Irish Draft Performance Plan

for
Air Navigation Services
for

Reference Period 3 (RP3)

Single European Sky Regulation

Decision Document

1 October 2021

Prepared by the joint National Supervisory Authorities (NSAs):

Commission for Aviation Regulation (CAR)

Irish Aviation Authority Safety Regulation Division (IAA SRD)

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1. Executive Summary

1.1 This document sets out our Decision on Ireland's revised Reference Period 3 (RP3) Performance Plan. Ireland's original RP3 Performance Plan was prepared, consulted on, and submitted in 2019 in line with the provisions of Commission Implementing Regulation (EU) 2019/317 and the targets set out in Commission Implementing Decision (EU) 2019/903. However, the impact of COVID-19 on the aviation sector meant that revisions to RP3 Performance Plans, targets and the implementing regulations would be required. A revised Performance Plan was then developed, and a consultation period held ahead of the submission date for a final draft RP3 Performance Plan to the EU Commission of 1 October 2021. The Performance Plan has been adopted by the Irish State.

1.2 This Performance Plan covers En Route air navigation services in the Shannon Flight Information Region (FIR) and Shannon Upper Information Region (UIR). It also covers Terminal services provided at Dublin, Shannon and Cork airports. The National Supervisory Authority (NSA) is not making any changes to the scope of the Performance Plan or the Charging Zones as part of this revision of the plan.

1.3 The Performance Plan covers costs of the following entities: The IAA ANSP, MET ANSP, NSA costs, State policy costs, ICAO and ECAC costs and Eurocontrol costs. The costs all relate to the provision of air traffic management services and are payable by airspace users (primarily airlines).

1.4 Once adopted, the revised RP3 Performance Plan will apply for the original years of RP3, from 2020 to 2024. Allowed revenue which is unrecovered in 2020 and 2021, due to the impact of COVID-19, is recoverable through adjustments to unit rates over seven years commencing in 2023.

1.5 In total, in 2017 prices for operating costs and nominal prices for capital costs, we have set Determined Costs for all entities of €685m for the 5 years 2020 to 2024. This compares to €758m in the various business plans and €911m in the 2019 draft Performance Plan. These costs are higher than the total figure we proposed in the consultation, which were €681m for all entities for the 5 years 2020 to 2024.

Assumptions and traffic forecasts

1.6 Traffic forecasts are used to convert the total Determined Costs (DC) into a Determined Unit Cost (DUC). We use Scenario 2 from the Eurocontrol May 2021 forecast, which is based on an easing of travel constraints from Q1 2022. This scenario sees En Route Service Units for Ireland at 2.1m in 2021 increasing to 4.7m by 2024, this compares to 4.6m in 2019. Terminal Service Units are forecast to be 77k in 2021, increasing to 136k in 2022 and then back to 2019 levels, at 188k, by 2024. This scenario aligns with the IAA ANSP's Business Plan assumption.

1.7 Following advice from the European Commission, the Performance Plan may be revised post submission, to reflect revised Eurocontrol forecasts expected to be published in October 2021.

1.8 In line with Article 2(11) and Article 26 of Regulation 317/2019, we use the forecast of

average Consumer Price Index (CPI) change from the International Monetary Fund (IMF), which was published in April 2021. It forecasts that inflation will be, on average, 1.4% per year between 2020 and 2024.

The IAA ANSP's Determined Costs

1.9 In total, in 2017 prices for operating costs and nominal prices for capital costs, we have set Determined Costs for the IAA ANSP of €99.6m in 2020 increasing to €120.5m in 2022 and then €126.7m in 2024, compared to €116.2m in 2019. Of this cost base, in 2020, €82.9m is allocated to En Route, with €16.8m allocated to terminal (€100.1m and €26.9m respectively in 2024). These are higher than the figures we proposed in the consultation, which were €99.5m in 2020 increasing to €119.1m in 2022 and then €124.8m in 2024.

1.10 **Table 1.1: IAA ANSP RP3 Total Determined Costs**

	2020	2021	2022	2023	2024	RP3 Total
IAA ANSP Proposal	101.1m	109.7m	135.9m	143.9m	145.7m	636.3m
NSA Consultation	99.5m	100.9m	119.1m	123.5m	124.8m	567.7m
NSA Decision	**99.6m**	**101.2m**	**120.5m**	**126.3m**	**126.7m**	**574.2m**
Difference from consultation	0.1m	0.3m	1.4m	2.8m	1.9m	6.5m
Difference from IAA ANSP	(1.5m)	(8.5m)	(15.4m)	(17.6m)	(19.0m)	(62.1m)

Source: CAR Calculations, ANSP position as per its calculations rather than Business Plan and with pension calculations updated.

1.11 For the IAA ANSP's operating costs, we have set a figure of €89.3m in 2020 rising to €105.9m in 2024, compared to the 2019 outturn of €99.4m. This is a lower level than proposed in the IAA ANSP's business plan – €90m in 2020 increasing to €118m in 2024 (or €117m if updated for pensions costs based on more up-to-date information). These figures are, however, higher than the figures we proposed in the consultation, which were €89.3m in 2020 increasing to €105m in 2024.

1.12 The IAA ANSP's past and forecast future operating costs are assessed in Section 4, based on analysis we commissioned from Steer. Operating costs decreased in 2020 and 2021 relative to 2019, due to the implementation of COVID-19 related cost containment measures. From 2022 onwards, we expect that operating costs will rebound to above 2019 levels and increase further thereafter, as traffic recovers towards 2019 levels.

1.13 Staff costs are forecast to decrease overall from 2019 to 2021, and then increase from 2022 in line with traffic growth and increased headcount requirements in certain business units, which, as well as traffic, is also associated with the delivery of capital projects and safety related requirements imposed by EU Regulation 2017/373. The reduced staff costs in 2020 and 2021 are the result of reduced headcount, a voluntary severance scheme, reduced working hours, reduced overtime, and the Government's employee wage subsidy scheme. There is also a variety of cost containment measures assumed to have been implemented to achieve reductions from 2019 in non-staff operating costs for 2020 and 2021.

Table 1.2: IAA ANSP Staff Opex

	2019	2020	2021	2022	2023	2024	RP3 Total
IAA ANSP	67.6m	63.7m	56.8m	68.9m	71.6m	74.2m	335.2m
NSA Consultation	67.6m	62.2m	56.4m	67.4m	68.9m	70.8m	325.8m
NSA Decision	**67.6m**	**62.2m**	**55.3m**	**67.1m**	**69.8m**	**72.0m**	**326.5m**
Difference from consultation	-	-	(1.1m)	(0.2m)	0.8m	1.2m	0.7m
Difference from IAA ANSP	(0)	(1.5m)	(1.4m)	(1.8m)	(1.8m)	(2.2m)	(8.7m)

Source: Steer Report, CAR Calculations, ANSP position with pension calculations updated. (2017 prices)

1.14 Taking account of submissions received, we have increased the granularity of our analysis of the Non-Staff costs, relative to the approach for the consultation. As is the case with staff costs, these will increase as new capital projects are delivered and become operational, although we also expect that some capital projects will deliver operating cost efficiencies, and have allowed for this in our forecasts. Training costs are expected to increase in line with the required timeline for increased ATCO staffing.

Table 1.3: IAA ANSP Non-Staff Opex

	2019	2020	2021	2022	2023	2024	RP3 Total
IAA ANSP	31.8m	26.4m	34.3m	42.2m	43.5m	42.4m	188.9m
NSA Consultation	31.8m	27.0m	29.2m	32.2m	33.5m	34.2m	156.2m
NSA Decision	**31.8m**	**27.0m**	**29.3m**	**33.7m**	**35.0m**	**33.9m**	**158.9m**
Difference from consultation	-	-	0.1m	1.5m	1.5m	(0.3m)	2.7m
Difference from IAA ANSP		0.6m	(5.0m)	(8.5m)	(8.5m)	(8.5m)	(30.0m)

Source: Steer Report, CAR Calculations. (2017 prices)

1.15 The allocation of operating costs between En Route and Terminal is based on an operating cost report, and model, produced by Steer. Many of the allocations are aligned with the IAA ANSP business plan, with the exception of ATCO numbers which are driven by Steer's bottom-up modelling, with some variances observed.

IAA ANSP - Capital Investments and Capital Costs

1.16 In total, we determined capital costs for the IAA ANSP of €10.4m in 2020 increasing to €20.8m by 2024. This is lower than the levels proposed in the ANSP's business plan, which are €10.8m for 2020 increasing to €28.9m by 2024. The difference between our proposal and that of the IAA ANSP is driven by a lower cost of capital, asset life assumptions which are overall longer, and a lower allowance for capital expenditure in the period. These costs are slightly higher overall than the costs proposed in the consultation, the key differences between the consultation and the final costs were the removal of the aiming up allowance, the correction of an error which led to an understatement of the return on capital, and adjustments in how the capital costs were displayed in the model. The capital costs proposed in the consultation were €10.2m in 2020 increasing to €19.8m by 2024.

1.17 Our assessment of capital costs is set out in Sections 5 and 6, and in Appendix 1 of the

draft Performance Plan published in July.

1.18 We have set the real weighted average cost of capital (WACC) at 3.5% for 2020-2024. The range of values estimated is between a low of 2.8% and a high of 4.2%, with a point estimate of 3.5%. This differs from the WACC proposed in the consultation of 4% for 2022-2024. That WACC included an 'aiming up' allowance within the estimation of the WACC, of 0.5%, from 2022. The 'aiming up' has been removed following consultation with stakeholders and a re-examination of the literature. Further explanation of this change can be found in Section 5.

1.19 The real WACC we have set is also below the point estimate for the real WACC of 5% in the IAA ANSP Business Plan. The nominal WACC in each year of RP3 ranges from 5.21% in 2021 to 5.64% in 2024. To calculate this, the point estimate of the real WACC has been converted to a nominal WACC.

Table 1.4: IAA ANSP Return on Capital

	2019	2020	2021	2022	2023	2024	RP3 Total
IAA ANSP		2.1m	5.3m	8.3m	9.7m	9.8m	35.3m
NSA Consultation	6.2m	1.6m	3.2m	6.9m	7.8m	7.4m	26.9m
NSA Decision	**6.3m**	**1.6m**	**4.3m**	**6.4m**	**7.3m**	**7.3m**	**26.9m**
Difference from consultation	0.1m	(0.02m)	1.1m	(0.5m)	(0.5m)	(0.1m)	(0.07m)
Difference from IAA ANSP		(0.5m)	(1.0m)	(1.9m)	(2.4m)	(2.5m)	(8.4m)

Source: CAR Calculations, ANSP position as per its calculations rather than Business Plan. (Nominal prices)

1.20 The IAA ANSP has kept its asset register at historical cost (i.e. in nominal prices). Consequently, the RAB we have derived from the asset register is nominal, and thus a nominal WACC is applied to derive the return on capital.

1.21 The IAA ANSP has proposed a revised capital investment programme for RP3 as part of the revision of the overall Performance Plan. While we broadly accept the merits of the proposed programme and the associated level of expenditure, we consider that, at a programme level, the efficient level of expenditure to deliver the full set of projects is likely somewhat lower than the cost submissions provided by the ANSP, while we consider that the timeline proposed is ambitious. Therefore, rather than disallowing any individual projects or adjusting costings at a project level, we have made a programme level reduction of 20% to forecast capitalisations over 2021-2024 (excluding expenditure associated with Dublin tower and the new En Route Contingency Centre at Ballygireen).

1.22 This level of allowed capital expenditure is, in our view, more likely to reflect the actual level of expenditure during RP3 relative to what the IAA ANSP has proposed. To the extent that the IAA ANSP incurs efficient expenditure on necessary capital projects during RP3 in excess of the 80% allowance, we will take this into consideration in RP4.

1.23 We have also adjusted the assumed asset lives for several RP3 projects. The individual adjustments are noted and listed in Section 6 and can be observed (and adjusted to test sensitivities) in the financial model. This adjustment reflects our observation that the asset lives proposed for a number of projects, or elements of projects, were

shorter than we would have expect. Our proposed asset lives are unchanged from the consultation.

Table 1.5: IAA ANSP Depreciation

	2019	2020	2021	2022	2023	2024	RP3 Total
IAA ANSP		8.8m	12.0m	16.4m	19.1m	19.4m	75.7m
NSA Consultation	10.4m	8.6m	10.7m	12.6m	13.2m	12.3m	57.5m
NSA Decision	**10.6m**	**8.8m**	**11.1m**	**13.3m**	**14.2m**	**13.5m**	**60.8m**
Difference from consultation*		0.2m	0.4m	0.7m	1.0m	1.2m	3.3m
Difference from IAA ANSP		(0.04m)	(0.9m)	(3.1m)	(4.9m)	(5.9m)	(14.9m)

Source: CAR Calculations, ANSP position as per its calculations rather than Business Plan. (Nominal prices)

**Note that, in the consultation the Performance Plan summary sheet was converting the capital costs to real prices. Our substantive approach to depreciation costs is unchanged relative to the consultation.*

MET ASD, NSA, and other State and Eurocontrol Costs

1.24 MET Aviation Services Division (ASD) has put forward cost proposals for RP3 which we consider to be reflective of enhanced efficiency in service delivery and include only eligible costs. Steer considers that, given the level of cost savings proposed relative to 2019 actual costs, further detailed scrutiny of the cost proposal is not warranted. We reflect these costs (€8.2m in 2020 and remaining broadly flat over the period) in the Performance Plan.

1.25 With regards to the NSA, and consistent with cost estimations in the original RP3 Performance Plan, reported supervision costs are expected to be higher for RP3 than they were for RP2. Previously reported supervision costs did not reflect the full costs of the oversight as they did not take account of corporate services such as IT, Finance and HR services. These costs now need to be reported as supervision costs due to the upcoming separation of the ANSP from the IAA and the subsequent merger of the IAA SRD with CAR. Increases in staff costs are also expected in RP3.

1.26 This results in NSA costs of €3.1m in 2020, increasing to €6.1m in 2024. This compares to a cost proposal from the NSA (finance section) of €6.6m in 2024. We asked Steer to review the NSA Business Plan proposal; their analysis is also published. These costs differ from those in the consultation, which proposed NSA costs of €2.8m in 2020, increasing to €6.1m in 2024. Relative to the consultation proposal, NSA costs are now €0.9m lower for 2021 due to a review of performance against budget year-to-date.

1.27 Other state costs are expected to increase by almost 8% from €10.4m in 2020 to €11.2m 2024 (in nominal terms). This includes costs for State Policy, ICAO and Eurocontrol.

