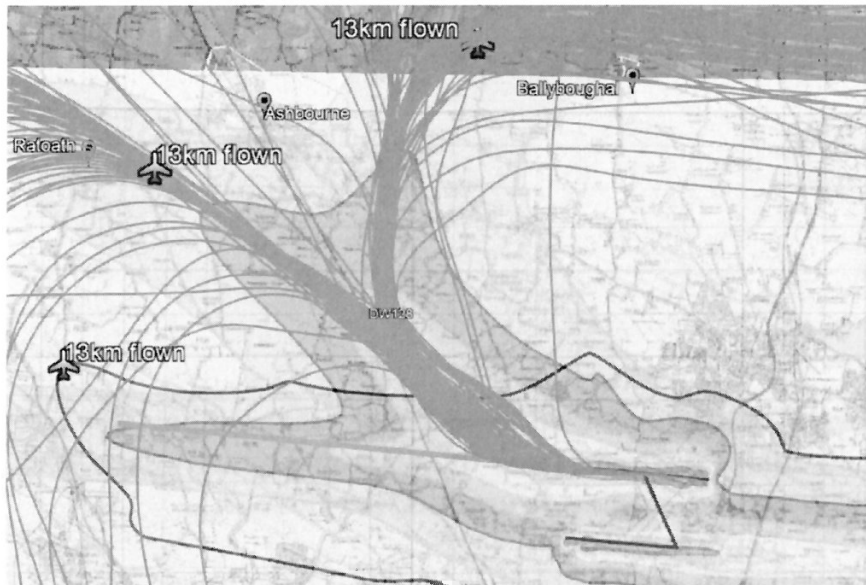
Finally, it might also be worth noting by way of contrast that the Environmental Impact Assessment Report for development at Waterford Airport included an assessment of ground operations at that airport.

(see <https://www.waterfordcouncil.ie/media/projects/airport-extension/ftco/EIAR%20Volume%202%20-%20Main%20EIAR/Chapter%2011%20-%20Noise%20and%20Vibration.pdf>)

- **The Environmental Report core unvalidated operational "assumptions" for twin parallel runways are materially different from the emerging actual usage data, since full operations commenced, leading to unsound predictions.**

A key section of the Daa commissioned AECOM Environmental Report supporting the proposed Daa changes is the section dealing with "Aircraft Noise & Vibration". The report states that "noise measurements were taken at sensitive locations". It further asserts that "when the wind is coming from the east (approximately 30% of the time) aircraft will take off into the east". However, the Daas own statistics show that, since full operations commenced on the northern runway, aircraft have been taking off into the east only 20% of the time. This reduces the "quiet time" actually enjoyed in South Swords by one third! Our current understanding is that no mechanism has been set up to measure adherence to this fundamental 30% metric underpinning the Daa sponsored Environmental Report recommendations. We assert, based on current validating data and observation, rather than spurious model prediction conjecture, that the Environmental report "supporting" the Daa proposals is flawed and hence fundamentally unsound. It should not and cannot be used to support any changes to current planning conditions.

The starkness of this deficiency is illustrated by the following aircraft track emerging data diagram:



- **The Environmental Report predictions of the proposals on South Sword's air pollution, based on obsolete, historic and partial data without validation, are unsound and unsafe.**

We understand that a very important consideration for ABP inspectors in arriving at the "balanced" conditions set out in the 2007 planning conditions was the health and safety of the aircraft travelling public, the airport neighbouring residents and the airport staff. Nothing has changed to moderate these health & safety concerns. In fact, with increased urbanization in the Greater Dublin Area, Fingal & surrounding counties combined with an aging population the original enlightened approach to nighttime protections carries even greater weight. Poorer air quality, as a result of the proposed changes, is a particular concern for the approximate 12,000 residents of South Swords, given the proposed operational plan for new runway combined with the prevailing winds. The AECOM report includes no model prediction validation of the specific impact on South Swords of moving the vast majority (almost 100% for weeks on end) of continuous aircraft take-offs to the northern runway. We assert that the current nearest air quality permanent monitor is too far east to give meaningful protective cover to South Swords. This fundamental omission makes this environmental report "unfit for purpose" as a basis for assessing the health & safety robustness of Daa proposals.

- **The Environmental Report substantially ignores the technical challenges of a workable night flying residential insulation scheme.**

Another fundamental omission from the environmental report is any model prediction & associated validation of the likely effectiveness of a residential sound insulation scheme against night time noise. In the context of aircraft noise, there is very little measured data for the sound transmission loss of exterior walls and there is almost none that is representative of modern Irish construction practice. Further, measurement data for the sound transmission loss of various roof structures is not available.

Our investigations to date have found no current expertise in this key specialism in either the Daa, Fingal CC or ANCA. We have been unable to contact any specialist contractor who will assess the requirements. The supporting environmental report sets out no analysis of the house types impacted, no benchmark mitigation standard to be achieved, no investigation of the likely costs of this mitigation, no criterion for assessing the achievement of any benchmark & no followup accredited validation process to assure adherence to this benchmark. In short, the environmental report falls well short of the professional standards that might be reasonably expected for a major health & safety issue of this nature and is hence completely inadmissible as a credible scientific document supporting the Daa proposals.

Thanking you for your time and attention to these urgent resident concerns