Appendix A

OVERARCHING INFORMATION REQUESTS

A) Noise and other environmental forecasts for additional assessment years and scenarios are requested with relation to the following:

- Extension of the analysis for all scenarios inclusive of the 32mppa passenger cap to cover:
    - 'unconstrained forecasts' (without North Runway Condition 5, with annual passenger cap) for 2030, 2035 and 2040; and
    - 'constrained forecasts' (with North Runway Condition 5, with annual passenger cap) extended to include outputs for 2030, 2035 and 2040.
- Extension of the analysis for all forecasts excluding the 32mppa passenger cap (i.e., growth potential) to cover:
    - 'unconstrained forecasts' (without North Runway Condition 5, with annual passenger cap) for 2030, 2035 and 2040; and
    - 'constrained forecasts' (with North Runway Condition 5, with annual passenger cap) extended to include outputs for 2030, 2035 and 2040.

- The Applicant should provide noise forecasts for the scenarios and situations described within the Application and consider providing further information in relation to the following preferential runway usage scenarios:
    - No use of the North Runway between 2300 and 0600 i.e., use only between the hour 0600-0700; and
    - Use of the North Runway allied to a quota for North Runway use in the periods 2300 to 2330 and 0600 to 0700

B) The Applicant is requested to describe how a 6.5-hour Noise Quota Scheme (2330-0600) will achieve an 8-hour night-time noise objective (2300-0700). Furthermore, the Applicant is requested to provide analysis of what, if any, safeguards are proposed in relation to noise impacts in the shoulder periods 2300-2330 and 0600-0700. Further information is requested with regards to the Noise Quota Scheme proposals and the methodology used in its formulation. Wider considerations are reflected in the details requested.

C) The Applicant is requested to provide an in-combination assessment for air noise, ground noise and road traffic noise.

D) The Applicant is requested to clarify why 2018 or 2019 (when 32 mppa was close to being achieved) is used as the assessment baseline case in the aspect (technical topic) chapters of the EIAR. In EIA the assessment should be against the likely future baseline,

i.e., what would happen in the future should the proposals not be implemented. We consider this to be the 'constrained case', i.e., where passenger numbers are constrained to 30.9mppa.

E) The future baseline is often referred to as the 'permitted / constrained case' in the EIAR as if these are the same. It appears though from the documentation provided that they are not, at least in terms of PAX and therefore associated ATMs. Permitted PAX is 32mppa, whereas in various places it is indicated that the maximum number of PAX in the constrained case is 30.9mppa. The Applicant is therefore requested to clarify what assessment case (in terms of mppa) has been used in each aspect (technical topic) chapter, and to provide additional analysis against the 'constrained case' if this has not been presented.

F) The Applicant is requested to demonstrate the potential effectiveness of a scheme which is based on a grant of €20,000. Evidence should be provided to demonstrate the measures which can be afforded for the properties receiving the grant and the likely uptake of such measures and what reliance has been placed on predicted outcomes in the application.

G) The Applicant is requested to demonstrate the benefits of the proposed insulation scheme. Having regard for the €20,000 grant and the types of measures which can be afforded for the properties included within the proposed eligibility boundary, information should be provided to demonstrate:

- additional noise reduction which can be provided with these measures in place and how this may translate to a reduction in sleep disturbance.
- how ventilation and overheating is to be addressed through the scheme
- how internal noise levels compare with the insulation in place and whether the insulation results in internal night-time noise levels equivalent to the baseline position.

H) For ANCA to fully understand the reliance and relevance of the cross-wind runway on the forecasts provided, the following information is requested:

- Clarification of whether the use of the crosswind runway is primarily due to prevailing wind directions or a result of capacity constraints in the period 0600-0700 associated with the existing main runway. The Applicant is requested to provide analysis to demonstrate any capacity issues using data for 2018 and 2019
- evidence to support the assumption that the crosswind runway will be used for less than 1% of ATM's. The Applicant is requested to provide data demonstrating its use over the last 10 years due to weather and/or capacity constraints.

- confirmation whether the crosswind runway, under the current planning permission is used to respond to demand in the hour 0600-0700?

SPECIFIC INFORMATION REQUESTS

Specific clarifications and requests for further information or scenario analysis are set out below in the context of the work being done to support ANCA with the drafting of the Regulatory Decision (RD) and associated Noise Abatement Objective (NAO). These include points of relevance to the Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA) screening that ANCA is undertaking on the RD and NAO, as well as points relating to forecasting, cost-effectiveness, and the assessment of noise. These points are set out in the following tables.

This appendix is divided into four sections:

TABLE 1: AA AND SEA INFORMATION REQUESTS

TABLE 2: FORECASTING INFORMATION REQUESTS

TABLE 3: COST-EFFECTIVENESS INFORMATION REQUESTS

TABLE 4: NOISE-LED INFORMATION REQUESTS

Request Number	Request Type	Topic Area	Notes / Doc Ref	Request

TABLE 1: AA AND SEA INFORMATION REQUESTS

1	Clarification	Noise quota	EIAR Chapter 1 - It appears that the noise quota count does not apply for the 1.5 hours of shoulder period.	The Applicant is requested to clarify why the noise quota count does not apply for the periods 23:00-23:30 and 06:00-07:00.
2	Clarification	Change in passenger numbers	EIAR Para 2.1.1 suggests that this application facilitates an increase in passengers, regardless of the CAP, because without the new night time proposals the 32mppa CAP could not be achieved.	The Applicant is requested to clarify whether this application facilitates an increase in passengers from 30.9mppa to 32mppa.
3	Clarification	Alternatives	EIAR 4.4.1 - Do nothing only refers to loss in PAX etc. in 2025 and makes no reference as to how long in the future this is to occur for.	The Applicant is requested to clarify whether the 3.2% decrease in flights is expected to continue beyond 2025.
4	Clarification	Traffic & Transport assessment	EIAR Chapter 9 - The assessment here appears to be against a 2019 baseline or at least 2019 was used as a proxy for a 32mppa baseline.	The Applicant is requested to clarify why 2019 is used as the assessment baseline case, when it should be the likely future baseline i.e. the constrained case.
5	Clarification	Traffic & Transport	EIAR Para 9.5.1 states no increase in traffic over a 24 hour period.	The Applicant is requested to clarify why there would be no increase in traffic over a 24 hour period given that Table 1.1 etc. shows a difference of 1.1mppa between the constrained cases (future baseline) and unconstrained case.

Request Number	Request Type	Topic Area	Notes / Doc Ref	Request
6	Clarification	Traffic & Transport	EIAR Section 9.4, Table 9-1 shows traffic count data from surveys of the local road network (undertaken in May 2019) for the periods 05:00 – 10:00 and 16:00 – 19:00.	The Applicant is requested to clarify why the period 23:00 – 05:00 was not included for the surveys of background traffic flows, seeing as the RA would facilitate more flights during the night-time period.
7	Clarification	Climate & Carbon	EIAR Para 11.3.1 states "Only departure flights are considered within this assessment to avoid double counting of aviation emissions between airports. It is assumed that the emissions associated with the arriving flights, above 3000ft, will be accounted for within the carbon accounts of the airports of origin."	The Applicant is requested to clarify if the landing cycle of incoming flights is included in the carbon assessment.
8	Clarification	Climate & Carbon	EIAR Chapter 11	The degree of radiative forcing resulting from a flight depends on a range of factors including meteorological conditions and timing in the diurnal and seasonal cycles. The Applicant is requested to clarify whether this has been accounted for when determining the impact of additional night flights.
9	Clarification	Air Quality assessment	EIAR Para 10.1.1 says it includes assessment in 2027 and has both the constrained and unconstrained case hitting 32mppa in 2025 or even potentially, if we are interpreting this correctly, 2022.	The Applicant is requested to clarify whether 2027 has been used as an assessment 'proxy' for 2025, or as a separate future scenario. In addition, the Applicant is requested to clarify whether there has been an assessment against the constrained case with a maximum of 30.9mppa as is shown in Table 1.1 (i.e. the EIA future baseline).

Request Number	Request Type	Topic Area	Notes / Doc Ref	Request
10	Clarification	Air Noise & Vibration assessment	EIAR Para 13.1 states "Road traffic noise effects have not been assessed for this application, as the Relevant Action is not forecast to cause any significant changes to the road traffic flows in the vicinity of the airport, either when considering the 24- hour period or the night period (23:00 to 07:00)"	The Applicant is requested to justify this assumption given there is a 1.1mppa increase as a result of the RA and that there are increased flows in sensitive night time periods. Furthermore, the Applicant should clarify whether the same criteria have been used for road traffic noise significance as T&T significance.
11	Clarification	Biodiversity: Terrestrial Ecology assessment	EIAR Chapter 15	The Applicant is requested to clarify whether the assessment considered the findings of the Dublin Bay Birds Project roosting bird study (Dec 2020).
12	Clarification	Landscape & Visual assessment	EIAR Chapter 17	The Applicant is requested to clarify whether effects on tranquillity in important designated landscapes have been considered. If so, the Applicant should clarify whether the additional overflying generally, and the additional overflying at night, create any tranquillity issues.
13	Clarification	Landscape and Visual	EIAR Chapter 17	The Applicant is requested to clarify whether there would be any change to lighting at night with the change to the Conditions, and if so, whether impacts of additional lighting have been considered.
14	Clarification	Cultural Heritage assessment	EIAR Chapter 20	The Applicant is requested to clarify whether additional overflying of Dunsink Observatory

Request Number	Request Type	Topic Area	Notes / Doc Ref	Request
				(Protected Structure RPS No. 0687) at night has been considered. Furthermore, the Applicant is requested to clarify whether the effect of increased overflying of other sensitive cultural heritage receptors has been considered.
15	Clarification	Cumulative Effects assessment	EIAR Chapter 21	The Applicant is requested to clarify whether adopted plans or programmes, for example the Fingal Development Plan, have been considered in the cumulative assessment as given their adopted status, they could be considered foreseeable. This is particularly important given that they set the context for growth at the Airport, and this application is shown to facilitate part of this when considering the 1.1mppa difference between the constrained and the unconstrained cases. This may therefore mean that they are already accounted for and not cumulative development, but the implications should still be considered.
16	Clarification	Appropriate Assessment	AA Report Para 2.1.5 states "The proposals can have no possible direct effects on any SAC as they do not involve any change to the final layout of the North Runway nor do they propose any additional stands, piers or other infrastructure at the airport."	The Applicant is requested to clarify whether possible disturbance effects, whether direct or indirect, from overflying have been considered for SACs designated for their animal species, e.g. Rockabill to Dalkey Island SAC.