Key Performance Area (KPA) Targets

1.28 For the safety targets, consistent with the provisions of Commission Implementing Decision (EU) 2021/891, the NSA has mandated that the IAA ANSP shall comply with the Union-wide targets during RP3 by ensuring Effectiveness of Safety Management (EoSM) that is at least “Level D” in the objective of safety risk management and at least

"Level C" in the other safety objectives of culture, policy and objectives, promotion, and assurance.

1.29 For the environment targets, the key performance indicator is the average horizontal En Route flight efficiency of the actual trajectory of aircraft (KEA). This measures the average additional distance flown compared to the great circle distance, which is the shortest distance between two points on the surface of a sphere. The Performance Plan aligns with the targets assigned to Ireland.

1.30 There are two KPIs within the KPA of capacity, one relating to En Route capacity and one relating to Terminal capacity, these are: the average En Route ATFM delay minutes per flight attributable to air navigation services, and the average arrival ATFM delay minutes per flight attributable to terminal and airport air navigation services. For the En Route capacity target, we are aligning the Performance Plan with the revised targets assigned to Ireland. The Terminal target in the original Performance Plan was 0.25 minutes for 2021, and 0.2 minutes for 2022-2024. We are not changing these targets.

1.31 The cost efficiency KPA includes two KPIs: the Determined Unit Cost (DUC) for En Route services and the DUC for terminal services. To calculate an appropriate level of allowed determined costs for the ANSP in RP3, the NSA has followed the regulatory building blocks approach. This approach is intended to build the cost base from the bottom up, rather than targeting a specific overall outcome. The building blocks used include an efficient level of operating costs, depreciation charges, the cost of capital based on the allowed asset base and an efficient WACC.

1.32 Applying this approach has led to an En Route DUC trend which is €0.67 (1.9%) lower than the equivalent value implied by the Union-wide DUC target, inclusive of baseline adjustments and with restructuring costs removed from the comparison. There is some year-to-year variation in the DUC trend relative to the EU-wide values, which is a feature of local circumstances, particularly traffic forecasts. This plan will lead to outperformance in 2020/2021, underperformance in 2022, performance close to the target in 2023 and slight outperformance in 2024.

Unit Rate Forecasts

1.33 The En Route unit rate for 2021 is €28. On the basis of our Performance Plan, we forecast that, in nominal terms and under our core traffic scenario, this rate will be €35.8 in 2022, before reducing to €32.3 and then €29.8 for 2023 and 2024 respectively. These differ slightly from the rates proposed in the consultation which were €35.7 in 2022, before reducing to €32.2 in 2023 and €29.9 in 2024.

1.34 The Terminal unit rate for 2021 is €162. We forecast that, in nominal terms, this rate will be €177.7 in 2022, before reducing to €176.1 and then €174.7 for 2023 and 2024 respectively. These differ slightly from the rates proposed in the consultation which were €177.8 in 2022, before reducing to €173.4 in 2023 and rising again to €174.9 in 2024.

1.35 The unit rates would be subject to change within the period due to adjustments (such as reductions if inflation is below the forecasts), and traffic risk sharing. The variance

between these rates and the rates which would result from the IAA ANSP Business Plan is set out in Section 11.

2. Background and Process for Developing a Revised Performance Plan

2.1 This section provides an overview of the context for the revised RP3 Performance Plan, both at a European level and specifically in Ireland. It then sets out the process followed by the NSA. Finally, this section outlines the comments received from various stakeholders on the process so far and the NSAs response.

European Context

2.2 The original RP3 Performance Plans were prepared and consulted on throughout 2019, in line with the provisions of Commission Implementing Regulation (EU) 2019/317 and the targets set out in Commission Implementing Decision (EU) 2019/903. Ireland's draft Performance Plan was submitted in October 2019, with the PRB review process set to conclude in March 2020; however, the impact of COVID-19 on the aviation sector meant that revisions to RP3 Performance Plans, targets and the implementing regulations would be required.

2.3 In November 2020, Commission Implementing Regulation (EU) 2020/1627 was passed; this legislation contained exceptional measures in response to the impact of COVID-19 and a revised timeline for the submission of updated RP3 performance plans. In June, revised targets were published within Commission Implementing Decision (EU) 2021/891. The review and decision on approval and formal adoption of the revised performance plans, by the EC, will take place in the months following the submission of these plans. The EC has also suggested that Performance Plans could be updated in light of revised traffic forecasts during the verification of completeness phase later this year, throughout October and November.

Institutional Context for ANS Provision and Oversight in Ireland

2.4 In line with Government policy, the institutional framework for the provision of air navigation services, and the oversight of these services, is currently undergoing a process of change. The Irish Aviation Authority (IAA) is being separated into its two constituent parts, the Air Navigation Services Provider (ANSP), and the Safety Regulation Division (SRD). SRD will remain as the IAA, while the ANSP will be incorporated as a new commercial company. The existing, separate Commission for Aviation Regulation (CAR), which has roles in economic regulation, licensing, and consumer protection in aviation, will then be merged into the IAA to form a new independent sectoral regulator with responsibility for aviation regulation in relation to safety, security, licensing, economic regulation, and passenger rights.

2.5 The development and submission of the original RP3 Performance Plan in 2019 was carried out within the IAA, as the designated NSA under the SES performance and charging regulation. The designation as NSA responsible for economic regulation and cost efficiency was transferred to CAR on 1 January 2020. The SRD function of the IAA has retained NSA responsibilities under the SES other than economic regulation, including safety oversight and licensing.[1] When the merger is completed, all of these oversight functions will sit within the new regulator, as will be established under the

[1] Further details are here:
https://www.aviationreg.ie/economic-regulation/air-navigation-charges.986.html

Air Navigation and Transport Bill 2020.[2] Section 10 provides for the Minister to identify a day (the Vesting Day) from which the separation of the ANSP and the establishment of the single independent aviation regulator will take effect.

2.6 Consequently, in this document, where we refer to 'the NSA', this should be taken to mean both CAR and the IAA SRD jointly, in advance of vesting day. From vesting day, 'the NSA' should be taken to refer to the IAA. Where we refer to 'the IAA ANSP', in advance of vesting day, this refers to the ANSP currently contained within the IAA. From vesting day, 'the IAA ANSP' should be taken to refer to the Designated Activity Company (DAC) referred to in Section 10 of the Air Navigation and Transport Bill 2020. We currently understand that this company is likely to trade under the name 'AirNav Ireland', as provided for under Section 11 of the Bill.

Process for Developing a Revised Irish Performance Plan

2.7 Following the passage of EU 2020/1627, in late 2020, the NSA and ANSPs began to prepare for the requirement to develop a revised Performance Plan for RP3. In particular, given that CAR was not involved in the original Performance Plan, it was necessary to develop entirely new inputs and forecasts for each of the regulatory building blocks (including, for example, deriving the full RAB).

2.8 In November 2020, the NSA issued a consultation on a proposed timeline for developing the revised plan.[3] In February 2021, CAR provided business plan guidance material to IAA ANSP, with guidance provided to MET ASD in March. Draft Business Plans were provided by both entities in April, with the final business plans provided in July, while an NSA supervision costs proposal was provided in May.

2.9 An initial draft Performance Plan was developed by the NSA on the basis of these submissions and other supporting documents and was published as a consultation document at the end of July. Stakeholders were then given time to assess the Performance Plan document and the model it was based on, before attending a consultation meeting with the NSA in late August to give feedback on the proposed plans. Alongside this meeting the NSA sought submissions from stakeholders that explained their views in detail. Written submissions were received from seven stakeholders before the deadline at the end of August.

2.10 This plan incorporates and responds to the feedback the NSA received from stakeholders.

Submissions received on the Process for Developing a Revised Irish Performance Plan

2.11 The IAA ANSP raises a number of concerns relating to the tight timelines of the revised RP3 process. It argues that the short timelines could set a precedent for the approval of plans that have not been developed with the appropriate procedures in place. It points out that it received the Steer report one week before the consultation material was published and that as a result, the NSA and Steer only had one week following this to update the report and modelling for the consultation. The IAA ANSP further states that the number of errors that it found in the consultation material suggests that the

[2] https://www.oireachtas.ie/en/bills/bill/2020/72/
[3] https://www.aviationreg.ie/air-navigation-charges/performance-plan-with-revised-targets-for-rp3.1002.html

NSAs did not have time to adequately review the material before publication and that had greater time been allotted, these errors may have been identified. It further states that given the tight timeframe, the burden of reviewing the consultation material should not fall to the IAA ANSP.

2.12 Ryanair also raises concerns about the tight timelines of the revised RP3 process. It notes that it wrote to the NSA in early August about amending the deadline of 31 August, and submitted a further such request on 30 August, both of which were rejected. It argues that insufficient time was allotted to fully review the plans, resulting in its submissions and comments not being as detailed as it would like.

2.13 IATA similarly considers that timelines were too tight and that there was insufficient time allowed for it to fully develop its written response. It argues this must be seen in the context that the Irish consultation meeting was held during a week where the small airspace user team had to conduct seven full state level consultations in five days. It also argues that there was insufficient time on the day of the consultation meeting to discuss the detailed aspects of the plan.

NSA Response on the Process for Developing a Revised Irish Performance Plan

2.14 We agree that the timelines were tight, especially for airlines and groups who have had to attend many consultations over a short period, although this is not something which was within our control. However, the consultation material had been publicly available for one month before the submission deadline. We consider that this was sufficient time for stakeholders to review the material; if more time had been available, we would however have allowed for a longer consultation period.

2.15 In response to the IAA ANSP, it must be pointed out that the IAA ANSP refused to provide us with the full set of management excel spreadsheets underpinning its forecasts, which created a requirement for us to re-create its outputs. This added significantly to ours and Steer's workload and reduced the amount of time we could provide to IAA ANSP to review the Steer report and that we could allow for all stakeholders at the consultation phase.

Scope of the Performance Plan

2.16 The Performance Plan covers En Route air navigation services in the Shannon Flight Information Region (FIR) and Shannon Upper Information Region (UIR). It also covers Terminal services provided at Dublin, Shannon and Cork airports. Although Cork and Shannon are below the inclusion threshold of 80,000 IFR movements, they were optionally included in the original Performance Plan as provided for under Article 1(4) of Regulation 317/2019. The NSA is not making any changes to the scope of the Performance Plan or the Charging Zones as part of this revision of the plan.

2.17 Shanwick Oceanic airspace, in which the IAA ANSP also provides air navigation services, is outside the scope of the Plan. Consequently, associated costs and revenues have been excluded from the Plan.

2.18 Once adopted, the revised RP3 Performance Plan will apply for the original years of RP3, from 2020 to 2024. Revenue not recovered in 2020 and 2021, due to the unit

rates planned in the original RP3 performance plans being applied to much lower traffic levels (partly offset by lower than planned costs), is potentially recoverable through adjustments to unit rates in subsequent years from 2023. Consequently, with unit rates already set for 2020 and 2021, the level of Determined Costs for these years contributes to the level of future adjustments to the unit rates from 2023, rather than impacting unit rates and the regulated revenue stream this year.

2.19 For the purposes of the cost efficiency KPA, 2020 and 2021 will be treated as one period and a number of other bespoke measures will also apply; these are discussed below in the context of the relevant KPAs.

Performance Plan Financial Model

2.20 The Performance Plan summary financial model was used to calculate the proposals set out in the revised Performance Plan and in this document. A draft version was published alongside the consultation document and a final version is published alongside this document. Separately, Steer developed an IAA ANSP Operating Expenditure (Opex) model which has been used to feed the main Performance Plan model.

2.21 Each of the 'ANSP', 'MET', and 'Supervision' sections of the model feed the determined cost tables proposed for each entity in the model.[4] The total determined costs are then summed in the 'Total DC' section. The IAA ANSP proposals, as modelled by us, have also been included on separate sheets for comparison purposes.

2.22 The 'UR' section then compiles the various aspects of the regulatory model and our application of these aspects to calculate forecast unit rates, after applying relevant unit rate adjustments.

2.23 Finally, the 'Summary' section, at the front of the model, summarises and displays the resulting unit rate and cost forecasts from a number of perspectives, as well as forecast coverage ratios and cash flow forecasts.

Submissions received on the Performance Plan Financial Model

2.24 The IAA ANSP states that it sought an editable copy of the Steer Opex model that had not been published, and that despite several such requests being made during August, an editable version of the model was not provided. It argues that this is unusual for several reasons, including the significance of this model to the IAA ANSP, the time constraints in responding to the consultation, and the number of queries that were required during August for the IAA ANSP to understand the model.

2.25 The IAA ANSP also states that it identified oversights and inconsistencies in the unpublished Opex model but was regularly requested to include the relevant points in its response to consultation. IAA ANSP is seeking assurances that the models upon which the consultation is based will be free of all errors post-consultation and that this is demonstrated to the relevant stakeholders.

[4] The section termed 'Supervision' includes Eurocontrol costs, NSA costs, and state policy costs from the Department of Transport.

NSA Response on the Performance Plan Financial Model

2.26 We have published our editable Performance Plan financial model and have provided the IAA ANSP with a calculated version of the Steer Opex model, which has allowed the IAA ANSP to engage with and understand the numbers, and to make substantive points in relation to either the reasonability of the assumptions or any errors or inconsistencies.

2.27 On the other hand, as noted above, the non-provision of full underlying Business Plan calculations slowed the process, and generated inconsistencies in our attempts to replicate the IAA ANSP Business Plan in a transferable way from which we could pivot our calculations. This resulted in a number of the issues that were then identified by the IAA ANSP as part of the consultation, such as the Steer modelling of salary progression, which have now been adjusted by us where appropriate.

3. Inflation and Traffic Forecast Assumptions

3.1 This section sets out the inflation and traffic forecast assumptions used as inputs to the Performance Plan. It also details the responses to the consultation paper and how they have been considered in the Performance Plan.

Inflation

3.2 As was detailed in the Consultation, we used the forecast of average Consumer Price Index (CPI) change from the International Monetary Fund (IMF), which was published in April 2021. This is in line with Article 2(11) and Article 26 of Regulation 317/2019. We have not changed our approach from the Consultation.

Table 3.1: Actual and Forecast Inflation 2020-2024

	2020	2021	2022	2023	2024
Inflation	-0.5%*	1.6%	1.9%	2.0%	2.0%

*Source: IMF, April 2021. *In line with Article 2(11) of Regulation 317/2019, as inflation was negative, a zero value has been used for relevant non-WACC adjustments.*

Submissions Received on Inflation

3.3 British Airways expresses concerns about whether the use of zero inflation in years that have negative inflation, in line with the Commission implementing Regulation, is internally consistent with the treatment of inflation in other areas of the price control, specifically in relation to the treatment of elements of the cost of capital and the inflation of the regulated asset base.