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17	Clarification	Appropriate Assessment	AA Report Section 5.4 – Tables 8 and 9 and Para 5.4.7, which states "under the proposed Relevant Action it is expected that there would be fewer events than compared to the 2018 baseline".	The Applicant is requested to clarify why 2018 is being used as the assessment baseline. If the constrained case (future baseline) was used as the baseline instead, then it can be seen that the RA would result in around a 1/3rd increase in disturbance events above 60 dB at Baldoyle Bay and Ireland's Eye. The Applicant is requested to clarify whether this 1/3rd increase counts as more than a negligible change, and thus in need of further consideration.
18	Clarification	Appropriate Assessment	AA Report Para 5.4.6 states "At all other relevant SPAs, there would be fewer than ten aircraft events per night which exceed 60 dB LAmax."	The Applicant is requested to clarify why fewer than 10 60dB disturbances is implied as being of little concern. For example, if an SPA has 0 disturbances under the constrained case (future baseline) but 9 disturbances with the RA (unconstrained case), then would that increase need further consideration.
19	Additional Forecast / Scenario	Post-2025 Scenario(s)	EIAR Chapter 1 - No information is provided on the future forecasts past 2025 except that the smaller Figure within Figure 3-3 seems to show that 32mppa is reached in the constrained case by 2026, or even just before that. It appears however, from the Climate and Carbon chapter which makes a high-level assessment in 2050, that in the constrained case 32mppa is never achieved. This is not however, reflected in other assessments.	The Applicant is requested to state whether 2025 is the year which is likely to be characterized by maximum environmental effects. If yes, clarification is requested of whether this maximum will continue at this level in perpetuity or reduce. Otherwise, clarification of when the maximum environmental effects occur should be identified. This should be substantiated by provision of 2025 scenario analysis.

Request Number	Request Type	Topic Area	Notes / Doc Ref	Request
20	Additional Forecast / Scenario	EIA future baseline	EIAR – All chapters	For aspect (technical topic) chapters that have not used the EIA future baseline (the constrained case) as their assessment baseline case, the Applicant is requested to provide this additional scenario analysis.
21	Additional Information	Assessment and baseline cases	EIAR Chapter 1 - The future baseline is often referred to as the permitted / constrained case as if these are the same (for example see 1.7.2 / 2.4.2). It appears though from the documentation provided that they are not, at least in terms of PAX and therefore associated ATMs. Permitted PAX is 32mppa, whereas in various places it is indicated that the maximum number of PAX in the constrained case is 30.9mppa. Furthermore in Climate and Carbon for example, the assessment made is against the constrained case, elsewhere it is against the permitted case. For some aspects i.e. Major Risks and Accidents, how the assessment is undertaken is not completely clear.	The Applicant is requested to provide further information that specifically indicates what number of PAX and therefore associated ATMs are being considered as the future baseline for assessment purposes (e.g. is this the constrained case and therefore 30.9mppa?). Furthermore, the Applicant is requested to provide a summary document revealing, for each technical aspect, the assessment case that has been used i.e. against 2018/19, or against the permitted case e.g. 32mppa, or against the constrained case 30.9mppa, or any combination of these, and which years they have considered. The Applicant is also requested to clarify if the base case used differs between technical chapters. Where it differs, clarification of the reasons for this is requested.
22	Additional Information	Shoulder period	EIAR Chapter 1 - There appears no modelling which directly considers movements in the 1.5 hours of shoulder period outside of the proposed noise quota system.	The applicant is requested to provide modelling data on ATMs for the period 23:00-23:30 and 06:00-07:00.

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23	Additional Information	Traffic & Transport	EIAR Section 9.4, Table 9-1 shows background traffic flows during the period 05:00-10:00 and 16:00-19:00	The applicant is requested to provide actual traffic count data for the full 24 hour period.
24	Additional Information	Traffic & Transport	EIAR Section 9.4, Figures 9-1 and 9-3 show the number of vehicle trips generated by the permitted / constrained and proposed / unconstrained scenarios for 2022 and 2025 per hour.	The applicant is requested to provide the raw data behind Figures 9-1 and 9-3.
25	Additional Information	Traffic & Transport	EIAR Section 9.4, Tables 9-4 and 9-5 show 'changes' in vehicle trips for the surrounding road network between the two scenarios.	The applicant is requested to provide the raw data for the permitted and proposed scenarios relating to Tables 9-4 and 9-5
26	Additional Information	Air Quality	EIAR Para 10.3.1 states "The contribution of Airport sources beyond 1km is negligible, based on professional experience."	The applicant is requested to provide information to substantiate this statement.
27	Additional Information	Air Quality	EIAR Chapter 10 and Appendix 10. Baseline air quality data (from 2018) is provided for each of the areas A1 to A10, however, assessment of the change in air quality for each of these separate areas for each of the scenarios seems to be missing.	The applicant is requested to provide further information on the change in air quality for each of areas A1 to A10 for each of the scenarios.
28	Additional Information	Climate & Carbon assessment	EIAR Chapter 11 – Unlike other chapters, this considers a 2050 case. However, there is no assessment in Table 11-7 against the national inventory made in 2050.	The applicant is requested to undertake and provide an assessment against the national inventory made in 2050. We suspect that it would demonstrate a significant impact using the criteria set out, given the future base case used in the Carbon and Climate chapter seems to indicate that the difference between the constrained case

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				(30.9mppa) and the unconstrained case (32mppa) continues in perpetuity, or at least until 2050.
29	Additional Information	Water	EIAR Para 12.3.2 states "The existing water environment has been determined from desktop review, site walkovers and site studies/investigations". However, other than figures for biological loading, hydraulic loading, and estimated extent of de-icer use regarding run-off provided in Table 12-1, no baseline data is actually provided in the report.	The applicant is requested to provide further information on the water baseline, i.e. the data obtained from the desktop review, site walkovers and site studies/investigations.
30	Additional Information	Biodiversity: Terrestrial Ecology ZOI	EIAR Chapter 15 - A Zone of Influence (ZOI) of 5km has been adopted for terrestrial ecology (see 15.3.1).	The applicant is requested to provide further information on why 5km has been chosen, when the AA screening assessment has adopted one of 15km?
31	Additional Information	Appropriate Assessment ZOI	AA Report Para 2.1.8 states "The likely zone of influence of the Proposed Relevant Action used in this AA screening is therefore all Special Protection Areas over which aircraft arriving or departing North Runway will pass at heights of 10,000 feet or less." However, there is no further reference to 10,000 feet, or anything	The applicant is requested to provide further information to explain why the ZOI described in para 2.1.8 is 10,000 feet, and yet the ZOI used in the assessment appears to be 15km. Similarly, there is no map which shows either a 15km buffer or aircraft height on flight paths in relation to Special Protection Areas, so it is unclear

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			to suggest that 15km has been used as a proxy for this, yet 15km is clearly being used as the ZOI.	how the screening of sites has been undertaken – particularly as flights departing both runways need to be considered (due to the increase in flights). The applicant is requested to provide such a map.
32	Additional Information	Appropriate Assessment	AA Report – Image 1 and Image 2 in Chapter 1 show existing and future arrival/departure flight paths respectively. Flight paths to the north of the airport will be slightly different to before, and this could lead to Natura 2000 sites being overflown that weren't before. An increase in night-time ATMs could therefore have more impact on less habituated sites than on others. This is hard to determine without a suitably detailed map.	The applicant is requested to provide a map overlaying flight paths on the Natura 2000 sites.

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TABLE 2: FORECASTING INFORMATION REQUESTS

33	Extension of Existing Forecast	Traffic Forecasts	Potential traffic impacts over the mid to long term of the North Runway Condition 5 restrictions.	The Applicant is requested to develop and submit the following analysis: Annual Forecast • Unconstrained forecasts (without North Runway Condition 5, with annual passenger cap) extended to 2040, to include outputs for 2030, 2035 and 2040? • Constrained forecasts (with North Runway Condition 5, with annual passenger cap) extended to include outputs for 2030, 2035 and 2040. 92-day Summer Night Period ATM Forecast • Extend to include results for 2030, 2035 and 2040 (unconstrained and constrained) Outputs to include QC for Night Period ATMs (unconstrained and constrained, for existing and proposed shorter Night Period)
34	Extension of Existing Forecast with No Annual Passenger Cap	Traffic Forecasts	Potential traffic impacts over the mid to long term of the North Runway Condition 5 restrictions in the event the annual passenger cap is relaxed.	The Applicant is requested to develop and submit the following analysis: Annual Forecast • Unconstrained forecasts (without North Runway Condition 5, without annual passenger cap) developed to 2040, to include outputs for 2025, 2030, 2035 and 2040? • Constrained forecasts (with North Runway Condition 5, without annual passenger cap) extended to include outputs for 2025, 2030, 2035 and 2040.