Decision on Inflation

3.4 The inflation forecast used for the Performance Plan remains unchanged from the Consultation. Regarding the internal consistency of the approach to inflation throughout the plan, we have used a rate of zero for 2020 to the extent required only, to adjust the determined costs included in the cost base, but Article 26 does not require that a value of zero is used to derive the determined costs themselves[5]. The RAB is at historical cost and as such, there are no inflationary adjustments. The WACC is consequently nominal- we have used the actual negative inflation rate for 2020 as there is no requirement to set it to zero, nor do we see any reason to do so.

Traffic Forecasts

3.5 We have based the Performance Plan on the Eurocontrol May forecast, Scenario 2, as detailed in the Draft Performance Plan and as has been recommended to the NSAs.

[5] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2020.366.01.0007.01.ENG&toc=OJ%3AL%3A2020%3A366%3ATOC

Table 3.2: Eurocontrol Forecast 2020-2024, Scenario 2 (000's)

	Actuals	Forecast			
	2020	2021	2022	2023	2024
IFR Movements	263	277	459	562	652
YoY Change	-59.3%	5.2%	65.8%	22.5%	16%
En Route Service Units	1,988	2,072	3,202	4,039	4,726
YoY Change	-57.3%	4.2%	54.6%	26.1%	17%
Terminal Service Units	71	77	136	163	188
YoY Change	-62%	9%	77%	20%	15%

Source: Eurocontrol Forecast Update 2021-2024 (May 2021)

Submissions Received on the use of Scenario 2 Traffic Forecast

3.6 British Airways supports the use of Scenario 2 from the Eurocontrol May forecast in the development of the Performance Plan. Regarding the possibility to update the Performance Plan based on the updated Eurocontrol forecasts which will be published in October, British Airways is in support of this provided that the building blocks are updated appropriately in line with the forecasts. British Airways also considers it important for the NSA to establish what the scope of such a review would be.

3.7 The IAA Staff Panel states that, based on current vaccination rates, Scenario 1 is the most appropriate scenario for RP3. It further points out that if the traffic outperforms the forecast, it does not believe that the IAA will have sufficient resources to deliver the required capacity.

3.8 The IAA ANSP is also in support of updating the plan in line with the October forecasts, and as stated by the European Commission, states that CAR should immediately start working on the updated plan and stakeholder consultations following the publication of the updated forecasts.

3.9 IATA is also in favour of the use of Scenario 2 for the traffic forecasts.

Decision on Traffic Forecasts

3.10 We continue to use the Eurocontrol May Forecast Scenario 2, as was recommended to the NSAs and is supported by stakeholders with the exception of the Staff Panel.

3.11 In response to the Staff Panel, the TRS mechanism provides for additional revenues for the IAA ANSP in the event that traffic exceeds the forecasts by up to 10%. As ANSP costs are relatively inelastic with respect to traffic levels, the additional revenues (+2% in the case of +2% traffic outperformance, +4.4% in the case of a +10% traffic outperformance) can be expected to match or exceed the required additional costs.

3.12 We note that, as outlined by the Staff Panel, traffic levels have recently trended towards Scenario 1, although there remains much uncertainty as to whether this trend will continue. We note that the Statfor October forecasts will take account of these recent trends. In relation to the potential to update the plan on the basis of these

forecasts during the verification of completeness phase, we intend to review the forecasts for Ireland when they are published. Our intention is that, if the forecasts are materially different and in the absence of further guidance on the extent to which NSAs are allowed to update the plans, we will publish a short consultation document setting out updated Determined Costs, DUCs, and Unit Rates for potential inclusion in an updated plan. The options proposed in that document will likely be to either update the Opex and Performance Plan models for the new forecasts, or to not update the Plan.

3.13 A revised +10%/-10% sensitivity has been included in Section 11 to estimate the updated Performance Plan parameters if traffic levels were to be 10% higher/lower in the new forecasts

4. Operating Expenditure

4.1 This section provides an overview of the determined level of Operating Expenditure (Opex) for the IAA ANSP which we have included in the Performance Plan. Opex is composed of Staff Costs and Non-Staff costs. Capital costs are considered separately in subsequent sections. Table 4.1 summarises total allowed Opex by charging zone, compared to the IAA ANSP position. As per Regulation 317/2019, figures in this section are in real 2017 prices; inflation adjustments will be added within the period.

Table 4.1: Total, En Route and Terminal ANSP Operating Costs

Source	Allocation	Actuals		Determined				
		2019	2020	2020	2021	2022	2023	2024
Determined	En Route	€82m	€76m	€75m	€72m	€85m	€88m	€89m
	Terminal	€18m	€14m	€14m	€13m	€15m	€16m	€17m
	Total	**€99m**	**€90m**	**€89m**	**€85m**	**€101m**	**€105m**	**€106m**
ANSP Proposal	En Route	€82m	€76m	€76m	€77m	€93m	€96m	€97m
	Terminal	€18m	€14m	€14m	€14m	€18m	€19m	€19m
	Total	**€99m**	**€90m**	**€90m**	**€91m**	**€111m**	**€115m**	**€117m**

Source: IAA ANSP Business Plan, CAR Calculations, Steer Report. 2017 Prices.

4.2 We continue to use the Steer advice to inform our Opex forecasts. In response to stakeholder submissions, Steer has revised its forecasts where it considers that this is warranted. The concluding report from Steer is published alongside this document. To summarise the changes relative to the consultation:

- Staff costs, other than pensions, over the period 2022-2024, are now forecast to be €5m higher.
- Non-Staff costs over the period 2022-2024 are approximately €2.6m higher.
- Based on more up-to-date information provided to Steer in relation to the pension contribution rates, pensions costs are forecast to be €4.3m lower than consulted on over the period 2021-2024.

4.3 Excluding the pensions cost adjustment to reflect the more up-to-date information, the overall increase relative to the consultation proposal over the years 2022-2024 is just under €8m.

4.4 In broad terms, the forecasts can be summarised as follows:

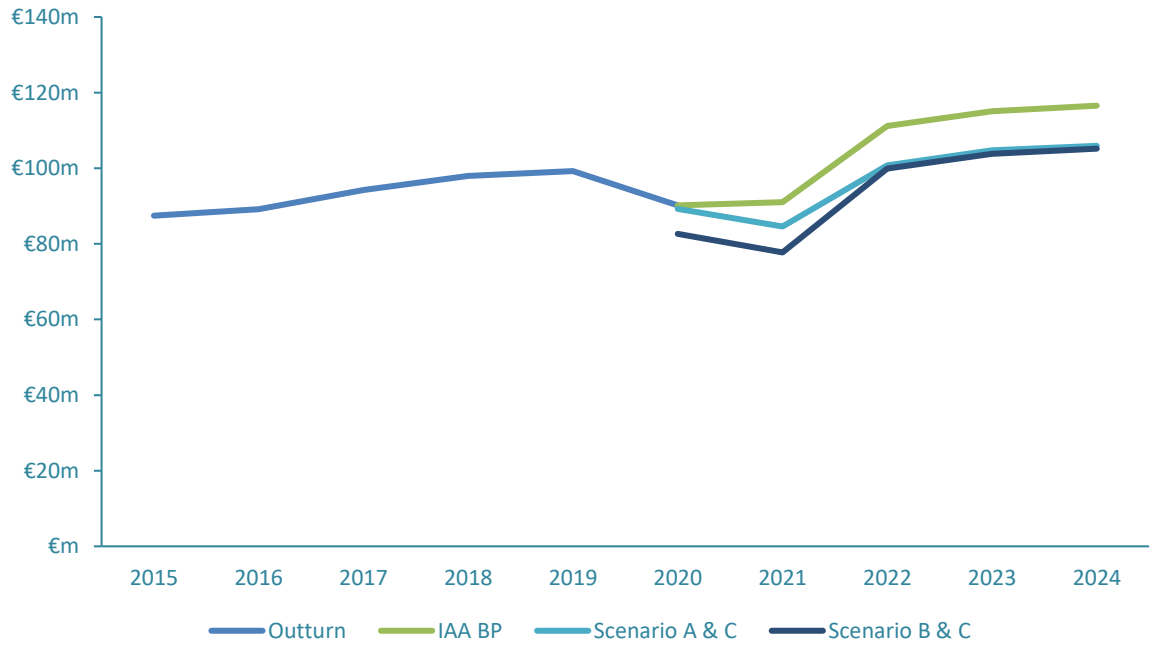
- Overall operating costs decrease in 2020 and 2021 in comparison to 2019, due to the cost containment measures implemented in response to the impact of COVID-19. In 2022, we expect that operating costs will rebound to above 2019 levels in real terms and increase further thereafter, as traffic recovers towards 2019 levels.
- Staff costs are forecast to decrease overall from 2019 to 2021, and then increase from 2022 in line with forecast traffic growth and increased headcount requirements in certain business units, primarily associated with the delivery of

capital projects and safety related requirements imposed by EU Regulation 2017/373. There is also expected to be an increased ATCO requirement in 2023 and 2024 with the commencement of dual parallel runway operations at Dublin Airport in late 2022. The reduced staff costs in 2020 and 2021 are the result of reduced headcount, a voluntary severance scheme, reduced working hours, reduced overtime, and the Government's employee wage subsidy scheme. There is a variety of cost containment measures assumed to have been implemented to achieve reductions from 2019 in non-staff operating costs for 2020 and 2021.

- Given the further evidence provided by the IAA ANSP, Steer has increased the granularity of its analysis of the Non-Staff cost lines, though in doing so it has also further considered the potential for efficiencies, particularly those associated with the allowed capital investment programme. Non-Staff costs are now expected to increase, in real terms, from €31.7m to €33.7m in 2022, increasing further to €35m in 2023 before reducing to €34m in 2024.

4.5 Steer developed two scenarios for the 2020/2021 'base year', against which to compare the savings made by the IAA ANSP. Scenario A is based on the level of savings achieved by ANSPs, while scenario B is influenced by the level of savings achieved by companies facing more substantial volume risk, in particular airports and airlines, while taking into account factors that make the same level of savings more challenging for ANSPs. Scenario C is then a single forecast for each year 2022-2024. We are proposing to implement scenario A and C, which can be seen in Figure 4.1. The reasoning for this decision is outlined below.

Figure 4.1: Operating Cost Outturns and Forecasts, IAA ANSP Business Plan and Steer Scenarios



Source: Steer, IAA ANSP

4.6 The allocation of operating costs between En Route and Terminal cost bases is derived from the Steer analysis. Many of the allocations are aligned with the IAA ANSP business plan, except for ATCO numbers which are driven by Steer's bottom-up modelling, with some variances therefore observed. The commencement of dual runway operations

at Dublin Airport is expected to lead to an increase in the proportion of ATCO costs allocated to Terminal, particularly from 2023. Table 4.2 shows determined Opex per forecast Service Unit for the En Route and Terminal charging zones.

Table 4.2: En Route and Terminal Opex per Service Unit, ANSP and Steer Scenarios A & C

Charging Zone	Source	2020	2021	2022	2023	2024
En Route	IAA ANSP	€38	€37	€29	€24	€21
	Steer	€38	€35	€27	€22	€19
Terminal	IAA ANSP	€197	€185	€132	€117	€103
	Steer	€196	€168	€113	€101	€90

Source: IAA ANSP Business Plan, Steer Report, CAR calculations, 2017 Prices.

Allowances for the 2020 and 2021 Base 'Year'

4.7 Ahead of the consultation, Steer developed cost saving benchmark scenarios against which the cost containment measures put in place by the IAA ANSP over 2020 and 2021 could be compared. These scenarios are described below, before we consider and address the submissions we received in response.

4.8 Steer assessed the savings made and planned by other ANSPs, based on the submissions of December 2020 made in line with Regulation EU 2020/1627. Scenario A was developed on that basis. For this scenario, Steer have assessed that a greater reduction in staff costs would have been achievable. Steer implemented adjustments to non-staff costs that would place the IAA ANSP just within in the top 25% of ANSPs in terms of savings, i.e. at the bottom of the upper quartile.

4.9 The implementation of this scenario would result in a decrease in operating costs of 10% in 2020 and 13.7% in 2021, compared to 2019. This compares to the IAA ANSP actual savings for 2020 of 9% and planned savings for 2021 of 8%.[6]

4.10 Steer then examined cost reductions achieved by other companies in Ireland in response to COVID-19, including Dublin Airport, Ryanair, Aer Lingus, Irish Continental and Bank of Ireland. These companies were chosen from industries that also experienced significant reductions in their revenues due to Covid-19. The purpose of this scenario was to consider whether these companies, with greater exposure to volume risk compared to ANSPs, responded to the crisis with more substantial cost savings.

4.11 Based on this analysis, Steer developed Scenario B, influenced by the level of savings achieved by airlines and airports and other companies. While these reductions are more substantial than the ANSP-driven scenario A, they remain below the savings achieved by most of the organisations listed in paragraph 4.10, in recognition of the more limited ability of ANSPs to scale their costs, particularly in the short term. Scenario B would result in reductions in operating costs of 17% in 2020 and 22.0% in 2021, compared to 2019 actual costs. This again compares to the IAA ANSP actual savings for 2020 of 9% and planned savings for 2021 of 8%.

[6] Updated for pensions costs.

Submissions Received in relation to 2020/2021

4.12 Aer Lingus raises concerns regarding the choice to benchmark the IAA ANSP against what it describes as other inefficient operators, arguing that the ANSP should be benchmarked against other parts of the industry such as airlines and airports. IATA similarly suggests that the NSA should consider implementing Steer Scenario B rather than A for 2020 and 2021.

4.13 British Airways similarly states that Scenario A is fundamentally flawed due to the comparisons to inefficient operators. It agrees with the NSA that greater cost reductions could have been achieved in 2020 and 2021, and states that there is no reason why costs should have increased in any areas during this time. It considers that significant restructuring should have been implemented during this time, as was the case at many airlines. It states that the NSA should reconsider the choice of Scenario A and implement Scenario B which would still result in a limited reduction in costs compared to other operators in the industry and when considering the fall in revenue in this period.

4.14 The Staff Panel states that the IAA ANSP has already outperformed the savings required for 2020/2021, and thus the decision to reduce costs further has no regulatory basis. It also states that there is no regulatory basis for comparing the ANSP to unrelated industries such as shipping and banking, and as such Scenario B should be discarded as an option.