Request Number	Request Type	Topic Area	Notes / Doc Ref	Request
				92-day Summer Night Period ATM Forecast • To include results for 2025, 2030, 2035 and 2040 (unconstrained and constrained) Outputs to include QC for Night Period ATMs (unconstrained and constrained, for existing and proposed shorter Night Period)
35	Alternative Traffic Sensitivities	Traffic Forecasts	Potential impact of alternative assumptions.	The Applicant is requested to develop and submit the following analysis: Alternative Assumptions (separate scenarios) • By 2025, annual pax/ATM value to be consistent with continuation of historic growth (2009-19) of seats/ATM at Dublin, with seat factor also assumed to have fully recovered to 2019 levels. • Ryanair base aircraft at Dublin to be fully switched to B737MAX by 2025. Key Outputs For each Scenario • Unconstrained annual forecasts (without North Runway Condition 5, with annual passenger cap) for 2025. • 92-day Summer Night Period ATM Forecast for 2025, including QC for Night Period ATMs (unconstrained, for existing and proposed shorter Night Period). Further Sensitivities

Request Number	Request Type	Topic Area	Notes / Doc Ref	Request
				Further sensitivities may be submitted on receipt of responses to clarification questions and additional information requests.
36	Clarification	Traffic Forecasts	DAA Operating Restrictions Report Page: 4 "*there is a requirement for dual runway operations between 06:00-07:00 to meet demand .*"	The Applicant is requested to clarify whether runway demand exceeded runway capacity in the 06:00-07:00 period in 2019? If so, could the Applicant outline how many flights could not be accommodated in 2019 across the year? However, if runway capacity was sufficient in 2019, could the Applicant provide more explanation on why there is a requirement for dual runway operations in 2025, given a lower annual passenger forecast than 2019.
37	Clarification	Traffic Forecasts	DAA Operating Restrictions Report Page: 13 Section: Patterns of Demand	The Applicant is requested to clarify what definition of 'busy day' was used in determining the 2019 busy day on which schedule forecasts were based? Was a specific day in 2019 used or was it a composite day? How does this busy day compare to the reference period for North Runway Condition 5 (which reference the average number of ATMs in the 92 day summer period)? How does the busy day Night Period demand compare to average Night Period demand from the 92 day summer period? How does the availability of unused slots adjacent to the Night Period compare in the busy day to the 92 day summer period average?

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38	Clarification	Traffic Forecasts	DAA Operating Restrictions Report Page: 20 "*Implementing the 65/night restriction requires a 43% reduction in current scheduled demand*"	The Applicant is requested to clarify how the figures in the report with the spreadsheet [A11267_12_CA154_5.0 ANCA Reporting Template v2.0 - All CEA Scenarios] have been reconciled? The North Runway Condition 5 planning restriction of 65 ATMs per night is based on average movements over the 92 day summer period, In the spreadsheet, this figure would appear to be 102.7 (not 113) for Summer 2019 (9,445 / 92 = 102.7, with 9,445 ATMs coming from scenario 0002 > summer > summer night). Note it is not clear whether the 'summer' in this context refers to the whole summer season, or the 92-day summer period. If it refers to the whole summer season, then can the equivalent data be provided by the Applicant for the 92 day period (historic and forecasts)?
39	Additional Information	Traffic Forecasts	DAA Operating Restrictions Report Page: 29 "*The assessed impact of the Operating Restrictions is a loss of 1.1m passengers per year (-3.5%) and a cumulative loss over the 4-year period 2022-2025 of 4.3m passengers*"	The Applicant is requested to provide more detail on the methodology taken to convert the impact of Night Period restrictions from a busy day ATM impact into an annual passenger impact? Further clarity on key assumptions such as seat factor and seats/ATM assumptions would be particularly relevant, given the pandemic has likely caused significant deviation from historic trends. Have any assumptions been made of possible mitigations for "lost" flights such as higher seat factors, larger aircraft, or passenger diversion (e.g.,

Request Number	Request Type	Topic Area	Notes / Doc Ref	Request
				if suitable direct service not available, travel via hubs or switch of destination for outbound leisure passengers)?
40	Additional Information	Traffic Forecasts	Dublin Airport Proposed Night Quota System.docx Page: 15 "*The proposed NQS will serve to balance the effects of night noise from the forecast night-time growth, encourage the use of quieter aircraft; and will provide a layer of assurance that the overall effects of noise at night arising from the proposed changes are managed and controlled such that they will be no worse than in 2018, and less than envisaged at the time of the North Runway Planning Permission.*"	The Applicant is requested to provide any analysis of the impacts of its proposed shortening of the Night Period – in particular, implications for local residents in the period that it is proposing to remove from the Night Period definition.
41	Additional Information	Traffic Forecasts	Economic Impact of Operating Restrictions.docx Page: 27 Figure: 4-1	The Applicant is requested to share any sensitivity analysis undertaken on the sensitivity of the projections for the foregone economic impacts? In particular, it would be helpful to understand the sensitivity of the projections to the traffic forecast outputs and the economic analysis methodology.

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42	Additional Information	Traffic Forecasts	Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report Page: 14 Table 2-2	The Applicant is requested to advise why are there proportionally fewer B737MAX aircraft in the annual night period than in the annual 24hr period? Is this driven by base airline assumptions? If so, can the Applicant advise why it was assumed Ryanair would be slower to add B737MAX aircraft to its Dublin base than its network average.
43	Additional Information	Traffic Forecasts	DAA Operating Restrictions Report.docx Page: 14 "*Aircraft movements recover fully to 2019 levels by 2025.*"	The Applicant is requested to share any supporting analysis or studies for the 2025 ATM forecast? In particular, can the Applicant share its 2025 seat capacity and seat factor assumptions by airline and/or route type? What is causing the reversal of previous trends at Dublin and elsewhere for higher passengers per ATM?
44	Clarification	Traffic Forecasts	DAA Operating Restrictions Report.docx Page: 20 "*The assumed demand reductions were made by applying pro rata reductions by airline of up to 50%, with an exemption for airlines with only 1 night flight*"	The Applicant is requested to advise if the potential impact of slot trading was considered in the analysis? For example, have any slot acquisitions been modelled to retain commercially stronger routes (or base aircraft) at the expense of more marginal routes or routes which can easily be accommodated at different times?
45	Clarification	Traffic Forecasts	DAA Operating Restrictions Report.docx Page: 21 "*Overall only 96.8% of the forecast demand could be accommodated in 2025 due to the impact of the night restrictions.*"	The Applicant is requested to advise if these conclusions are based on an analysis of a busy day or relate to the 92 day Summer period defined in North Runway Condition 5 (if they are not the same)? Can the Applicant clarify if the 96.8% figure referenced is an annual figure for 2025 or the busy day figure?

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46	Additional Information	Traffic Forecasts	DAA Operating Restrictions Report.docx Page: 27 "*Our fleet modernisation analysis assumes that Ryanair will switch its DUB base to B737MAX only after 2027*"	The Applicant is requested to provide any supporting analysis or rationale for this assumption?
47	Additional Information	Traffic Forecasts	Dublin Airport Proposed Night Quota System.docx Page: 2 "*The NQS proposal includes an Annual Night Quota (ANQ) allowance applied to scheduled operations across the Night Quota Period (23:30 to 06:00)*"	The Applicant is requested to provide any analysis it has undertaken (included safeguarding considered) in relation to noise impacts in the period 2300-2330 or 0600-0700?
48	Clarification	Traffic Forecasts	Economic Impact of Operating Restrictions.docx Page: 5 "*the forgone economic impact resulting from the operating restrictions is projected to reach 3,430 jobs and 261 million in GVA by 2025 .*"	The Applicant is requested to advise if it has undertaken any analysis of potential mitigating actions (other than relaxing noise regulations)? Have alternative approaches been considered which could – for example - minimise the negative economic impacts but preserve most of the current noise / night period protections for residents?
49	Additional Information	Traffic Forecasts	DAA Operating Restrictions Report.docx	The Applicant is requested to submit an assumptions book detailing any assumptions made in each of the forecast models?

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TABLE 3: COST-EFFECTIVENESS INFORMATION REQUESTS

50	Additional Forecast / Scenario	Cost-Effectiveness – Operating restrictions		The Applicant shall provide passenger and ATM forecasts under the constrained and unconstrained scenarios for the years 2030, 2035 and 2040.
51	Clarification	Cost-Effectiveness – Operating restrictions	DAA Operating Restrictions Report – Executive Summary Chart titled "*DUB Annual Passenger Forecasts Unconstrained v Constrained*"	The constrained case shows continuous passenger growth between 2022 and 2026. The Applicant is requested to confirm what is driving this growth? Is this down to higher load factors or more ATMs? If this is due to more ATMs, is this based on more ATMs on a 'busy day' or is it based on a higher annualisation factor?
52	Additional Information	Cost-Effectiveness – Operating restrictions	DAA Operating Restrictions Report – Executive Summary Chart titled "*DUB Annual Passenger Forecasts Unconstrained v Constrained*"	The Applicant is requested to provide evidence as to what has been used to determine that some of the lost passenger numbers in the constrained case, would not materialize in the form of higher load factors, or more ATMs on less busy days?
53	Additional Information	Cost-Effectiveness – Operating restrictions	DAA Operating Restrictions Report – Introduction *"…to 2025 (when it is assumed for this study that the 32m passenger level is reached)."*	The Applicant is requested to confirm whether the 32 million assumption is its own or that of its consultant? Or is it supported by modelling or other evidence / insight? Please provide details of the basis of this assumption, and any supporting evidence.
54	Clarification	Cost-Effectiveness – Operating restrictions	DAA Operating Restrictions Report – Patterns of Demand	T The Applicant is requested to clarify whether a busy day is an actual day or some form of composite, and the details of the specific day(s) used to construct the busy day? Please also