4.15 The IAA ANSP states that there has been no explanation as to why the methodology in the business plan has been dismissed, and believes that the NSA's methodology does not provide a detailed assessment of step changes in costs, which is unacceptable. The ANSP disagrees with the proposal to disallow costs from 2020 and 2021 which it states have already been incurred, as they were necessary to maintain the required level of service in these years. Furthermore, the IAA ANSP claims that there was a lack of regulatory guidance on cost efficiency from the NSA in relation to cost containment measures for 2020 and 2021.

4.16 The IAA ANSP provides more up-to-date information regarding pension contribution rates from 2021, which it states should now be used in the Performance Plan

Decision on 2020/2021 Allowances

4.17 Comments relating to the Steer analysis have been addressed by Steer in the consultation response report. Steer has not changed its approach to the 2020/2021 baseline, with the exception of adopting the revised pension contribution assumption from 2021.

4.18 As we outlined in the consultation, there are three feasible options we could implement for the 'base year' of 2020/2021:

- Costs as proposed by the IAA ANSP
- Scenario A
- Scenario B

4.19 Our proposal at consultation was to adopt scenario A. The airlines generally support Scenario B, while the IAA ANSP and the Staff Panel support the IAA ANSP proposal. We have considered both perspectives but have not been persuaded that we should change our proposed decision, for the reasons we set out in the consultation.

4.20 Given the exceptional measures implemented for 2020 and 2021, the implication of our decision on this point flows through to the level of revenues to be recovered over the 5 to 7-year period from 2023. It does not impact the unit rates charged for last year or this year, but rather will impact the size of the gap between the Determined Costs and the regulated revenues actually earned in 2020 and 2021 – the gap which will be recovered from airspace users from 2023. We note that the IAA ANSP has been able to fund this revenue gap in 2020/2021 through retained earnings accrued in past years.

4.21 We agree with the airlines that, had the IAA ANSP (like other ANSPs) been exposed to volume risk, more significant cost savings would likely have been observed. However, we still consider that it would not be appropriate to overlook this volume risk allocation methodology provided for under the regulation, which has benefitted airspace users in RP2. This is particularly true where most of the relevant costs which would be additionally disallowed under Scenario B have already been incurred or are committed. We consider that Scenario A is achievable for the IAA ANSP, but Scenario B would amount to a material reassignment of traffic risk.

4.22 The Staff Panel is correct that, even under the IAA ANSP proposal for 2020/2021, the Union-wide DUC target would be outperformed for that period. However, as set out in Section 11, our approach has not been to target a specific level of DUC for any of the years in RP3, but rather, consistent with our building blocks approach to economic regulation, to consider what level of cost is likely to be required to deliver the required level of service. The level of outperformance in 2020/2021 balances underperformance in 2022 and 2023, when we assess that the higher DUC is actually likely to be required, such that the Performance Plan still aligns with the overall Union-Wide weighted average DUC target across RP3.

4.23 We do not agree with the Staff Panel that there is no regulatory basis for the comparison underpinning Scenario B. The performance and charging regulations place certain restrictions and obligations on NSAs, but also provide for flexibility in how the Determined Costs are set and what analysis is considered as part of that process. The purpose of Scenario B was to compare with industries that also experienced significant reductions in their revenues due to Covid-19. Scenario B therefore benchmarks the responses of companies which are comparable on the basis of this key metric. While we have not adopted Scenario B for the reasons set out above, we consider the comparison to be instructive.

4.24 We did not dismiss the cost forecasting methodology in the IAA ANSP Business Plan, but were not able to fully assess it as the full underlying calculations from the management spreadsheets were not provided. The provision of this material would have enabled a full assessment, in the way we enabled a full assessment by the IAA ANSP of our cost proposals by providing it with our models, and would also have reduced the level of complexity required in our modelling.

4.25 We disagree with the statement from the IAA ANSP that no regulatory guidance was

provided. In April 2020, in response to a request from the IAA ANSP, we advised that if we are required to assess whether cost containment measures taken were sufficient, the question will be, did the IAA ANSP assess all costs, and take practical, achievable steps to control those where appropriate. In the context of the regulatory model in effect, uncertainty over the recovery trajectory, and the responses of other ANSPs to similar circumstances, benchmarking the response of the IAA ANSP against the response of other ANSPs as opposed to volume-exposed companies is, in our view the best way to give effect to this commitment.

4.26 The effect of adopting Scenario A is that Determined Costs associated with 2020 are assessed at approximately €1m lower than actual costs. Then, for 2021, the Determined Cost level is c.€6m lower than the ANSP proposal. However, the characterisation by the ANSP of its 2020/2021 proposal as actual incurred costs is not accurate. We expect that the IAA ANSP can meet the target for 2021, which is supported by actual cost performance relative to budget over the first half of 2021. We thus consider that meeting the overall target for the combined period 2020/2021 remains achievable. If it does not meet the 2020/2021 Determined Cost level, the variance will be marginal and thus will have a marginal impact on the level of additional revenues the IAA ANSP will earn from 2023.

Forecasts for 2022-2024

4.27 Ahead of the consultation, Steer developed a bottom-up forecasting model for 2022 to 2024 and developed forecasting assumptions regarding efficient headcount within the various business units, consequent staff costs, and non-staff costs. This report was published alongside the consultation document and formed part of the consultation, with stakeholders invite to provide comments or submissions in relation to the specific forecasting assumptions or methodology.

4.28 Steer accepted that there was a requirement for Opex to increase in real terms relative to 2019 levels, by 2024. This was predominantly due to local factors, such as the step change in the scope of services being provided by the IAA ANSP with dual runway operations at Dublin Airport, as well an increased infrastructural footprint due to the delivery of other capital projects such as CEROC. Following analysis at an individual staff level, Steer also accepted that there were incremental cost requirements specific to the IAA ANSP in relation to achieving compliance with the safety related requirements of Regulation 373/2017. For these reasons, meeting the capacity target in 2024 would require more ATCOs than were in place in 2019, despite a similar level of forecast traffic, as well as increased headcount in other business units.

4.29 At consultation, Steer forecast Staff Costs which were similar to the IAA ANSP Business Plan, the total variance being 4%. The variance was driven by minor differences on headcount, in particular the level of ATCO staffing required for 2022 and 2023, as well as the forecasts for salary progression and increases leading to a lower level of unit cost than the IAA ANSP Business Plan forecast.

4.30 On Non-Staff costs, Steer considered that in most cases, these should return to 2019 levels by 2022 and then stay broadly flat in real terms, though with some exceptions. This was a significant point of variance with the IAA ANSP Business Plan, which proposed much more substantial real cost increases from 2022.

Submissions on the 2022-2024 forecasts

4.31 British Airways points out that Irish airspace is relatively less complex than others, and as such it expects that this should be reflected in the level of allowed operating expenses. It further states that it is disappointed to see operating costs that exceed 2019 costs in real terms by 2022, and that it would expect that the operating costs should rather be falling in real terms over time, as efficiency gains are achieved.

4.32 IATA supports the reduction in costs laid out by the NSA, though it believes further savings could be generated by a further review of all sub items included. IATA states that by 2024, Staff costs and overall Opex increase by some 12% and 24% respectively, and that in RP2 the ANSP spent below the allowed level of determined costs despite dealing with higher traffic levels without any service disruptions.

4.33 The Staff Panel and the IAA ANSP, in particular, provide specific comments on various individual cost lines as forecast by Steer.

4.34 The IAA ANSP states that the underestimation of required operating costs has much more serious consequences than an overestimation, and that there are areas that will suffer if the plan is implemented unchanged from the consultation. It states that Steer did not consider the required costs on a line by line basis from the perspective of local circumstances, eligibility, justification or interdependencies with other KPAs.

4.35 Both the Staff Panel and the IAA ANSP address the question of interdependencies in some detail, stating that should the proposed cost allowances be implemented, this will result in degradation of capacity. The IAA ANSP references a study it commissioned by the Network Manager (NM) showing that limiting capacity to seven En Route sectors resulted in Network area delays of 70,000 to 100,000 minutes. It considers that the variance in assumed ATCO staffing levels in 2023 (16) would restrict the ability to staff the eighth High Level sector, resulting in the regular imposition of ATFM delays during peak hours and a failure to meet the capacity target.

4.36 IATA and several other airlines are not convinced by the IAA ANSP claims regarding the likelihood of delays materialising.

4.37 The Staff Panel states that the Steer report '*completely ignores'* the interdependencies between safety, capacity and cost.

4.38 The IAA ANSP states that there is a growing trend to move away from buying systems using capital expenditure as more and more companies are selling Software as a Service (SaaS), leading to increases in Opex and decreases in Capex. On this basis, it requests a facility to convert Capex allocations to Opex allocations where necessary.

Decision on the 2022 to 2024 forecasts

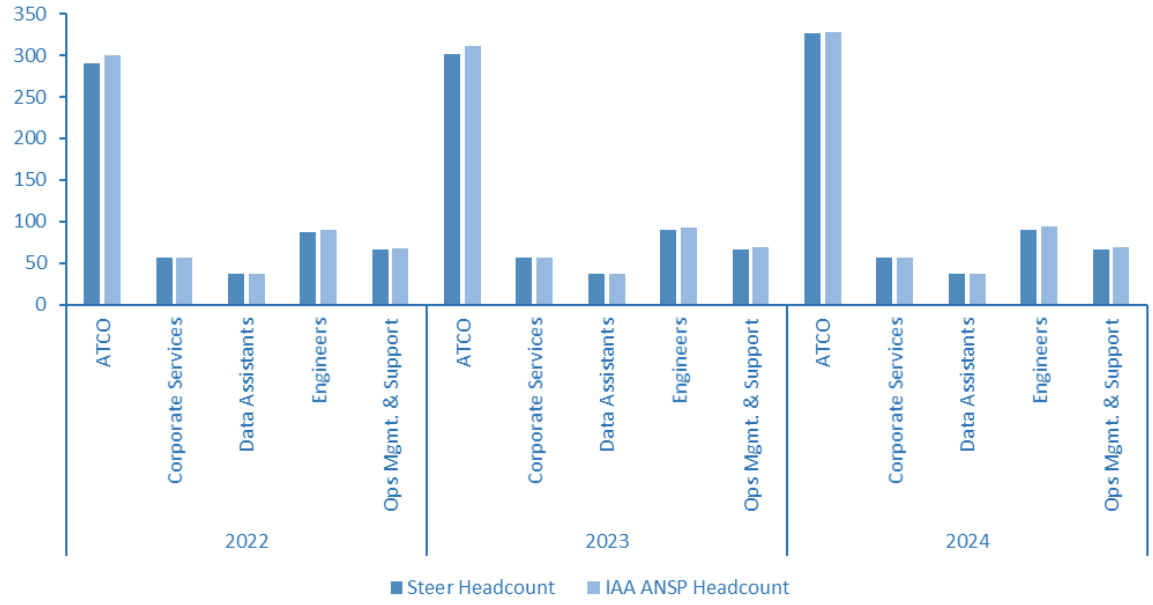
4.39 Steer has considered and addressed the submissions made on its forecasts, with detail set out in the published consultation response report. We continue to base our forecasts on their advice.

4.40 Staff costs are now €1.7m higher over 2022-204, or €5m higher if the counterbalancing effect of the revised pension contributions is excluded. The increase is predominantly

due to adjustments to the modelling, having regard to the submissions from the IAA ANSP. The Collective Labour Agreement (CLA) has now been added explicitly.

4.41 In response to the Staff Panel and IAA ANSP submissions on training capacity constraints, Steer has limited the level of ATCOs which can be assumed to graduate per training class, meaning that more ATCOs are brought forward into 2023 to meet the required 2024 headcount. The forecast pension contribution rates have been adjusted based on more up-to-date information regarding the expected obligations of the IAA ANSP.

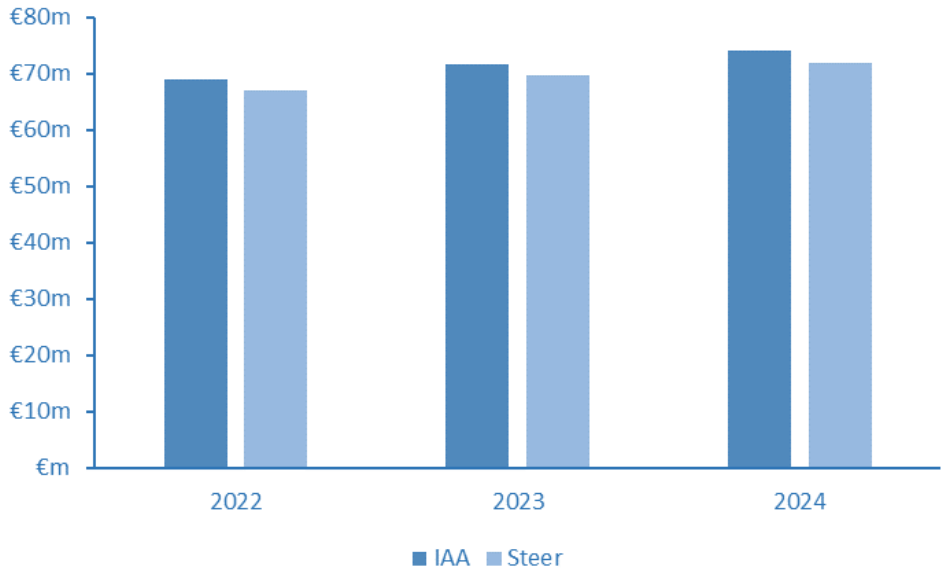
Figure 4.2: IAA and Steer Headcount Forecast for 2022-2024



Source: Steer, IAA ANSP

4.42 Figure 4.3 compares our final Staff Cost forecasts with those of the IAA ANSP (with the latter updated to also take account of the revised pension contribution rates).

Figure 4.3: IAA ANSP and Steer Staff Costs Comparison, 2022-2024



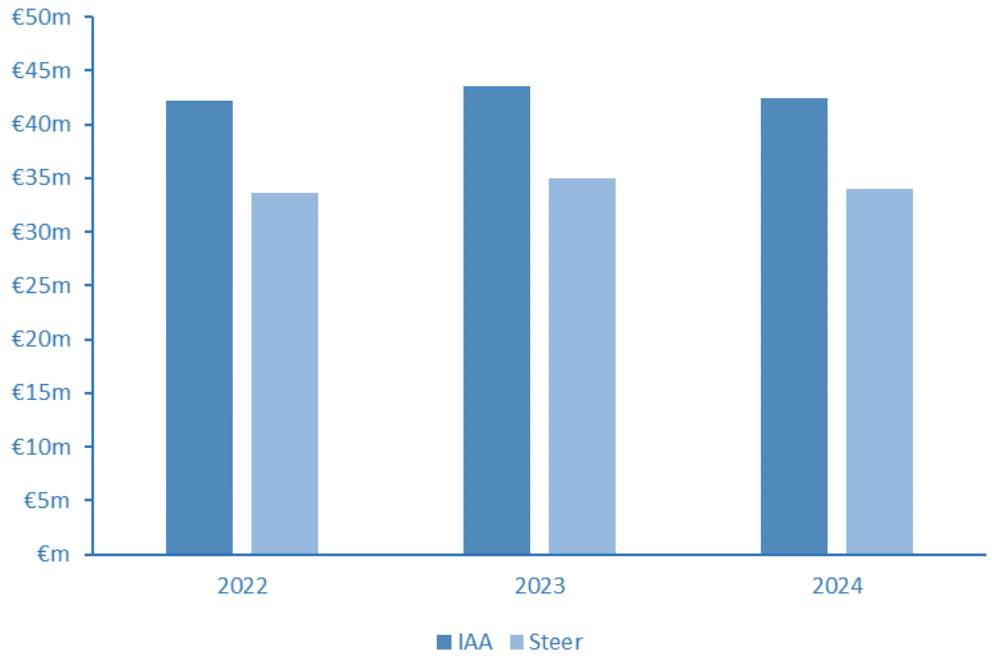
Source: IAA ANSP Business Plan, Steer Model, 2017 prices

4.43 In response to submissions received, Steer has increased the granularity of its analysis of the Non-Staff costs, taking account of both the specific points raised by the IAA ANSP and the Staff Panel, as well as the requests for a further review of the line items to identify any potential efficiencies. On the latter point, Steer considers that some of the allowed capital projects, details in relation to which were not provided in time to be taken into account for the consultation, can be expected to deliver cost efficiencies. For example, the Energy Management Upgrade project is expected to have a material effect in reducing power consumption.

4.44 Thus, Steer has moved away from the approach of reverting to 2019 levels in real terms. Full details are set out in the Steer report. The most significant overall changes to the forecasts, over 2022-2024 are as follows:

- Training costs have increased by €1.8m, with higher allowances for ATCO training in 2022 and 2023.
- Telecoms has increased by €1.3m.
- Rent and rates has increased by €0.7m.
- Insurance has increased by €0.6m.
- Security has increased by €2.2m.
- 'Other' costs have reduced by €4.4m, bringing them into line with the IAA ANSP's Business Plan proposal rather than maintaining the 2019 level.
- There are a number of other changes with a value of less than €0.5m.

Figure 4.4: Non-Staff Operating Costs, 2022-2024, Steer and IAA ANSP



Source: Steer, IAA ANSP Business Plan, 2017 prices

4.45 In response to the airlines, for the reasons summarised above and set out in detail in the Steer report, we consider that a real increase in the level of operating expenditure incurred is necessary to deliver the required services, and that such costs are therefore justified and eligible and should be included in the Determined Cost base.

4.46 We disagree with the suggestions that we or Steer have ignored interdependencies or local factors. These are the key factors which have driven the forecasts. The forecast ATCO requirements were modelled based on traffic levels, the level of staff required to ensure a safe service, and the number of staff required to deliver capital projects and to enable regulatory compliance. In its forecasting, Steer has not built in any degradation of capacity performance. Local circumstances such as the commencement of dual operations at Dublin Airport, and the consequent requirement for more engineers and Non-Staff costs such as Power and Maintenance, have been explicitly accounted for. Increases in staffing levels associated with EU Regulation 373/2017 have also been explicitly accounted for. This detail was provided to stakeholders ahead of the consultation.

4.47 Furthermore, as well as using the required level of safety and capacity performance as inputs to the cost forecasts, NSA has undertaken a financial viability and stress test assessment of the IAA ANSP, as set out in Section 11. Based on financial projections, the IAA's coverage ratios are well within a sustainable range and, under a scenario of an unplanned +10% increase in operating costs, the ratios remain within a sustainable range.[7] A very significant factor in the strength of the IAA ANSP's financial position is the recovery of 2020/2021 costs, which have been paid through the retained earnings of the pre-merger entity, by the newly incorporated ANSP from 2023. We estimate this

[7] Noting that a variance of this scale may be related to a significant change in circumstances warranting a re-opening of the Performance Plan.

at approximately €12m per year. This provides a large buffer of additional revenue on top of the Determined Costs which will be available to the IAA ANSP in RP3 and RP4.

4.48 It is therefore the NSA's view that, in the event that the IAA ANSP is unable to meet all KPA targets simultaneously, it is the actual cost efficiency performance against the DUC which should be degraded in the first instance, rather than capacity or environment performance. In all circumstances, the required level of safety performance should be delivered by the IAA ANSP.

4.49 In relation to the NM report, we understand that this simulation is based on 2024 traffic. The variance in ATCO forecasts between the NSA and IAA ANSP was just 3 (now reduced to 2) for 2024. Consequently, notwithstanding that our ATCO forecasts are based on maintaining historic capacity performance, the IAA ANSP is linking ATCO variance between our forecasts and theirs in one year, with simulated delay in another.

4.50 It is important to note that we use the above forecasts to set an overall level of Determined costs only; we do not prescribe exactly how the IAA ANSP should incur expenditure or structure its business. The IAA ANSP is not required to align with the individual elements of our forecasts, such as in relation to assumed headcount or payroll costs, precisely as we set out, or in fact to achieve the Opex target at all. For example, in its response to the consultation, the Staff Panel said that the forecast headcounts are too low, as there is demand among staff for career breaks/job-shares, and these measures would ensure that there is no over-staffing leading to overpayment by airspace users, notwithstanding a higher level of recruitment. However, our forecast headcounts do not need to change in order for this to occur. The IAA ANSP has full flexibility to, for example, hire more staff and off-set the cost of this through career breaks/job-shares.

4.51 The comments in relation to Software as a Service are noted. This is a trend we are aware of and we have addressed the same issue in the context of airport charges regulation. The performance and charging regulation places certain further strictures on how we regulate compared to airport charges, however we do not see any issue with taking the approach suggested by the IAA ANSP, if necessary. Should there be an overspend on IT related Opex and a corresponding underspend on IT Capex, and the IAA ANSP provides us with evidence and a reconciliation demonstrating this, we will capitalise this spend from RP4 and/or not claw back the corresponding capital allowances earned during RP3, as appropriate.

Cost Allocation between En Route and Terminal Charging Zones

4.52 In the consultation document, we noted that costs have been allocated to En Route or Terminal charging zones as advised by Steer. For ATCO staff costs, forecast Terminal and En Route ATCO requirements are modelled separately by Steer and as such, there is no cross subsidisation. Dual runway operations at Dublin Airport will see a greater proportion of the costs associated with ATCOs shift to the terminal cost base from 2023, which can be seen in the allocations in Table 4.3.

4.53 Other staff costs were allocated broadly in line with the IAA ANSP's allocation keys, which ultimately leads to a similar allocation as is applied to ATCOs. The IAA ANSP cost allocation methodology first separates costs into cost centres, based on the

geographical location which the cost relates to. Following this, the costs are split into activities which may then be further divided into sub sections. Each of the activities and sub sections are assigned cost allocation keys based on the extent to which the activity is related to En Route or Terminal services.

4.54 The cost allocation keys for an activity are based on a number of factors, including traffic, the number of staff working and in which role, the use of assets, and the '20km rule'. The 20km rule is a practice that allocates all costs related to the first 20km from the airport to terminal cost base, with charges to En Route beginning from the 20km point. For some direct operating costs, such as rent, the costs are first divided into particular activities using a key before being assigned to a location and then allocated based on this.

4.55 We noted that we did not see any evidence that this allocation methodology involves material cross-subsidisation in operating costs, either between the Terminal and En Route cost bases or with unregulated activities such as services provided in Shanwick oceanic airspace

Decision on Cost Allocation

4.56 We did not receive any submissions or objections in relation to the proposed allocation of Opex. The allocation methodology remains unchanged from the consultation, as summarised in Table 4.3.

Table 4.3: En Route Allocation of Staff and Other Operating Costs

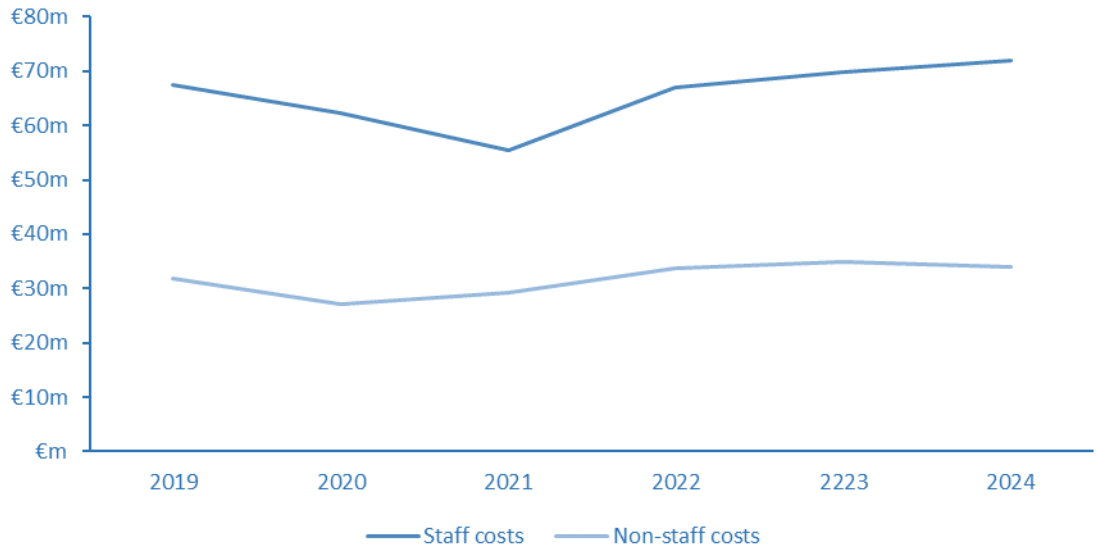
	Category	2021	2022	2023	2024
Staff Costs	ATCO	87%	87%	86%	85%
	Corporate Services	83%	83%	83%	83%
	Data Analyst	88%	88%	88%	88%
	Operational Management Support	85%	85%	85%	85%
	Engineering	86%	86%	86%	86%
Non-Staff Costs		82%	82%	81%	81%

Source: Steer Report, IAA ANSP Business Plan. Percentages are of total in-scope costs, i.e. they exclude unregulated costs.

Decision Summary

4.57 Based on the decisions at outlined above, our final forecasts for the IAA ANSP Opex for RP3 are set out in Figure 4.5.

Figure 4.5: Staff and Non-Staff Costs, 2019-2024



Source: CAR, Steer, 2017 Prices

4.58 We have included Voluntary Severance Scheme (VSS) and Voluntary Early Retirement (VER) costs associated with these schemes as exceptional items for 2021. We have reported these as restructuring costs as provided for under Article 2(18) of Regulation 317/2019.

5. Cost of Capital

5.1 This section sets out the NSA's decision on the weighted average cost of capital (WACC) for the IAA ANSP for RP3. Relative to our consultation proposal of 4.0% for 2022-2024, we have reduced the real WACC to 3.5% by removing the 0.5% aiming up allowance. All other WACC parameters have remained unchanged. The WACC for 2020 and 2021 therefore remains unchanged at 3.5%.

5.2 The decision on the cost of capital set out in this document considers both the Performance Review Body (PRB) guidance[8] (which we understand to be consistent with the Regulation EU 2019/317) and relevant regulatory precedent from CAR and other regulators.

5.3 The pre-tax WACC is given by the following formula:

WACC (pre-tax) = g × Rd + 1/(1 – t) × Re × (1 – g);

where:

g = total debt/(total debt + total equity) or 'gearing';

Rd = pre-tax cost of debt;

Re = post-tax cost of equity;

t = corporate tax rate;

5.4 The estimation of each of these WACC parameters is set out in the remainder of this section. The decision on each parameter includes our original consultation proposal, submissions received from stakeholders and our decision.

Submissions Received on the Overall WACC

5.5 Not all stakeholders provided comments on the cost of capital, with the most significant contributions coming from the IAA ANSP and British Airways (BA). IATA and Ryanair also provided comments on some parameters.

5.6 In terms of general comments, BA states that it was pleased to see that CAR has performed substantial analysis to inform on the WACC determination, ensuring the ANSP is compensated appropriately for new and existing investments. BA also notes that, in general (as well as within a number of recent UK regulatory determinations), WACCs have been decreasing in recent years, particularly as the cost of debt and associated risk environment in global capital markets have been declining.

Gearing

5.7 The gearing used within the WACC represents the proportion of an entity's operations financed by debt (as opposed to equity) and can be set using its actual, or a notional, capital structure. The actual capital structure reflects the actual proportion of debt and equity used to finance operations, whereas the notional capital structure uses an 'optimal' gearing, which is intended to reflect an efficient proportion of debt and

[8] Study on Cost of Capital Methodology review (August 2021) and Study on Cost of Capital Methodology review and update (September 2021)

equity that could be deployed.

5.8 While the IAA ANSP currently has no debt, and its current gearing is therefore zero, it has put in place borrowing facilities. However, uncertainty on the timing and extent to which these facilities will be used means the IAA ANSP's level of gearing throughout RP3 is uncertain. Notwithstanding the lack of clarity around the actual level of gearing in RP3, the preference within recent Irish regulatory decisions has been to use a notional gearing which represents an 'efficient' or 'optimal' level of gearing that minimises the cost of capital. We therefore intend to use a notional gearing for the IAA ANSP.

5.9 There is no universally accepted precise level of gearing that is considered to be efficient or optimal; however, regulatory decisions within the Irish and European aviation sector in recent years have used values between 50% and 60% (based on ranges around these values), and the PRB has also stated that the gearing associated with an efficient WACC should be around 60%. In its 2020 decision[9] on NATS En Route plc's (NERL) WACC, the UK Competition and Markets Authority (CMA) used a lower notional gearing of 30% as this was more in line with comparator airports and air navigation service providers (ANSPs) and would lead to a more efficient WACC for NERL.

5.10 Within the consultation proposal, we considered a gearing point estimate of 50% appropriate, which was line with the IAA ANSP's gearing assumption of 50%.

Submissions Received on Gearing

5.11 BA agrees that a notional gearing should be used to determine the WACC, though notes that it is important to consider the impact of the gearing ratio on the asset beta and re-levering, due to the significant difference between the actual implied notional capital structure of the IAA. In addition, this is especially the case if the WACC increases with the gearing ratio, which would result in a higher WACC at a higher gearing

5.12 IATA states it considers the gearing to be within the typical range of regulatory precedents and that the notional gearing should remain unchanged throughout RP3, due to the low level of risk faced by the ANSP.