Request Number	Request Type	Topic Area	Notes / Doc Ref	Request
				confirm whether this busy day is the base schedule for developing future busy day schedules?
55	Additional Information	Cost-Effectiveness – Operating restrictions	DAA Operating Restrictions Report – Patterns of Demand *"The general pattern of demand is expected to develop along similar patterns to today,"* *"The 06:00 scheduled departures peak is expected to increase from 35 to 44 departures."*	The Applicant is requested to provide a narrative explaining how exactly the unconstrained forecast busy day schedules have been developed. How has it been determined what new routes would be flown, assumed turnaround times load factors, etc.? How have you ensured the busy day schedules retain consistency with the overall assumption around passenger numbers in each modelled year? The Applicant is requested to confirm exactly where specific assumptions are based on expert judgment, or external evidence and insight. This section in the report also makes several statements around what is 'expected' to happen around the daily demand profile. The Applicant is requested to confirm whether these expectations are judgement-based assumptions, modelling results, or other insights / evidence? The Applicant is requested to confirm what engagement there has been with airlines in developing these. And clarify how their perspectives have been incorporated.
56	Additional Information	Cost-Effectiveness – Operating restrictions	DAA Operating Restrictions Report – Patterns of Demand	The Applicant is requested to provide busy day schedules for each of the modelled years (including 2030, 2035, and 2040) and for both constrained

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				and unconstrained scenarios, the assumed annualisation factors, and the fleet assumptions matched up with the schedule. Please also identify flights that form rotations of the same aircraft.
57	Clarification	Cost-Effectiveness – Operating restrictions	DAA Operating Restrictions Report – Night Movement Demand *"By 2022, DUB aircraft movements are assumed to have recovered to 95% of 2019 levels, although passengers have only recovered to around 90% due to reduced load factors and aircraft size in the post COVID recovery period."*	As with Request 54, the Applicant is requested to confirm whether these are assumptions based on judgement, or whether they are supported by modelling or other evidence.
58	Clarification	Cost-Effectiveness – Operating restrictions	DAA Operating Restrictions Report – Constrained case analysis *"For this post COVID-19 update, we were informed by daa that some airlines will require longer turnaround times (eg, for additional aircraft cleaning). This has been incorporated into the scheduling assumptions"*	The Applicant is requested to confirm exactly how the information provided by daa has been incorporated into the scheduling assumptions. For example, has the minimum turnaround time for certain airlines been extended on a blanket basis? Please also confirm whether these adjustments have been applied to both the unconstrained and constrained scenarios on a consistent basis.
59	Clarification	Cost-Effectiveness – Operating restrictions	DAA Operating Restrictions Report – Constrained case summary *"These 12 'lost' night flights also resulted in 12 lost daytime flights (i.e., those daytime flights operated by the same aircraft rotation). Therefore, the impact of the night constraints*	The Applicant is requested to clarify what this statement means? Does it mean that it was unable to accommodate new flights into the schedule to replace the 12 lost daytime flights? Is this assumption capacity driven (there is no appropriate space within the schedule)? Or is it

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			was to reduce the total busy 24h day movements by 24 (-3.2%).”	demand driven (you could not find an airline that would want such a slot)? The Applicant shall provide evidence to support this assumption.
60	Clarification	Cost-Effectiveness – Operating restrictions	DAA Operating Restrictions Report – DUB Fleet renewal	The Applicant is requested to clarify its assumptions in relation to fleet renewal. Is the implicit assumption that the fleet mix would remain unchanged under the constrained and unconstrained scenarios? In other words, airline fleet renewal or fleet placement decisions would not be affected by the introduction of night-time operating restrictions?
61	Clarification	Cost-Effectiveness – Operating restrictions	DAA Operating Restrictions Report – Airline Fleet renewal *“These assumptions are not likely to be significantly affected by the COVID-19 crisis and are conservative.”*	The Applicant is requested to confirm what this statement means precisely. What specific assumptions would be considered conservative? And in what direction?
62	Additional information	Cost-Effectiveness – Operating restrictions	DAA Operating Restrictions Report – Annual Traffic Impact	The Applicant is requested to provide the annualisation factors and average load factors that have been used to go from a busy day schedule to annual passenger forecasts? Please provide details of how these have been derived, including any supporting evidence. Please also confirm whether these are consistent across the two scenarios.

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63	Additional Forecast / Scenario	Cost-Effectiveness – Operating restrictions		The Applicant is requested to clarify whether the growth scenario used is a relatively neutral forecast or whether it is a high / low estimate. The Applicant is requested to provide forecasts of low and high growth scenarios. Please provide in a consistent format to Request 55.
64	Additional Forecast / Scenario	Cost-Effectiveness – Operating restrictions	DAA Operating Restrictions Report – Annual Traffic Impact *"It should be noted that this estimated impact is a conservative assessment. It assumes that airlines are willing and able to accept alternative slot times outside of the 23:00-07:00 night period, which would be commercially and/or operationally suboptimal. In a post-COVID crisis environment, weak passenger demand will mean that airline flexibility is reduced."*	The Applicant is requested to provide a scenario of traffic and passenger impacts under a scenario where airlines are unwilling to accept alternate slot times outside of the 23:00-07:00 night period.
65	Additional Information	Cost-Effectiveness – Economic impact of operating restrictions	*"Restricted early morning departures to Europe will hamper business connectivity."* *"Reduced long haul connectivity will impact business and tourism."* *"The operating restrictions will hamper Dublin's ability to develop as a hub airport"*	The Applicant is requested to provide supporting evidence for these assertions. This can be linked to the Mott MacDonald analysis or, where applicable, linked to airline or passenger engagement? Similarly, has there been any assessment of the scale of the impact?
66	Clarification	Cost-Effectiveness – Economic impact of operating restrictions	Direct, Indirect, Induced Multipliers	The Applicant is requested to confirm the extent to which these multipliers account for displacement effects, providing detail and evidence.

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				Displacement effects refers to the idea that the loss of spending on aviation and the associated loss in employment would be partially balanced by more spending elsewhere in the economy and more employment in those sectors. Please also confirm whether there has been any assessment of how the multipliers vary in a world of full employment or conversely, high unemployment?
67	Additional Information	Cost-Effectiveness – Economic impact of operating restrictions	Catalytic impacts	The Applicant is requested to provide further detail on how exactly the catalytic impacts have been calculated from the inputs provided by the Mott MacDonald study, preferably in spreadsheet form. Are they based solely on total ATMs or is the forecast of future connectivity linked to the types of destinations served?
68	Additional Information	Cost-Effectiveness – Economic impact of operating restrictions		The Applicant is requested to confirm and provide evidence of sensitivity analysis which has been considered for the uncertainty around the various parameters (i.e. the multipliers and the catalytic impact parameter)? Please provide details of any sensitivity runs.
69	Clarification	Cost-Effectiveness – Economic impact of operating restrictions		The implicit assumption is that there is no impact from flights being rescheduled by more than 60 minutes. The Applicant is requested to confirm whether there has been any consideration of whether there is an economic impact from such flight re-times. Please also confirm whether the

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				current assumption is considered appropriate, or conservative.
70	Additional Information	Cost-Effectiveness – Economic impact of operating restrictions	Figure 4-2	The Applicant is requested to provide detail on how the regional impacts been broken down, such that we are able to trace the calculations.

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TABLE 4: NOISE-LED INFORMATION REQUESTS

71	Clarification		EIAR Main Report *2.1.2. Proposed Development in Detail* *"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 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."*	The Applicant is requested to clarify whether consideration has been given to a restriction which would seek to increase the 65/night aircraft movement restriction to 115/night as per the 2019 operation. Is such an amendment sufficient for an operation which is limited to 32mppa?
72	Clarification		EIAR Main Report *2.1.2. Proposed Development in Detail* *"above the number stipulated in condition no. 5 of the North Runway Planning Permission, in accordance with the annual night-time noise quota."*	The Applicant is requested to clarify whether consideration has been given to a restriction in the form of an 8-hour noise quota scheme running from 2300-0700 rather than the 6.5 hour scheme proposed?
73	Additional Information		EIAR Main Report *2.1.2.1. Condition 3(d) of the North Runway Permission* *"Runway 10L-28R shall not be used for take-off or landing between 0000 hours and 0559 hours"*	The Applicant is requested to provide evidence to demonstrate that the use of the North Runway is necessary over the period 2300-0000 with the Airport restricted to 32mppa?

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74	Additional Information		EIAR Main Report *2.1.2.2. Condition 5 of the North Runway Permission* *"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 Applicant is requested to provide details of how it envisages its Noise Monitoring Framework to operate and whether this will include the monitoring of noise mitigation measures, noise insulation and operating restrictions. The Applicant should describe how it foresees this functioning under Part 4 of the 2019 Act.
75	Additional Information		EIAR Main Report *2.1.2.3. The Proposed Quota Count System* *"ATM from 2018 which was 0.52 per ATM"*	The Applicant is requested to provide the total annual noise quota for 2006, 2011, 2016, 2018 and 2019 for the 6.5 hour noise period as proposed by the Applicant along with equivalent QC per ATM.
76	Clarification		EIAR Main Report *2.1.2.3. The Proposed Quota Count System* *"The proposed change from the night-time aircraft movement cap of 65 movements per night to the ANQ, will allow growth in overall air traffic movements at night whilst ensuring that the overall effects of aircraft noise do not exceed those in 2018 in accordance with the cNAO."*	It is noted that the description of the proposed ANQ throughout the Application is of a control which seeks to limit aircraft noise rather than reduce it. Reduction is a key aspect of aircraft noise management and some consideration of this should be given. The Applicant is requested to propose review periods for the ANQ and how the ANQ could be progressively reduced.