Decision on Gearing

5.13 The notional gearing ratio within the consultation proposal was intended to represent an optimal balanced capital structure that balances the trade-off between a gearing which is too low, which means customers do not benefit from the ability to issue debt (which is cheaper than equity), and, gearing which is too high which implies excessive levels of debt and, therefore, risk. The gearing range is also in line with recent CAR regulatory determinations, which we do not see sufficient justification to deviate from.

5.14 With respect to the relationship with the gearing and betas, a mid-point gearing estimate of 50%, combined with a re-levered asset beta of 0.5, implies an equity beta of 0.93 (based on the equation set out in paragraph 5.35). We consider this value of

[9] NATS (En Route) Plc/CAA Regulatory Appeal (August, 2020)

less than 1 reasonable given it implies that the ANSP is slightly less sensitive to systemic risk than the market benchmark, after taking account of the notional capital structure.

5.15 We have therefore not altered our draft proposal.

Cost of Equity

5.16 The cost of equity is estimated using the Capital Asset Pricing Model (CAPM), which is given by the following formula:

$Re = Rf + \beta_e \times (Rm - Rf)$:

where:

Re = Post-tax cost of equity;

Rf = Risk-free rate;

β_e *= Equity Beta; and*

Rm = Total market return (TMR).

Rm – Rf = Equity risk premium

5.17 The CAPM describes the expected return for assets and equities, and in cases where equities are traded in markets, some of the parameters are observable based on market data. However, in cases such as the IAA ANSP where equities are not traded, the parameters are estimated, as set out below.

5.18 The PRB has proposed that, due to the impact of COVID-19 on the aviation sector, the cost of equity for RP3 could be set to zero. However, we did not consider 0% to be appropriate as, firstly, the market conditions of 2020 and 2021 are projected to improve significantly in the remaining years of RP3 and, secondly, the cost of equity represents the level of return required by investors, which, based on the parameters of the CAPM set out below, is not 0% in the current environment.

5.19 Thus, within the consultation proposal, we considered that while the IAA ANSP is free to waive its return on equity if it were to choose to do so, we did not believe that there was a strong basis for us to impose this as a regulatory remedy.

Submissions Received on Cost of Equity

5.20 IATA and BA state the cost of equity should be set to zero for some of all or RP3, in line with the proposals of the PRB. BA also suggests that CAR refer to the 2018 determination[10] by the UK Office for Rail and Road (ORR) on Network Rail in this context.

5.21 IAA ANSP agrees with CAR's proposed decision not to waive the cost equity in RP3, noting that it has already voluntarily deferred charges in 2020 and under recoveries in 2020 and 2021 may not be fully recouped until RP4.

Decision on Cost of Equity

5.22 For the reasons given in our consultation proposal, we do not consider waiving the IAA

[10] ORR 2018 periodic review draft determination

ANSP's cost of equity to be appropriate – the ORR determination referred to by BA also does not propose waiving the cost of equity. While the IAA ANSP is free to waive its return on equity if it were to choose to do so, we do not believe that there is a strong theoretical or legal basis for us to impose this as a regulatory remedy.

5.23 As the cost of equity is dependent upon the values of its constituent parameters, decisions on which are provided in turn in the sections below, a final value for cost of equity is presented at the end of this chapter.

Risk-free Rate

5.24 Within our consultation proposal, an appropriate range for the risk-free rate (which is the theoretical rate of return of an investment with zero risk) was derived based on yields on 10-year Irish and German government bonds, and considering market expectations on future government bond yields. This methodology is in line with PRB recommendations and Irish regulatory precedent.

5.25 Irish and German 10-year bonds were selected, respectively, as the state in which the IAA ANSP operates and the lowest risk bonds within the Euro area. To reflect a mix of current market conditions and longer-term trends, 1-year, 2-year and 5-year average yields were used. Bond yields are currently at historically low levels and yields on both Irish and German 10-year bonds have decreased to below zero, in nominal terms, in recent years.

Table 5.1: Nominal 10-Year Bond Yields[11]

Country	5-Year Average	2-Year Average	1-Year Average
Ireland	0.5%	0.1%	(0.1%)
Germany	0.03%	(0.4%)	(0.5%)

Source: Investing.com

5.26 In order to generate real yields required for the WACC, nominal yields were converted using the Fisher equation[12] and the European Central Bank's (ECB) survey[13] on the expected long-term inflation rate for the relevant time periods. The long-term expected inflation rate has remained between 1.7% and 1.9% over the last five years, which implies real yields have been well below -1% across Irish and German bonds.

Table 5.2: Real 10-Year Bond Yields

Country	5-Year Average	2-Year Average	1-Year Average	Mid-point
Ireland	(1.2%)	(1.6%)	(1.7%)	(1.5%)
Germany	(1.7%)	(2.1%)	(2.2%)	(1.9%)

Source: Investing.com & ECB

5.27 While the above rates reflect the current risk-free rate, they do not take account of yields or rates in future years or throughout the remainder of RP3. Forward rates, which reflect market expectations on future yields, are not directly observable though

[11] Average of monthly rates where, 5-year average is 2016-2020, 2-year average is 2019-2020 and 1-year average is 2020.
[12] 1+ real yield at time t = (1+nominal yield at time t)/(1+long-term expected inflation rate at time t)
[13] ECB HCIP inflation forecast survey

can be estimated using spot rates on bonds with shorter maturities.[14]

5.28 Forward rates were estimated using the ECB's Euro area yield curve[15] for each remaining year in RP3 relative to December 2020 using both all Euro area government bonds and AAA-rated government bonds. The spread versus spot yields on AAA-rated Euro area[16] bonds is minimal, though the spread versus all Euro area[17] implies market expectations of increased yields in the next few years.

Table 5.3: Euro Area Bond Spreads versus December 2020

Year	Spread versus December 2020		
	All Euro area bonds	AAA-rated Euro area bonds	Average
2021	0.74%	0.10%	
2022	0.85%	0.08%	
2023	0.96%	0.06%	
2024	1.09%	0.02%	
2021-2024 average	**0.91%**	**0.06%**	**0.49%**

Source: ECB

5.29 Based on the mid-point of historic real yields and average forward rates for RP3, our proposal for an appropriate range for the risk-free rate was -1.5% to -1.0%. The upper bound of this range is in line with the -1.0% risk-free rate used by the IAA ANSP.

Table 5.4: Risk-free Rate Estimate

	Data Point	Lower Bound	Upper Bound
	Current yields	(1.9%)	(1.5%)
+	Forward rates	0.5%	0.5%
=	Risk-free rate	(1.5%)	(1.0%)

Source: CAR Calculations. Differences in totals due to rounding

5.30 This range sits within estimates of the risk-free rate with recent regulatory decisions within the aviation sector, including Dublin Airport[18] (-0.6% in 2019) and NERL[19] (-1.7% in 2019 and -2.25% in 2020).

Submissions Received on Risk-Free Rate

5.31 IATA notes that the risk-free rate has continued to fall, and at times has been negative, in recent years. BA states that the risk-free rate may have been marginally overestimated due to how it has been calculated, in particular, in relation to:

- Whether CAR had considered the use of index-linked government bonds;
- Whether a cross-check was performed on yields to ensure that no distortion existed in absolute terms;
- Ensuring using nominal yields does not result in compensation for inflation risk

[14] Forward Rate = $[(1+S1)^{n1}/(1+S2)^{n2}]^{1/(n1-n2)}$-1, where S=spot rate and n=number of years.
[15] ECB Euro area yield curves
[16] Euro area 10-year Government AAA-rated bonds (December 2020 average daily rate)
[17] Euro area 10-year Government Benchmark bond yield (December 2020 rate)
[18] Maximum Level of Airport Charges at Dublin Airport 2020-2024 (October 2019)
[19] NATS (En Route) Plc/CAA Regulatory Appeal (August 2020)

where the regulatory regime already incorporates inflation protection; and

- Questioning the use of forward rates as predictors of future spot rates.

Decision on Risk-Free Rate

5.32 In response to the comments on the risk-free rate estimation methodology:

- Index-linked bonds were not used as the Irish index-linked bond market is not sufficiently mature or large.
- Yields were calculated using monthly rates across a 5-year time horizon, which should adequately mitigate against volatility in specific periods. The observed trend in bond yields is also consistent with broader market trends (including those in other recent regulatory decisions).
- The risk-free rate within the CAPM represents the rate of return on a market risk-free asset that does not compensate for any kind of risk (including inflation risk) – SES charging scheme mechanisms were therefore not considered.
- As predictor of future rates is inherently imperfect, we consider the use of forward rates (a commonly-used approach) a reasonable indicator.

5.33 We have therefore not altered our draft proposal.

Beta

5.34 Within the CAPM, the equity beta is a measure of an entity's volatility or sensitivity to systemic risk. In order to estimate the equity beta (or levered beta), the asset beta (or unlevered beta), which isolates the risk solely due to an entity's assets and removes the impact of debt, must first be estimated. The equity beta is then estimated using the asset beta by including impact of debt (by 'levering' the beta).

5.35 The equity beta is given by the following formula:

$$\beta_e = \beta_a \times [1+(1 - t) \times (D/E)]$$

where:

β_e = *equity beta;*

β_a = *asset beta;*

t = corporate tax rate;

D = share of operations financed by debt (equivalent to g in the WACC formula); and

E = share of operations financed by equity (equivalent to (1 – g) in the WACC formula).

5.36 The above equity beta formula assumes the debt beta is zero, reflecting that fact there is no market risk associated with the IAA ANSP's debt. This is the approach most often used in the estimation of the cost of equity and regulatory decisions, which we did not see a reason to deviate from within our consultation proposal.

5.37 To generate an asset beta, we drew upon recent regulatory decisions within the European aviation sector that have surveyed betas of a selection of European ANSPs and airports. In addition to the ANSPs (which are regulated under the same regime as

the IAA ANSP), the betas of the selected airports were considered to be good comparators as they incur similar levels of sector-specific demand and revenue risk to ANSPs, are mostly regulated under some form of price-cap regulation[20] and, for the market-based estimates, are of a sufficient size that equity is sufficiently liquid and therefore a more reliable benchmark for beta estimates.

5.38 We considered ANSPs and airports more appropriate comparators for the IAA ANSP than those proposed by the PRB[21], as they operate in a much more similar operating, competitive and regulatory environment. However, while there are similarities, it should be noted that there are some important differences between ANSP and airport operational and regulatory environments which affect systemic risk exposure.

Table 5.5: European Aviation Sector Asset Betas

Estimate Type	Name	Entity Type	Year(s)	Asset beta
Based on market data	ADP	Airport, France	2016-2020	0.5-0.6
	Fraport	Airport, Germany	2016-2020	0.45-0.55
	AENA	Airport(s), Spain	2018-2020	0.55-0.65
	ENAV	ANSP, Italy	2019-2020	0.45-0.55
Regulatory Decision	Heathrow	Airport, UK	2019*	0.5
	DAA	Airport, Ireland	2019	0.5
	NERL	ANSP, UK	2019	0.46
	NERL	ANSP, UK	2020	0.5-0.6

Source: UK CMA[22], CAR[23] UK CAA[24]. Note: All market-based estimates are based on data up to February 2020 within the CMA's 2020 decision on NERL.

5.39 The betas for the airports and ANSPs shown above imply a narrow range of between 0.45 and 0.65. However, it should be noted that only the 2020 NERL estimate dates from after March 2020, and thus the impact of COVID-19.

5.40 While an event such as COVID-19, which has had a disproportionate negative impact on the aviation sector relative to other industries, could reveal airports or ANSPs to be more, or less, sensitive to systemic risk than had previously been assumed, such an event will not necessarily change these entities' sensitivity to systemic risk, especially over the long term (asset betas based on market data are typically measured for a period of up to five years).

5.41 While COVID-19 is clearly a significant negative shock, which has reduced demand and revenues within the aviation sector, it is not clear that this means ANSPs are any more sensitive to systemic risk than they were prior to COVID-19. As was the case prior to COVID-19, ANSPs under the SES charging scheme are permitted to charge airspace users at a level sufficient to cover their costs, including the revenue lost in 2020 and 2021 through revised performance plans (though 4.4% of revenue is at risk under the traffic risk sharing mechanism).

[20] Except for Fraport, which calculates its WACC as part of its charges-setting process.
[21] EQTEC & Gas and Ryanair Holdings.
[22] NATS (En Route) Plc/CAA Regulatory Appeal (August, 2020)
[23] Maximum Level of Airport Charges at Dublin Airport 2020-2024 (October 2019)
[24] Q6 WACC Determination (October 2013) and Heathrow policy update and consultation (February 2019)

5.42 Therefore, we did not consider there was sufficient evidence to deviate significantly from the range of asset beta estimates from airports and ANSPs shown in the table above. It is likely that ANSPs under the SES are slightly less sensitive to systemic risk than comparable airports given the environment in which they operate; ANSPs are less exposed to revenue risk through SES regulation (particularly over the long-term), although this is somewhat offset by lower permitted operating margins (due to smaller asset bases relative to operating costs) and higher operating leverage, both of which increase sensitivity to systemic risk.

5.43 Based on its assessment of risk exposure and comparator analysis, the IAA ANSP has used an asset beta range of between 0.65 and 0.70; however, this appears high based on the evidence above (and is higher than each of the aviation sector comparators within the IAA ANSP's report). On balance, we considered 0.45 to 0.55 an appropriate range for the asset beta, which based on a gearing range of 50%, translates to an equity beta of between 0.84 and 1.03.

Submissions Received on Beta

5.44 The IAA ANSP notes that CAR's estimate of the asset beta was lower than its proposal of 0.68, based on a range of 0.65 to 0.7, and considers that should be higher than our proposal, based on a number of points:

- The IAA has a relatively small asset base, high operating costs and low operating margins, which means its profit margin is sensitive to changes in traffic and costs (and, by its calculations, the IAA's profit margin is more sensitive to traffic than daa).
- The oversight and regulation of the IAA as part of the Performance Plan process means the IAA may not be permitted to charge all of its BP determined cost proposal.
- CAR's estimation of the asset beta is too focused on the ability of the IAA to recover forgone revenue over the longer-term, as opposed to the short to medium-term.

5.45 The IAA ANSP also questions the comparators used in CAR's decision, stating that it relies too heavily on airports and does not consider ANSPs with higher asset betas, including Airservices Australia (0.55), Airways New Zealand (0.6) or previous CAR determinations on the IAA between 2002 and 2011 (0.65).

5.46 The IAA ANSP makes a number of references to the UK CMA's 2020 decision on NERL, stating that the CMA estimated NERL's beta at 0.57 and that this represents a post-COVID increase given the original CAA decision was pre-COVID. However, it should be noted that CMA did not provide a point estimate of the asset beta (instead it provided ranges of 0.5-0.6 and 0.52-0.62, excluding and including a debt beta respectively) and that the decision was in response to an appeal that did not make adjustments to take account of COVID-19.

5.47 BA states that it considers airports and ANSPs to be more appropriate comparators than those recommended by the PRB and that COVID-19 will not necessarily change these entities' sensitivity to systemic risk, especially over the long term. In addition,

that it is preferable to measure asset betas over a relatively long period of time to account for short-term volatility.

5.48 BA also states that it agrees that ANSPs under the SES are slightly less sensitive to systemic risk than comparable airports given the environment in which they operate, particularly due to the Traffic Risk Sharing mechanism, which allows IAA a level of protection compared to its comparator set. Overall, it considers that an estimate of 0.45-0.5 does not appear at odds with other regulatory settlements.

Decision on Beta

5.49 While the points made by the IAA ANSP with respect to its asset base, operating leverage and profit margin are valid with respect to sensitivity to systemic risk, these factors should not be considered in isolation when estimating its asset beta. The revenue protection within the SES charging scheme regulation means that the IAA ANSP faces significantly lower revenue risk compared to almost all other business in the aviation sector and other economic sectors.

5.50 Within its consultation response, the IAA ANSP states it would suffer a 73% reduction in profit (though still retain a positive profit) due a 10% traffic shock; however, the traffic risk sharing mechanism means revenues are partially protected for traffic reductions up to 10% and fully protected beyond 10%. While the regulatory determination may reduce the IAA's RP3 determined cost proposal by around 10% over RP3, the ability to recover almost all, and potentially all depending how the rest of 2021 unfolds, of the forgone revenue in 2020 and 2021, also significantly reduces the IAA's revenue risk compared to other businesses and regulated entities – Heathrow[25] has been permitted to recover a small proportion of revenue due to COVID-19 (the daa's post-COVID regulatory settlement is yet to be determined).

5.51 It should also be noted that the IAA ANSP's asset base, relative to the size of its revenues and operating costs, is not unusually high compared to other European ANSPs under the SES and is set to increase significantly throughout RP3 given the scale of the investment programme. The IAA also has sufficient cash reserves and no debt, which means it is relatively insulated from the effect on its liquidity arising from a negative systemic shock. The cost risk sharing mechanism within the SES charging scheme regulation also means that it is protected from unexpected cost increases in some areas.

5.52 With respect to the comparator sample used, within our consultation proposal, we used evidence from three European SES ANSP betas (albeit from two ANSPs) and a number of European airports, in an attempt to, as far as possible, use comparators operating within a similar operating environment and geography. With respect to the ANSP comparators provided by the IAA, Airservices Australia and Airways New Zealand do not operate under SES charging scheme and previous CAR determinations on the IAA related only to terminal navigation services prior to the implementation of the SES charging scheme in its current form. An asset beta estimation lower than these comparators therefore appears consistent.

[25] UK CAA update on Heathrow Airport (April 2021)

5.53 With respect to the time period used to estimate the asset beta, as noted by BA, it is more appropriate to measure asset betas over a relatively long period of time to account for short-term volatility. However, it should be noted that shorter term implications of the potential risks and regulation have still been considered. With respect to the impact of COVID-19, BA and the IAA's cost of capital report within its Business Plan are in agreement with our view; the IAA' exposure to systemic risk has not changed due to the occurrence of the COVID-19 pandemic.

5.54 We have therefore not altered our draft proposal.

Equity Risk Premium

5.55 In order to estimate the equity risk premium (which is the excess return earned by investors above the risk-free rate) within our consultation proposal, we drew upon datasets of historical market returns, in line with PRB guidance, and recent regulatory precedent. The equity risk premium can either be estimated in isolation or as part of total market returns (equivalent to the sum of the risk-free rate and the equity risk premium). Total market returns (TMR) is generally considered to be more stable over time, compared to its individual components, and therefore potentially better suited for estimating the equity risk premium (assuming the risk-free rate is known or has been estimated).

5.56 To generate an initial estimate of the equity risk premium, we used the Damodaran datasets[26], a source of financial market data recommended by the PRB. Within the Damodaran risk premium datasets, the equity risk premium for each country is calculated using two alternative approaches; by using either rating-based sovereign bond default or credit default swap spreads, relative to appropriate benchmarks, and applying these to a mature equity market premium after accounting for relative market volatility. These approaches generate a range for the current Irish equity risk premium of between 4.9% and 6.2%.

5.57 Given the range of the risk-free rate of between -1.5% and -1.0%, this equity premium range implies a TMR range of 3.4% to 5.2%. This range appeared low and somewhat below the level of the TMR used in recent Irish regulatory determinations; the TMR has been set at between 6.3% and 6.75% across a number of regulatory determinations in the aviation and utilities sectors in recent years. In addition, the 2019 Swiss Economics study[27] for the most recent Dublin Airport charges determination found that average Irish and European returns over the long-term have been between 6.1% and 6.8% (using Blume's method[28]), and that forward-looking TMRs have in recent years been between 6.1% and 6.3%.

5.58 We therefore set the equity risk premium to be consistent with the long-term TMR estimated within recent regulatory decisions, such that the TMR is between 6% and 7%. The range for the equity risk premium is therefore 7.5% to 8.0%; this is in line with the IAA ANSP estimate which gives a range for the equity risk premium of between 7.4% and 7.8%, implying a TMR of between 6.4% and 6.8%.

[26] 'Risk Premiums for Other Markets' dataset
[27] Dublin Airport Cost of Capital for 2019 Determination (September 2019)
[28] Blume's method gives a weighted estimate of the arithmetic and geometric mean returns.

5.59 Consistent with recent regulatory decisions, given the long-term stability of market returns, this range is also an appropriate estimate of the forward-looking equity risk premium, which can be used for the remainder of RP3.

Submission Received on Equity Risk Premium

5.60 BA agrees with the TMR approach to estimating the equity risk premium, though questions why the risk premium values estimated using the Damodaran method had not been given greater consideration. BA also notes that that the referenced dataset used to estimate the TMR was a few years out of date and questions the justification for using Blume's method of averaging using a ten-year holding period.

Decision on Equity Risk Premium

5.61 As the Damodaran method provides an estimate of the equity risk premium, it is unlikely to be the most appropriate method for estimating the TMR (our preferred approach) as it is based on assumptions of the equity risk premium in a mature market and does account for the relationship with the risk-free rate.

5.62 Using the most recent version of the Dimson, Marsh and Staunton ("DMS") dataset[29], we have calculated updated values for market return using Blume's method over a 10-year holding period. We consider a 10-year holding period appropriate, as the time horizon balances shorter and longer-term trends and is consistent with the bond maturities used for the risk-free rate, as well as recent CAR determinations. We consider Blume's method most appropriate as it accounts for the biases for using the arithmetic or geometric means alone.

5.63 Using Irish and European equity returns within the latest DMS dataset, Blume's method of averaging using a ten-year holding period gives a return range of between 6.0% and 6.7%, which is consistent with the 6% to 7% range for the TMR within our draft proposal.

5.64 We have therefore not altered our draft proposal.

Cost of Debt

5.65 Generally, to estimate an entity's efficient cost of debt, an estimate of embedded debt (based on current debt costs) and new debt (based on current yields on bonds from comparable entities and market conditions) are combined to generate the total cost of debt. The PRB states that corporate debt costs of comparable entities should be used to estimate the cost of debt for ANSPs.

5.66 However, the IAA ANSP currently has no embedded debt and has included the terms of the agreed borrowing facilities within its RP3 Business Plan. The IAA ANSP's cost of debt can therefore be estimated directly based on these agreed facilities.

5.67 We calculated the cost of embedded debt using the various fees and rates in the IAA ANSP's RCF arrangements. The range for the nominal cost of debt was in line with the 1.52% used by the IAA ANSP. Nominal debt costs were converted to real debt costs

[29] Global Investment Returns Yearbook 2021

using the Fisher equation[30] and an inflation rate of 1.4%, which is the RP3 average rate based on the April 2021 Eurostat figure for 2020 and the April 2021 IMF forecast for 2021 to 2024. This led to a real cost of debt of 0.12% within our consultation proposal.

Submission Received on Cost of Debt

5.68 BA notes that corporate debt costs of comparable entities had not been considered in estimation of the IAA's cost of debt, though the figure of 0.12% does not appear unreasonable in comparison to other regulated entities

Decision on Cost of Debt

5.69 Given the IAA ANSP currently has no debt and provided the terms of its agreed borrowing facilities for RP3, using comparator entities' cost of debt did not seem appropriate as they would likely have given a less accurate estimation of the IAA's debt costs.

5.70 We have therefore not altered our draft proposal.

Aiming up

5.71 Consistent with recent Irish regulatory precedent and UKRN guidance[31], we proposed to include an 'aiming up' allowance within the estimation of the WACC. This was to mitigate estimation error and the impact of the point estimate of the WACC being set too low – which can be considered to have greater adverse consequences on economic welfare than an overestimate.

5.72 Though an overestimate of the WACC will lead to somewhat higher charges for airspace users, an underestimate could disincentivise investment, which is considered to have greater detrimental welfare impacts in the long term. Based on this, and consistent with the CAR 2019 decision on Dublin Airport[32], we included an aiming up allowance of 0.5% within our consultation proposal.

5.73 However, this regulatory period is unusual in that we are already more than three quarters of the way through the 'base year', which itself comprises the first two years of a five-year period. In that context, as well as the impact of COVID-19 on the sector during 2020 and 2021 referenced by the PRB, the rationale for aiming up the WACC in these years falls away. For that reason, we did not propose to 'aim up' the WACC for 2020 and 2021.

Submissions Received on Aiming Up

5.74 BA questions the inclusion of the aiming up allowance, stating that its use in UK regulatory determinations reflects the particular circumstances, regulatory framework and investment risk profile of the UK water industry. It also notes that the UK CAA had rejected the use of an aiming up allowance for Heathrow's H7 settlement for these reasons. Ryanair also cites the UK CAA's Heathrow H7 settlement and states that it

[30] 1+ real cost of debt = (1+nominal cost of debt)/(1+ expected inflation rate)
[31] Estimating the cost of capital for implementation of price controls by UK Regulators (2018)
[32] Maximum Level of Airport Charges at Dublin Airport 2020-2024 (October 2019)

does not support the aiming up proposal as it eliminates the incentive to manage the cost of financing.

5.75 BA also notes that the IAA is protected from risk through the traffic risk sharing mechanism and that it does not require further protection on investment risks through aiming up allowance on new, and especially not existing, investments.

5.76 IATA also states that the aiming up allowance is not appropriate for the IAA ANSP given its regulatory safeguards, and that maximum risk exposure is in the region of 4.4%.

Decision on Aiming Up

5.77 Having considered the comments and evidence provided by stakeholders, we have undertaken a further review of the appropriate literature on aiming up and further considered the rationale for including it. The UK CMA[33] set out its reasons for including an aiming up allowance within a regulatory determination within the UK water sector. These included a recognition that there is uncertainty over the optimal level of capital investment, uncertainty in estimating the WACC and the need to fully compensate and retain private investors. It should be noted that the CMA did not consider it appropriate to include an aiming up allowance for NERL in its 2020 determination.[34]

5.78 A paper produced for Ofwat[35], in relation to the same price determination, noted that potential motives for including an aiming up allowance could include: the need to offset asymmetric regulatory investment risk associated when revenues associated with the investment is uncertain; and the need to promote investment where the consumer and social costs of more versus less investment are asymmetric.

5.79 With respect to the UK CMA's second point above, as noted by the UK CAA in its Heathrow H7 determination[36], uncertainty in relation to WACC parameters could warrant including an aiming up or aiming down allowance, so including neither would appear to be the most prudent option. Unlike regulated UK water companies, the IAA ANSP has no private investors, so the need to fully compensate and retain private investors is not relevant.

5.80 With respect to capital investment risks, as has been noted above, the IAA ANSP is substantially protected from revenue risk through the SES charging scheme regulation, so including an aiming up allowance to compensate for uncertain revenues does not seem appropriate.

5.81 With respect to capital investment incentives, it is conceptually conceivable that, in the context of ANS provision in Ireland, the negative consequences for airspace users arising from underinvestment in infrastructure may exceed the short-term positive impacts of lower service charges. However, in the context of setting the WACC, it is not practicable to determine what the optimum level of investment is with respect to airspace user and consumer welfare – the ANSP and airspaces users are also not likely

[33] CMA UK water sector price determinations (March 2021)
[34] NATS (En Route) Plc/CAA Regulatory Appeal (August, 2020)
[35] Aiming up on the WACC and prices (October 2020)
[36] Appendices to Economic regulation of Heathrow (April 2021)

to agree on where the optimum level lies.

5.82 In addition, there are important reasons why an aiming up allowance to incentivise capital investment may not be appropriate in this context. Firstly, from a practical perspective, we consider that other factors, such as effective programme management and oversight, will have a greater bearing on the delivery of the capital programme than a 0.5% higher WACC. We also note that a comparatively high WACC in RP2 was coincident with a significant under delivery of planned capital expenditure.

5.83 Secondly, there are already significant incentives for the ANSP not to underinvest within the regulatory framework; based on the revised cost risk sharing mechanism for RP3, any capital costs included within determined costs not spent must be reimbursed to airspace users. In addition, an aiming up allowance would apply to the IAA ANSP's entire fixed asset base, which means airspace users would be paying for a return on existing, in addition to new, investments.

5.84 More generally, within regulatory determinations, a higher or 'aimed up' WACC can provide a buffer to reassure the regulator that in the event of poorer than expected cost performance, the impact will be on the profit of the regulated entity, rather than impact the ability of the regulated entity to fund itself or deliver the required services at the required standard. However, as set out in the Cost Efficiency KPA section, we have stress-tested the financeability of the IAA ANSP, and we consider that the unrecovered revenue from 2020/2021 already provides a much larger buffer than an aiming up allowance would, in the specific circumstances of RP3.

5.85 Based on the evidence above, we accept the arguments of the airlines and do not consider it appropriate to include the aiming up allowance included within our draft proposal, and it has therefore not been included within our final determination.

WACC Summary

5.86 The range of values for the WACC, calculated based on the parameters above, is shown in the table below compared against the values estimated by the IAA ANSP (the IAA ANSP's nominal cost of debt has been updated based on the updated RP3 inflation forecasts). The estimated range is below the point estimate for the real WACC within the IAA ANSP Business Plan of 5.0%.