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77	Additional Information		EIAR Main Report *2.1.2.3. The Proposed Quota Count System* *"In addition to the above"*	It is noted that many of the controls being described here are existing requirements under the North Runway Planning Consent. For the avoidance of doubt the Applicant is requested to describe which noise management measures are new or being replaced as part of the Proposals, and which of the measures being relied on are outstanding actions under its Noise Action Plan.
78	Additional Information		EIAR Main Report *2.1.2.5 A Night Noise Insulation Scheme* *"every 2 years with revised forecasts."*	It is noted that under the North Runway consent that compensation schemes are to be reviewed biannually using a retrospective review. The Applicant is requested to provide further information as to how eligibility under the proposed scheme be determined alongside the requirements of the existing schemes. The Applicant is requested to confirm what information will be provided as part of the forecasts and what aspects of the current schemes would be used as a template for the new scheme e.g., acoustic performance requirements, etc
79	Additional Information		EIAR Main Report *2.1.2.6 The Balanced Approach* *"and the crosswind runway (34) when weather conditions allow during the hours of 0630 – 0800 local time) will cease."*	ANCA notes that use of the cross runway is indicated during morning periods, as required. The Applicant is requested to clarify whether the use of the crosswind runway is primarily due to prevailing wind directions or a result of capacity constraints in the period 0600-0700 associated with the existing main runway? The Applicant is requested to provide analysis to demonstrate any capacity issues using data for 2018 and 2019.

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80	Additional Information		EIAR Main Report *2.5 Description of Operations* *"For the purposes of this EIAR an assumption of use for 1% of aircraft movements was used which is based on the percentage of time it is likely to be essential for use i.e when the crosswind component requires its use"*	The Applicant is requested to provide evidence to support the assumption that the crosswind runway will be used for less than 1% of ATM's. The Applicant is requested to provide data demonstrating its use over the last 10 years due to weather and/or capacity constraints.
81	Additional Information		EIAR Main Report *3.3 Patterns of Demand* *"Meeting this level of departures demand in the 06:00 hour requires use of the North Runway in the 06:00-06:59 hour."*	The Applicant is requested to confirm whether the crosswind runway, under the current planning permission is used to respond to demand in the hour 0600-0700.
82	Additional Information		EIAR Main Report *Table 4-1 Feasible preferential runway use measures*	The Applicant is requested to describe why the proposed quota system is based on a time period of 23:30 to 05:59 whilst the runway preferential use scenarios relate to the period 23:00 to 06:59 or 00:00 to 05:59. The Applicant is requested to consider the feasibility of a quota system which operates over the whole 8-hour night period i.e. 23:00 to 06:59? Section 2.1 of the EIAR states that during 2018/19 the South runway was over capacity from 06:30 to 08:00. The Applicant is requested to advise on whether a runway preferential use scenario where

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				the North Runway is available from 06:00 and 07:00 is a feasible option. The Applicant is requested to demonstrate the need to allow North Runway operations at night from the North Runway during the period 2300-0000 in the context of its 32 mppa restriction?
83	Clarification		EIAR Main Report *7.3.3.5 Human Health and Well-being*	With respect to aircraft noise, the human health and well-being section of the EIAR should have regard for the methodology described in Annex III of the END. This is a mandatory methodology for the assessment of health impact due to noise exposure. The Applicant is requested to confirm that all approaches as part of the END assessment required under Reg598 are considered in Section 7.3.3.5 of the EIAR to ensure consistency.
84	Additional Information		EIAR Main Report *7.3.4.2 Human Health and Well-being* *"The assessment of human health and well-being is a qualitative rather than quantitative assessment"*	The Applicant is requested to provide further information considering the assessment of human health and well-being within the EIAR. A qualitative assessment is presented however a quantitative assessment should be made available.
85	Additional Information		EIAR Main Report *7.7.1.1 Amenity and Local Communities* *"As set out in Chapter 14. Ground Noise and Vibration, no residential receptors are expected to experience*	The Applicant is requested to provide an in-combination air and ground noise assessment. This is particularly relevant for receptors located around the airfield boundary where combined air and ground noise levels may trigger eligibility for the Airport's existing and proposed noise mitigation schemes.

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			significant effects, either adverse or beneficial, using the 24-hour period metric."	
86	Clarification		EIAR Main Report *13.2.4 Relevant UK Policy, Standards and Guidance* *"National Planning Policy Framework (NPPF, 2020) Noise Policy Statement for England (2010) (DEFRA, 2010)"*	The EIAR refers to English noise and planning policy. The Applicant needs to describe the applicability of these documents to Ireland. Where the Applicant is using these documents to advocate a particular noise management policy, this should be identified.
87	Clarification		EIAR Main Report *13.2.5 Other International Policy, Standards and Guidance*	The Applicant is requested to ensure that the application applies the latest requirements of legislation. For example the Environmental Noise Regulations (S.I. No. 140/2006) was repealed and replaced in 2018.
88	Clarification		EIAR Main Report *13.3.4 Methodology for Determining Baseline Conditions and Sensitive Receptors* *"This scenario, referred to in this chapter as "2025 Consented"*	The Applicant is requested to provide the rationale for this scenario to be presented especially when it is a "scaled down" version of the scenario presented in 2007? The relevance of this scenario should be clearly stated with respect to the EIA and any work presented in the context of the ICAO Balanced Approach.

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89	Additional Information		EIAR Main Report *13.4 Baseline Conditions* *"predictions have been made for 2018"*	Section 13.4 of the EIAR states that "predictions have been made for 2018". The Applicant is requested to confirm whether the 2018 noise exposure data provided is based on schedules or recorded activity, and whether the modelling has been validated against the airport's NMTs? The Applicant is requested to provide information to demonstrate the adequacy of the NMT network to validate aircraft noise models after the north runway becomes operational.
90	Clarification		EIAR Main Report *13.4.2 Noise Modelling Lden Metric* *"the existing dwellings and population excluding consented developments"*	The Applicant is requested to clarify how consented developments have been included in the noise modelling including what data is this based on and at what point in time?
91	Additional Information		EIAR Main Report *13.6.2 Cumulative Noise Effects* *"Instead each of the main sources associated with operations at the airport was assessed according to its own character, with specific methodologies applied. Air noise at a given receptor is characterised by a series of relatively loud individual noise events, between which there are periods of relative quiet."* *"Conversely ground noise at a given receptor is characterised by lower noise levels which have a longer*	The Applicant is requested to provide an in-combination air and ground noise assessment. In-combination assessment has been undertaken on other applications submitted by the Applicant. It is noted that of the two examples provided in-combination assessment was provided in one of these (Heathrow Cranford Agreement Planning Application). This is an important example as this assessment relates to changes in runway use.

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			duration and will vary less over time as it is often due to multiple activities occurring at the same time. It is typically only audible to those closer to the airport boundary."	
92	Additional Information		EIAR Main Report *13.7.7.1 Night Noise Insulation Scheme* *"The proposed scheme will provide a grant of €20,000"*	The Applicant is requested to demonstrate the potential effectiveness of a scheme which is based on a grant of €20,000. Evidence should be provided to demonstrate the measures which can be afforded for the properties receiving the grant and the likely uptake of such measures and what reliance has been placed on predicted outcomes in the application.
93	Additional Information		EIAR Main Report *13.8 Residual Effects* *"The commonly accepted metrics for assessing air noise all relate to external noise levels. Therefore the assessment of effects presented in Section 13.6 do not allow for any benefit of the residential sound insulation schemes, as this reduces the internal noise level."*	The Applicant is requested to demonstrate the benefits of the proposed insulation scheme. Having regard for the €20,000 grant and the types of measures which can be afforded for the properties included within the proposed eligibility boundary, information should be provided to demonstrate: (a) additional noise reduction which can be provided with these measures in place and how this may translate to a reduction in sleep disturbance. (b) how ventilation and overheating is to be addressed through the scheme (c) how internal noise levels compare with the insulation in place and whether the

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				insulation results in internal night-time noise levels equivalent to the baseline position.
94	Additional Information		EIAR Main Report *Table 14-1: Ground Noise Impact Criteria (absolute) – residential*	The Applicant is requested to demonstrate the impact criteria for ground noise. As a continuous noise emission which may be considered industrial in nature, it may be more appropriate to consider EPA NG4 on assessment of licensed activities, on implementing the IED. Noise limit values from such activities should not exceed 55 dB L_{day}, 50 dB L_{eve} and 45 dB L_{night}, which equates to 55.4 dB L_{den} The Applicant is requested to submit information that demonstrates wider consideration of noise levels during the night. An understanding of potential changes in the diurnal pattern of noise from ground operations during the night should be provided.
95	Clarification		EIAR Main Report *14.4.1 Noise Surveys*	The Applicant is requested to clarify what attempts were made to differentiate noise due to aircraft ground activities from the results of the survey presented in Section 14.4 of the EIAR? At many of the locations presented in Figure 14.1 it would appear that air noise and road traffic noise are the dominant sources.

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96	Clarification		EIAR Main Report *14.5.3 Operational Procedures* *"FEGP is available at a number of stands at Dublin Airport, and aircraft are required to use it where available, in preference to APUs or GPUs."*	The Applicant is requested to clarify which operational procedures are relied on within the ground noise assessment to mitigate and limit noise. For example, which stands have been assumed to be available with FEGP? Could this be extended to all stands? The Applicant is requested to confirm whether the ground noise assessment has included modelling of Apron 5H?
97	Clarification		EIAR Main Report *14.6.3 Cumulative Noise Effects* *"Instead each of the main sources associated with operations at the airport was assessed according to its own character, with specific methodologies applied. Air noise at a given receptor is characterised by a series of relatively loud individual noise events, between which there are periods of relative quiet. It can therefore be audible at large distances from the airport. Conversely ground noise at a given receptor is characterised by lower noise levels which have a longer duration and will vary less over time as it is often due to multiple activities occurring at the same time. It is typically only audible to those closer to the airport boundary."*	See request for information #85. For example, it is noted that in the Ridgewood area there is about 3 dB difference in L_{night} levels from the air noise and ground noise. Neither dominates, but both will be experienced by the residents as an in-combination effect.

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98	Clarification		EIAR Main Report *14.8 Residual Effects and Conclusions* *"Therefore the assessment of effects presented in Section 14.6 do not allow for any benefit of the residential sound insulation schemes,"*	The Applicant is requested to address ground noise in combination of with aircraft noise because there are some receptors where there appears to be a clear additive effect. Section 14.8 of the ground noise assessment indicates that the effects have not considered the benefit of sound insulation schemes. It is noted that the assessment work provided for aircraft noise has had consideration of this.
99	Clarification		EIAR Main Report *14.8 Residual Effects and Conclusions* *"Allowing for the benefit of the residential sound insulation schemes in general reduces the number of people assessed with significant adverse effects and increases the number of people assessed with significant beneficial effects."*	The Applicant is requested to confirm the number of dwellings which are assumed to have been fitted with noise insulation for the purpose of the ground noise assessment and to provide their locations.
100	Additional Information		EIAR Main Report General comment on noise metrics	The effects presented within the EIAR for air and ground noise rely on average noise metrics. The Applicant is requested to provide additional information to assist in understanding and articulating the effects. This information includes: - Single mode i.e., easterly and westerly night-time noise contours (L_{night} and N60) - Indication of the change in diurnal noise levels during the night as a result of the Proposed Development

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				- Anticipated L_{ASmax} levels at receptors around the airport indicating how these change as a result of the relevant action - Demonstration of the benefits of quieter aircraft through the use of L_{Amax} footprints.
101	Clarification		EIAR Technical Appendices *13B.4 Population and Demographics Assessment Methodology* *Dwelling and Population Data* *"This has been obtained for 2016 based on Census data from the Central Statistics Office."*	The Applicant is requested to confirm whether the average dwelling occupancy was derived from Census 2016 and the 2015 GeoDirectory Census used for their SAPS assessment? Or was the 2019 GeoDirectory used?
102	Clarification		EIAR Technical Appendices *14B.6 Model Overview* *14B.6.1* *"based on building outlines derived from satellite imagery for buildings outside the airport site"*	The Applicant is requested to confirm whether the ground noise model was developed using the OSi Prime2 dataset or whether buildings were manually digitised?
103	Clarification		EIAR Technical Appendices 14B.6 Model Overview 14B.6.1 "A standard height of 7 m was assumed for residential buildings."	The Applicant is requested to confirm whether deriving building heights within its ground noise model from Lidar data was considered.

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104	Clarification		EIAR Technical Appendices *Table 14B-18: Summary of Noise Level Data from Other Assessments*	The Applicant is requested to confirm if the directivity of aircraft ground noise emissions been considered. If not, the Applicant is requested to confirm that the modelling has assumed omnidirectional propagation?
105	Clarification		Noise Information for the Regulation 598/2014 (Aircraft Noise Regulation) Assessment *3.1 NOISE ABATEMENT OBJECTIVE FOR DUBLIN AIRPORT* *"To limit and reduce the adverse effects of long-term exposure to aircraft noise, including health and quality of life, so that long-term noise exposure, particularly at night, does not exceed the situation in 2018. This should be achieved through the application of the Balanced Approach"*	ANCA acknowledges the Candidate Noise Abatement Objective (cNAO) adopted by the Applicant. This will be considered by ANCA when it comes to set the Noise Abatement Objective for the Airport. The Applicant is requested to describe why this cNAO is considered appropriate.
106	Additional Information		Noise Information for the Regulation 598/2014 (Aircraft Noise Regulation) Assessment *3.1 NOISE ABATEMENT OBJECTIVE FOR DUBLIN AIRPORT* *"The reason that 2018 was chosen as the baseline year is that the Noise Action Plan and Local Area Plan for Dublin Airport suggest that a noise problem at night might be emerging in the period up to 2018."*	The Applicant is requested to provide data for 2016 in the same format as provided by the Applicant for 2018 as per the Aircraft Noise Reporting Template. ANCA would like to note that the Noise Action Plan for Dublin Airport 2018-2023 reports data from 2016 and not 2018. No data is provided by the Applicant for 2016.

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107	Clarification		Noise Information for the Regulation 598/2014 (Aircraft Noise Regulation) Assessment *3.2 Measurement of the NAO* *"Three additional noise indicators have also been computed, these are Lday and Levening which are defined in Directive 2002/49/EC, and their combination which is the LAeq 16hr for an annual period."*	The Applicant is requested to confirm whether the $L_{Aeq,\ 16hr}$ information provided with the Application is based on annual movements or the average summer day i.e., the period used in UK aviation policy referenced between 16 June to 15 September inclusive. It is noted that the Applicant has reported noise exposure data for the $L_{Aeq,\ 16hr}$ metric and has also cited UK noise and aviation policy. It is also noted that the original conditions attached to the North Runway consent adopt the $L_{Aeq,\ 16hr}$ metric.
108	Clarification		Noise Information for the Regulation 598/2014 (Aircraft Noise Regulation) Assessment *3.3 Significant Effects under the Scenarios* *"For the Lden and Lnight noise indicators the significance of effect has been determined by separately rating both the absolute noise levels and the change in noise level as set out below. The individual ratings are then combined to determine the significance of any effects.* *The absolute noise values and associated impact criteria for residential receptors that have been developed are given in Table 1. They commence with a negligible band which applies to noise levels that lie below a low threshold, specifically 45 dB Lden and 40 dB Lnight, as WHO 2018 states that aircraft noise above these levels is associated with adverse health effects. The subsequent bands are defined by values that are*	The Applicant is requested to clarify if the Applicant considered that the comparisons equating exposure levels in terms of L_{den} against $L_{Aeq,\ 16hr}$ relate only to the level of noise exposure and not to the underpinning exposure dose response relationships for these metrics.

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			required to be reported under Directive 2002/49/EC. Taking Lden, the value of 55 dB is where WHO 2018 reports evidence of an effect on reading skills and oral comprehension in children. This value is also comparable to the level of 54 dB LAeq,16h which is now used in the UK as marking the approximate onset of significant community annoyance. The value of 55 dB Lden has therefore been assigned to medium impact, as it relates to the start of these effects. *Taking the value of 65 dB Lden, this is where WHO 2018 reports an association between those exposed and those considering themselves highly annoyed of 45.5 %. Such a noise level is also comparable with the level of 63 dB LAeq,16h widely used in the UK for eligibility for acoustic insulation, following Government guidance, and is also used for eligibility at Dublin under the North Runway Permission. The value of 65 dB Lden has therefore been assigned to the start of a high impact."*	
109	Additional Information		Noise Information for the Regulation 598/2014 (Aircraft Noise Regulation) Assessment *3.3 Significant Effects under the Scenarios* *"The effect of a change in noise level tends to increase with the absolute level of noise experienced at a receptor. If, for example, the night-time noise level at a dwelling were to change from 45 dB to 50 dB Lnight, the overall effect for the occupants would be less than if the night-time noise level were to increase by the same amount from 55 dB to 60 dB Lnight."*	The Applicant is requested to provide further justification of the significance matrix adopted. In keeping with the health effects of aircraft noise, the matrix should be demonstrated in terms of how changes in noise exposure at various magnitudes translate into changing effects i.e., increases in dose-response and corresponding changes in annoyance and sleep disturbance. This analysis will help ANCA determine whether the change magnitudes proposed are appropriate when considering annoyance and sleep disturbance effects and whether the approach adopted by the

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				Applicant aligns with the exposure response functions underpinning health.
110	Additional Information		Noise Information for the Regulation 598/2014 (Aircraft Noise Regulation) Assessment *4.0 SCENARIOS CONSIDERED* *"While operating procedures such as continuous climb and Low Power/Low Drag approaches were considered, they were not taken forward to assessment. This is largely due to the IAA ANSP having control over the design and assessment of the airspace, which consequently influences the procedures used. So, while airspace improvements are anticipated as part of the European Airspace Modernisation Programme, because modifying procedures is not directly within the control of the daa and the forthcoming modernisation of procedures, these types of measures were not further considered."*	The Applicant is requested to provide evidence of the outcomes of engagement with the IAA and to demonstrate why the noise abatement operating procedures cannot be considered. ANCA has a requirement to ensure that technical coordination between stakeholders has taken place. To this end, the applicant is requested to provide the outcome of discussion in relation to measures such as: - Low Power / Low Drag - Noise Abatement Departure Procedures - Steeper Approaches The Applicant should consult the 'Management Measures' tab of the Aircraft Noise Report Template and provide technical evidence for each measure.
111	Additional Information		Noise Information for the Regulation 598/2014 (Aircraft Noise Regulation) Assessment *APPENDIX 2* *Flight Routes*	The Applicant is requested to provide evidence that the assumed flight paths relied upon in the noise assessment provided with the Application can be relied on.

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112	Clarification		Noise Information for the Regulation 598/2014 (Aircraft Noise Regulation) Assessment *APPENDIX 2* *Dispersion*	The noise assessment has included dispersion assumptions in relation to flight paths. No sensitivity testing is presented to demonstrate whether a foreseeable implementation of Precision Based Navigation potentially changes the outcome of the assessment work. Statements made in other parts of the Application indicate that modernisation will occur. The Applicant is requested to confirm, with reference to any correspondence and evidence provided by the IAA, the timeframes for PBN implementation at Dublin Airport and the likely effect this would have on aircraft noise.
113	Clarification		Noise Information for the Regulation 598/2014 (Aircraft Noise Regulation) Assessment *APPENDIX 2* *Table A2.15: Modifications to AEDT Default Assumptions*	The Applicant is requested to confirm the process adopted for the modification of the AEDT default profiles as part of its modelling? The evidence provided confirms that radar information has been used to validate profiles however no example is provided as to how this has been carried out. This is important as it is expected that the approach adopted as part of this Application would be carried forward as part of any regulatory requirements which arise. As a minimum information demonstrating the height of aircraft against distance from departure and landing should be provided in terms of modelled performance alongside information taken from the radar.

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114	Clarification		Noise Information for the Regulation 598/2014 (Aircraft Noise Regulation) Assessment *APPENDIX 2* *Table A2.16: Expected Change in Noise Levels between Current and Modernised Aircraft Types*	For the avoidance of doubt, the Applicant is requested to provide reference information to confirm the expected change in noise levels between the Current and Modernised Aircraft Types.

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115	Clarification		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report *2.1.2 EXISTING AND PLANNED MEASURES* *"Main airport and community stakeholders were consulted on these NPRs throughout 2016 and 2017 prior to the design of airspace and safety assessment by the Irish Aviation Authority (IAA) in 2018 and 2019."*	ANCA notes that the consultation on the NPRs occurred in 2016 and 2017. The Applicant is requested to confirm to what extent the consultation has influenced the NPRs adopted within the assessment and to confirm whether any NPRs will have an associated prescribed corridor or swathe.
116	Clarification		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report *TABLE 2 - (1 OF 3) EXISTING AND PLANNED NOISE MANAGEMENT MEASURES*	It is noted that many of the measures listed in Table 2 relate to actions defined within the Airport's Noise Action Plan. The Applicant is requested to confirm the degree to which noise management measures as defined in Table 11 of its Noise Action Plan have commenced, are in progress or have been completed.

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117	Clarification		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report *TABLE2-(1OF3) EXISTINGANDPLANNED NOISEMANAGEMENT MEASURES* *NS-2* *(Work with airline partners to introduce quieter aircraft, particularly at night, including consideration of incentives. Approaches to incentives under development and expected to be in place by 2022.)*	The Applicant is requested to provide evidence that t the forecasts prepared with the application responds to NS-2. For example, some forecasts do not include any 737max operating during the night. This appears to be counter to the objective of NS-2.
118	Clarification		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report *TABLE2-(1OF3) EXISTINGANDPLANNED NOISEMANAGEMENT MEASURES* *NA-3* *(thrust cutback at 1,500 feet)*	The Applicant is requested to provide evidence to confirm that environmentally, NADP2 is the best departure procedure for the airport. The information provided with the Application states that this is the case however this is not evidenced. It is noted that Action 5 defined under the Noise Action Plan requires such evidence to be reviewed.
119	Clarification		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report *TABLE2-(1OF3) EXISTINGANDPLANNED NOISEMANAGEMENT MEASURES* *NA-5* *(Continuous Decent Approach (CDA) – Operates a CDA*	The Applicant is requested to confirm the current altitude from which CDA occurs at Dublin Airport and whether this will remain the procedure with the North Runway in operation? If level flight is required upon approach then the altitude should be provided to support review of the noise exposure forecasts.

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			that reduces the noise experienced on the ground by reducing the overall thrust required during the initial descent and keeping aircraft at higher altitudes for a longer period of time.)	
120	Clarification		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report *E X H I B I T 2 - 2 G E N E R A L I S E D N O I S E M O D E L F L I G H T T R A C K S F O R S E G R E G A T E D A ND M I X E D M O D E*	The Applicant is requested to confirm whether the IAA have designed the airspace to facilitate mixed mode use even if preferential runway use is in the place during both the day and the night?
121	Clarification		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report *2. 1 . 5. 3 D I S P E R S I ON* *(The degree of dispersion is normally a function of the distance travelled by an aircraft along the route and on the form of the route (e.g., degree of turn). It is commonly found that the spread of aircraft approximates to a normal distribution pattern, the shape or spread of which will vary with distance along the route. A simplified mathematical model can be adopted to represent a normal distribution of events, based on standard deviations. ECAC.CEAC Doc 29 4th Edition Report on Standard Method of Computing Noise*	See Request 111

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			Contours around Civil Airports advises the use of seven "dispersed" tracks associated with each traffic flow to be modelled. This results in a series of noise model tracks that include the backbone and the three sub-tracks either side of the backbone.)	
122	Further Information		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report *2.2.1 PREVENT CONSTRAINED TRAFFI C IMPACTS* *(As a result, the impact of the restriction on future growth is very significant.)*	This statement is noted and indicates that the relevant action being applied for by the Applicant may have consequences beyond this Application. Further information is requested on this basis as described at the outset of the request.
123	Clarification		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report *T A B L E 3-1 (1 O F 6) N O I S E R E D U C T I O N M I T I G A T I O N M E A S U R E S S C R E E N I N G M A T R I X* *(note: a detailed assessment_by changing the noise certi fication standards to aircraft meet certified noise level standards to* *standards usually provide time for measure is not further considered.)*	The Applicant is requested to provide further justification for why restrictions and/or incentives aimed at phasing out certain aircraft aligned to their noise certification, have not been considered. ANCA points the Applicant to Action 2 of the Noise Action Plan.

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124	Clarification		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report *TABLE 3-1(3 OF6) NOISE REDUCTION MITIGATION MEASURESSCREENINGMATRIX* *(As recommended in the Noise Action Plan, daa re-evaluated the appropriate NADP profile for Dublin Airport based on the three- runway airfield. The assessment concluded that the NADP 2 departure remains the preferred profile at Dublin Airport. This is an existing measure assumed to be in place as part of the Forecast without New Measures scenario; therefore, further assessment was not necessary.)*	See Request 117
125	Clarification		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report *TABLE 3-1(4 OF6) NOISE REDUCTION MITIGATION MEASURESSCREENINGMATRIX* *(This measure is an existing measure conducted by IAA and is assumed as part of the Forecast without New Measure scenario; therefore, further assessment was not conducted. The IAA ANSP endeavours to include*	The Applicant is requested to confirm whether Continuous Climb Operations (CCO) are part of the Airspace Design or not. Evidence should be provided to show how this has been considered in the modelling

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			continuous climb segments in its departure procedures to the maximum extent possible.)	
126	Clarification		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report *TABLE 3-1 (4 OF6) NOISE REDUCTION MITIGATION MEASURESSCREENINGMATRIX* *(Due to the need for additional detailed assessments related to feasibility and the anticipated low level of benefit, this measure type was not further considered at this stage. In fact, steeper angle approaches can generate more noise.)*	It is noted that Slightly Steeper Approaches are ruled out as they are anticipated to provide a low benefit. The Applicant is requested to provide quantitative evidence to justify the statements made. ANCA notes that other European airports are introducing SSA to mitigate noise.
127	Clarification		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report *TABLE 3-1 (4 OF6) NOISE REDUCTION MITIGATION MEASURESSCREENINGMATRIX*	See Request 109

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			(This measure is an existing measure at Dublin Airport and is assumed as part of the Forecast without New Measure scenario; therefore, further assessment was not conducted. The IAA ANSP endeavours to include CDA segments in its arrival procedures to the maximum extent possible.)	
128	Additional Information		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report *TABLE 3-1 (6 OF 6) NOISE REDUCTION MITIGATION MEASURES SCREENING MATRIX* *(There is an existing land acquisition and relocation measure in place for Dublin Airport. Approved in 2016, this measure provides voluntary acquisition of eligible dwellings located within the predicted 69dB LAeq,16hr contour. The scheme is voluntary and places no obligation on any property owner to participate. Offers to purchase will include a 30 percent premium on the current market value of the residence. Property valuations will be based on current movements at Dublin Airport and accordingly valuations will not be affected by the new runway. The scheme will remain available for three years after North Runway is operational (2025). Because this is an existing measure, no further consideration was required.)*	It is noted that the application does not propose an equivalent to the current daytime voluntary purchase scheme. The Applicant is requested to demonstrate how the eligibility boundaries for the existing voluntary purchase scheme align with the night time noise exposure levels calculated for 2025 in Scenarios 2 to 9 as ANCA wishes to understand whether the existing voluntary purchase scheme remains adequate in the context of this Application and forecast night-time noise exposure from Dublin Airport.

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129	Additional Information		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report *TABLE 3-1 (6 OF 6) NOISE REDUCTION MITIGATION MEASURES SCREENING MATRIX* *(A current measure is planned that will assess and work with airline partners to introduce quieter aircraft, particularly at night, which could include consideration of incentives. Approaches to incentives under are development and are expected to be in place by 2022. Noise charges consultation is expected to commence in Summer 2020 and will continue again in November 2020 with a view to introduction of night-time charges in 2021/22. This is intended to increase the proportion of modernised aircraft at the airport and consequentially reduce the noise from aircraft movements. Because this is an existing measure, no further consideration was required. The noise modelling in the assessment did include for fleet modernisation based on conservative rates of change and without a detailed assessment of the impact of noise charges as the final charges were not set at time of the assessment.)*	The Applicant is requested to provide further information in relation to the how the Airport will work with airlines to incentivise quieter aircraft and how this will work in practice? It is noted that similar actions are set out in Action 1 and Action 2 of the Airport's NAP. The Applicant is requested to provide evidence to demonstrate how such incentives have influenced the forecasts.

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130	Clarification		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report *3.1 .3 ST EP 2 – E F F EC TI V E NESS O F FE ASI B LE MI TI G AT ION ME ASURE S* *(To determine the effectiveness of a proposed residential sound insulation measure for purposes of this assessment, all people exposed to "high" external noise levels (high noise impact levels is 55dB Lnight or higher consistent with the thresholds discussed in Section 3.3 of the Dublin Airport North Runway, Noise Information for the Regulation 598/2014 (Aircraft Noise Regulation) Assessment report by Bickerdike Allen Partners LLP) have had a 5dB reduction in noise level applied to determine a residual noise assessment rating.)*	The Applicant is requested to provide justification for the assumed 5 dB reduction in external noise levels to account for sound insulation measures. See Requests 91 and 92.
131	Further Information / Additional Scenarios		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report *"The primary difference among the eight preferential run way use scenarios is how the runways are used during t he night-* *time hours. Three preferential runway use scenarios (S cenarios 2, 9 and 10) provide access to both runways between 2300 and 2359, and between 0600 and 0659 (called the shoulder hours) and prefer use of one runway between 0000 and 0559. Scenario 10 suggests switchi ng between North Runway and South Runway to provi*	The Applicant is requested to confirm and provide evidence as to whether any of the following additional preferential runway use scenarios should be considered: - No use of the North Runway between 2300 and 0600 - Use of the North Runway allied to a quota in the periods 2300 to 2330 and 0500 to 0700

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			de respite between 0000 and 0559. Two preferential runway use scenarios operate in semi-mixed mode (mixed mode for arrivals or departures only) between 2300 and 0659 (Scenarios 7 and 8). One scenario maintains Option 7b for 24-hours (Scenario 3), and another proposes Reverse Option 7b during night-time hours (Scenario 4). Scenario 5 suggests alternating between Option 7b and Reverse Option 7b during night-time hours to provide respite."	
132	Additional Information		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Forecast Without New Measures and Additional Measures Assessment Report *3.1.4 STEP 3 – NEED FOR OPERATING RESTRICTION MEASURE(S)* *(The proposed QC measure would assign a QC value to each individual aircraft movement based on the certified noise level of that aircraft. Lower QC values are applied for aircraft with lower noise levels, higher values for noisier aircraft. The QC accumulates for each air traffic movement (ATM) against the Noise Quota (NQ) across the applicable period. As such, the system allows a greater number of quieter aircraft movements within a given quota, encouraging the use of quieter aircraft. An ANQ has been developed for the period 2330 to 0600 (known as the NQP) consistent with airports operating similar QC based systems. daa proposes to apply an ANQ of 7,990 for each year from*	The Applicant is requested to provide further information regarding the proposed Noise Quota System and confirm whether:- a. a noise quota system aligning to an 8-hour night-time period 2300-0700 been considered. b. the quota system is based on the current UK Department for Transport system. Has a movement limit or other control been considered as part of the noise quota period? c. Has the quota system has been considered for forecasts extending beyond 2025? d. a review period for the quota system been considered? e. an incremental reduction in quota over time has been considered?

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			the opening of the North Runway to 2025. The ANQ is based on the 2025 forecast fleet mix and ATMs, and is not expected to involve a substantial cost to implement. Refer to the Noise Quota Report by Anderson Acoustics for more information on the proposed ANQ.)	
133	Clarification		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Cost Effectiveness Analysis Report *2.1 UNIT OF E FFEC TI V ENESS* *(The priorities are established based on potential noise problems expected to occur due to the implementation of a proposed future development or action that extends capacity.)*	The Applicant is requested to clarify what is meant by the statement: *"The priorities are established based on potential noise problems expected to occur due to the implementation of a proposed future development or action that" extends capacity."*
134	Clarification		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Cost Effectiveness Analysis Report 2.1 UNIT OF E FFEC TI V ENESS *(Change in Lden levels:* *— Exposed to noise levels between 45 dB and 50 dB Lden and an increase at or higher than 9 dB increase* *— Exposed to noise levels between 50 dB and 55 dB Lden and an increase at or higher than 6 dB increase* *— Exposed to noise levels between 55 dB and 65 dB Lden and an increase at or higher than 3 dB increase* *— Exposed to noise levels between 65 dB and 70 dB*	It is noted that the same change criteria are adopted for night-time noise as for daytime noise. The Applicant is requested to provide detail against the exposure response functions reported in Directive 2020/367.

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			Lden and an increase at or higher than 2 dB increase *— Exposed to noise levels 70 dB Lden or higher and an increase at or higher than 1 dB increase* *Change in Lnight levels:* *— Exposed to noise levels between 40 dB and 45 dB Lnight and an increase at or higher than 9 dB increase* *— Exposed to noise levels between 45 dB and 50 dB Lnight and an increase at or higher than 6 dB increase* *— Exposed to noise levels between 50 dB and 55 dB Lnight and an increase at or higher than 3 dB increase* *— Exposed to noise levels between 55 dB and 60 dB Lnight and an increase at or higher than 2 dB increase* *— Exposed to noise levels at or higher than 60 dB Lnight and an increase at or higher than 1 dB increase)*	
135	Clarification		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Cost Effectiveness Analysis Report *5. LAND USE PLANNING AND MANAGEMENT MEAS URES*	The Applicant is requested to demonstrate consideration of the implications of the Local Area Plan and to the effectiveness or otherwise of the noise zones set out in the Local Area Plan.
136	Additional Information		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Cost Effectiveness Analysis Report *5.3 COST TO IMPLEMENT* *(The costs are based on a grant scheme of €20,000 per dwelling, the costs to set up the grant scheme*	The Applicant is requested to provide evidence or analysis to confirm the figures presented here in relation to the scheme programme and administration costs.

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			programme (€300,000) and annual administration cost of the programme (€100,000).)	
137	Additional information		Dublin Airport North Runway, Regulation 598/2014 (Aircraft Noise Regulation) Cost Effectiveness Analysis Report *5.3 COST TO IMPLEMENT* *(For cumulative cost estimation purposes, this analysis assumes all dwelling units would accept the grant scheme and complete the sound insulation of the relevant rooms starting in 2022 and complete them by 2025, which is a span of three years. Table 5-2 indicates the cumulative cost estimate for sound insulation for the three years.)*	The Applicant is requested to provide evidence to demonstrate how its past experience of voluntary sound insulation schemes inform the assumption around likely uptake of the proposed grant scheme.
138	Clarification		Dublin Airport Proposed Night Quota System *Introduction* *(The NQS proposal includes an Annual Night Quota (ANQ) allowance applied to scheduled operations across the Night Quota Period (23:30 to 06:00).)*	The Applicant is requested to provide analysis of what safeguards are proposed in relation to noise impacts in period 2300-2330 or 0600-0700 and to provide details of other quota periods which could be used instead, such as an 8-hour night period or a period to operate alongside voluntary restrictions on the use of the runways.
139	Clarification		Dublin Airport Proposed Night Quota System *Considerations for a Night Quota System* *A Night Quota System (NQS) and EU598*	The Applicant is requested to demonstrate that the proposed 6.5 hour NQS will ensure the meeting of an 8-hour night-time objective.

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			(Whilst analysis indicates that source, operating procedure and land use measures meet the cNAO, daa is proposing an NQS to provide assurances that forecast noise conditions in 2025 will meet the cNAO since part of that compliance will be as a result of airlines updating the fleet operating at Dublin Airport to comprise more, quieter aircraft as indicated in the forecast.)	
140	Further Information		Dublin Airport Proposed Night Quota System *Considerations for a Night Quota System* *ANight Quota System (NQS) and EU598* *(As per QC type systems in other jurisdictions, a detailed methodology and procedures would need to be developed and implemented which would need to include provision for late operations and other non-scheduled flights to balance their effects on the local community with the impacts that would arise on the network impact should they be prevented.)*	This statement is noted and demonstrates that further development of the NQS is necessary. The Applicant is requested to provide further information regarding the mechanics of the proposed NQS in whatever form it is to take. For example, are any exemptions proposed from the scheme, what will form the basis of the QC points assigned to aircraft. This request should be read alongside other comments made by ANCA in relation to the proposed NQS.
141	Clarification		Dublin Airport Proposed Night Quota System *Developing a proposed Annual Night Quota* *All scheduled and non-scheduled ATMs during the NQP* *(forecast in 2025 to determine an Annual Night Quota to be used for the period 2022-2025 for scheduled ATMs.)*	The Applicant is requested to demonstrate that all available control mechanisms, in addition to QC, has been considered. For example, determining the health impact which may be acceptable in line with any NAO brought forward by ANCA and then calculating the ANQ by working backwards from there to determine the fleet mix changes required and the number of ATMs that could then be allowed etc. Given the time horizon for the assessment presented within the Application, the Applicant is requested to

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				provide additional data to demonstrate whether the consequences of moving to such a QC control over the long term will remain appropriate.
142	Clarification		Dublin Airport Proposed Night Quota System *Total Annual ATM and QC.Arrivals and departures.* *ATM*	The Applicant is requested to further explain the ATM increase in night period while total ATMs are assumed flat. Additionally, the Applicant is requested to demonstrate that there will not be a consequence of inflating the QC allowance calculated as part of the scheme. The Applicant should note comments made by ANCA in relation to the forecasts and fleet mix assumptions.
143	Further Information		Dublin Airport Proposed Night Quota System *Calculate NQP Annual Night Quota = 7,990*	The NQP will be influenced by aircraft mix assumptions, making these assumptions extremely important. The is no explicit visibility of these assumptions and it is difficult for ANCA to identify how this annual quota has been calculated and the requirement for the proposed headroom. The Applicant is requested to provide further information to demonstrate how the annual quota has been calculated is requested.
144	Additional Information		Dublin Airport Proposed Night Quota System *Calculate NQP Annual Night Quota = 7,990* *(The ANQ tolerance provides an allowance of ~5% for inherent variability associated with forecasts. The analysis has assumed a single, typical QC value for each aircraft type. There are a range of QC values that could*	The Applicant is requested to provide further information on how the QC value for each aircraft type has been selected and which parameters have been used as part of the selection (i.e., take-off weights and consideration of destinations served?). The Applicant is requested to identify any requirement for marginally compliant aircraft operations during the

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			apply to any one type based on engines and aircraft weight. The ANQ tolerance therefore provides an allowance for some variation between the assumed QC for a flight and the QC for the aircraft that may actually operate. The next slide provides additional)	night period. This is an important consideration as the allowance may increase the ANQ, and hence the allowable number of night ATMs over and above the actual need i.e., the unconstrained position.
145	Additional information		Dublin Airport Proposed Night Quota System *Proposed Night Quota System. Summary.*	The Applicant is requested to provide the methodology used to formulate the proposed noise quota be provided. As presented, it appears to assume that residents are indifferent between fewer, nosier flights and more frequent, quieter flights (as long as QC count is the same). The Applicant is requested to provide detail for this implicit assumption and to confirm whether consideration been given to incrementally lowering the quota over time. The current approach adopted by the proposal is that the airport may continue to increase night-flying up to a limit without necessarily reducing noise over the longer term. Given the forecasts provided extend only to 2025 there is no evidence to demonstrate that objectives to reduce aircraft noise can be influenced by the proposed controls.