Table 5.6: IAA ANSP and NSA WACC Comparison

Parameter	IAA ANSP BP estimate		NSA estimate		
	Low	High	Low	High	Point estimate
Gearing	0.5	0.5	0.5	0.5	0.5
Risk-free rate	(1.0%)	(1.0%)	(1.5%)	(1.0%)	(1.2%)
Total market returns	6.4%	6.8%	6.0%	7.0%	6.5%
Equity risk premium	7.4%	7.8%	7.5%	8.0%	7.8%
Asset beta	0.65	0.70	0.45	0.55	0.5
Equity beta	1.22	1.31	0.84	1.03	0.94
Post-tax cost of equity	7.3%	9.1%	4.9%	7.2%	6.0%
Tax rate	12.5%	12.5%	12.5%	12.5%	12.5%

Parameter	IAA ANSP BP estimate		NSA estimate		
	Low	High	Low	High	Point estimate
Pre-tax cost of equity	8.4%	10.5%	5.6%	8.3%	6.9%
Cost of debt	0.1%	0.1%	0.1%	0.1%	0.1%
Pre-tax real WACC	**4.6%**	**5.3%**	**2.8%**	**4.2%**	**3.5%**

Source: NSA Calculations, IAA ANSP.

5.87 The nominal WACC in each year of RP3 is shown in the table below. The point estimate of the real WACC from the table above has been converted to a nominal WACC, using the inflation rate for each year[37], to convert the real risk-free rate and real cost of debt to nominal values using the Fisher equation.

Table 5.7: Nominal WACC

Figure	2020	2021	2022	2023	2024
Inflation	(0.5%)	1.6%	1.9%	2.0%	2.0%
Nominal WACC	3.0%	5.2%	5.5%	5.6%	5.6%

Source: NSA Calculations

5.88 The IAA ANSP has kept its asset register at historical cost (i.e. in nominal prices). Consequently, the RAB we have derived from the asset register is nominal, and thus a nominal WACC must be applied to derive the return on capital.

[37] April 2021 Eurostat figure for 2020 and April 2021 IMF forecast for 2021 to 2024

6. Capital Costs and Investments

6.1 This section sets out the IAA ANSP capital cost allowances. The final allowances, compared to the IAA ANSP position, are summarised in Table 6.1. There are two elements of Capital Costs:

- Depreciation charges which must be based on the value of the asset over its expected useful life.
- A return on capital, derived from the application of the WACC set out in Section 5 to the Regulated Asset Base (RAB).

Table 6.1: Determined Capital Costs for RP3

Source	Allocation	Determined				
		2020	2021	2022	2023	2024
Determined	En Route	€7.5m	€10.1m	€11.2m	€12m	€11.1m
	Terminal	€2.9m	€5.3m	€8.5m	€9.5m	€9.7m
	Total	**€10.4m**	**€15.3m**	**€19.7m**	**€21.5m**	**€20.8m**
ANSP BP	En Route	€7.8m	€11.0m	€13.5m	€15.7m	€15.5m
	Terminal	€3.0m	€6.3m	€11.1m	€12.9m	€13.5m
	Total	**€10.8m**	**€17.3m**	**€24.6m**	**€28.6m**	**€28.9m**

Source: CAR Calculations, Nominal Prices. ANSP position as per its calculations rather than Business Plan.

6.2 Overall, the allowances are slightly higher than was set out in the consultation version of the model, as we have now corrected an error in relation to the return on capital, and aligned the 'Total Costs' section of the model with the required mix of real and nominal prices as per the regulation.[38] This is offset by the removal of the aiming up allowance in the cost of capital as described in Section 5.

6.3 Below we set out how the revised allowances for RP3 were arrived at and what proposals were set out in relation to the regulatory treatment and reporting for new RP3 projects. We then outline any relevant comments made by stakeholders and how these have been taken into consideration.

6.4 The RAB is in nominal prices. All figures presented in this section are therefore in nominal prices, with a nominal WACC applied as set out in Section 5. The inflation forecasts are thus not applied to these costs for our unit rate forecasts, and they will be excluded from inflation adjustments when setting the unit rates on an annual basis as per Article 26 of Regulation 317/2019.

Modelling of Depreciation and Return on Capital

6.5 As CAR was not involved in the original RP3 Performance Plan, it was necessary to build a model of the IAA ANSP's full RAB from first principles. A condensed version of this model has been used for the ANSP Capex sheets in the published Performance Plan

[38] Although nominal prices were correctly used for the calculation of the total Determined Costs and set out in the consultation document.

model; the new RP3 projects have been included individually in these sheets but the rollover asset base from RP2 has been included at total level.

6.6 Ahead of the Consultation, we first sought to replicate the IAA ANSP's figures based on its assumptions regarding depreciation. Ultimately a close match was obtained with the figures provided in the IAA ANSP's Business Plan. Note that, in this section and the financial model, we present the IAA ANSP proposals as we have modelled their input assumptions, rather than the figures in the Business Plan.

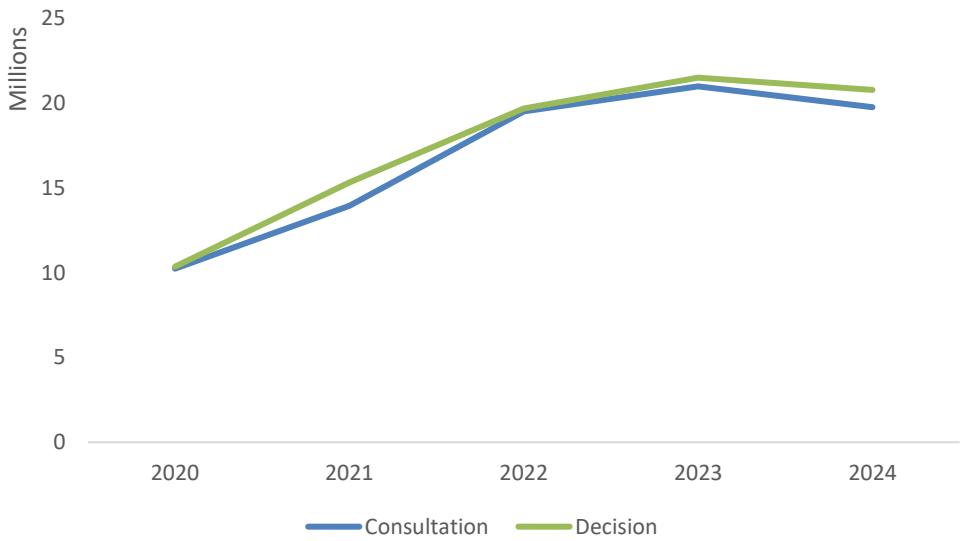
Submissions Received on Modelling of Depreciation and Return on Capital

6.7 In response to the Consultation, the IAA ANSP states that the published model has indicated that its capital depreciation requested for RP3 is €75.75m but that this figure should be €75.59m, in line with its own RP3 Business Plan. Similarly, for cost of capital, the IAA ANSP states that its final RP3 Plan includes a total of €38m, but that the published model indicates that €35.1m is being sought. It therefore argues that the actual capital cost reduction proposed by the NSA is greater than stated in the Performance Plan.

Decision on Modelling of Depreciation and Return on Capital

6.8 No changes to the modelling of depreciation and the cost of capital have been made based on these comments. We have however adjusted the Performance Plan model so that it fully aligns with the mix of real and nominal prices required by the Regulation; the 'Total Cost and Profitability' tab in the consultation version was converting the capital costs to real prices, which meant that the allowable capital costs were understated for the high level comparisons. Figure 6.1 compares the proposed and the final capital cost summaries.

Figure 6.1: Capital Cost Summary, Consultation and Decision

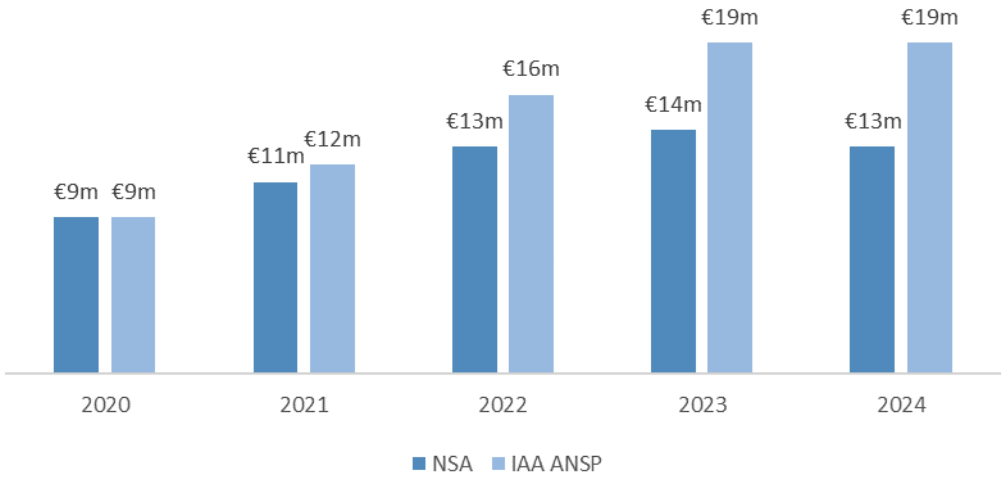


Source: CAR Calculations, Performance Plan model

6.9 Figure 6.2 shows our modelled depreciation charges, based on the ANSP proposal but with a number of adjustments to the assumptions for new RP3 projects, which are explained below. As explained above, the IAA ANSP's position on depreciation and the

cost of capital in our model continues to be based on its own excel calculations, rather than on the summary figures in its Business Plan. These figures do not fully match.

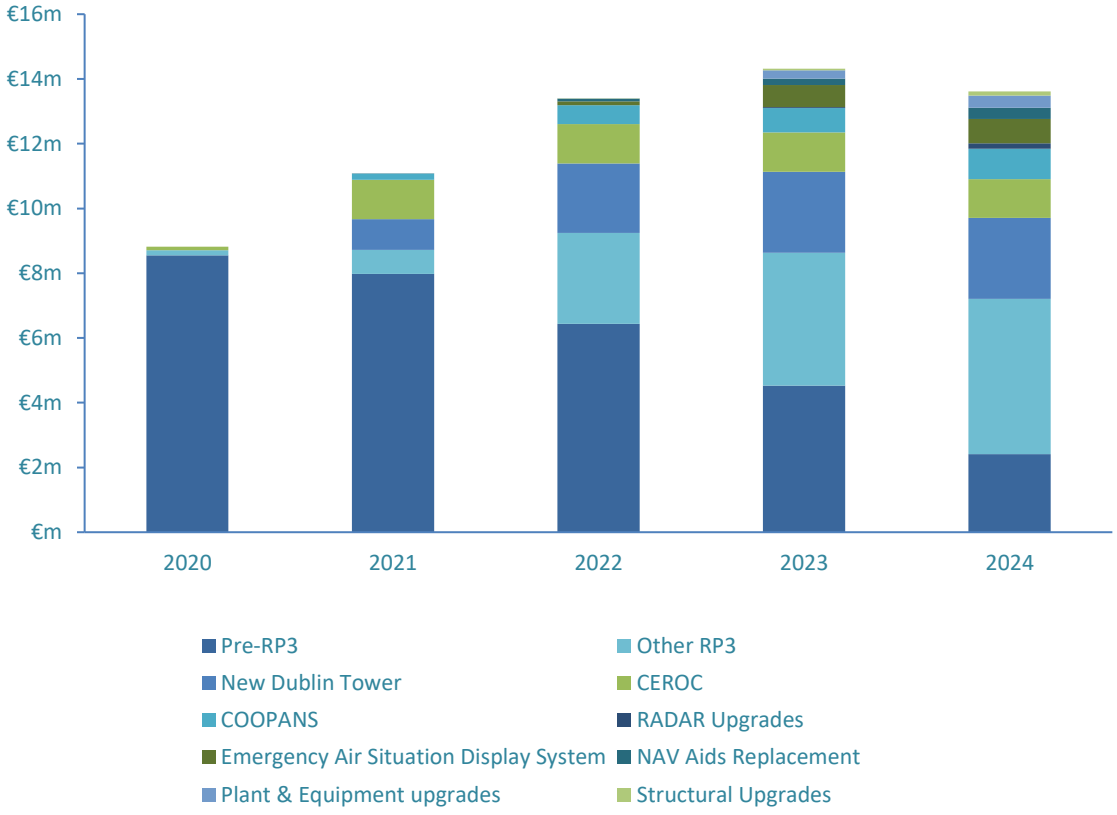
Figure 6.2 Depreciation Costs Over RP3, Compared to IAA ANSP



Source: CAR calculations

6.10 Figure 6.3 shows a breakdown of our proposed depreciation costs by project or group of projects.

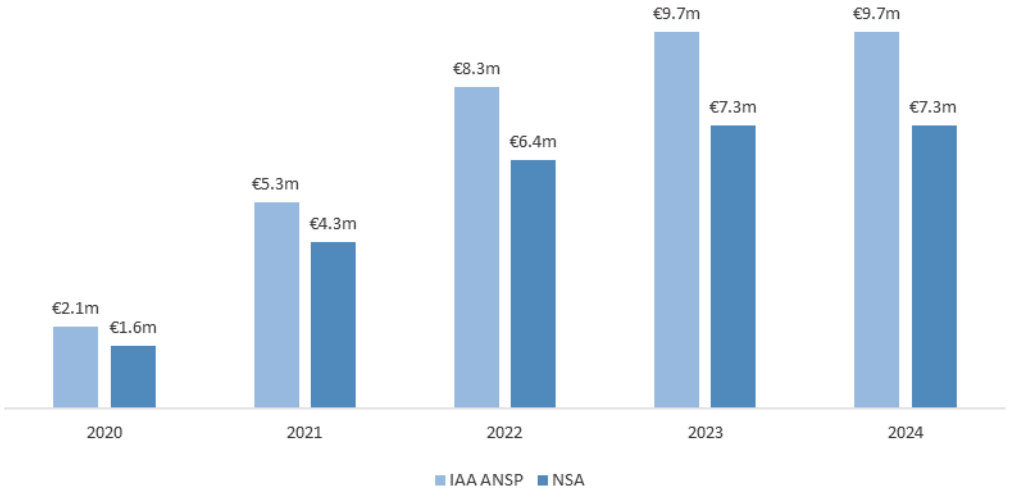
Figure 6.3 Depreciation Costs by Major Project or Group



Source: CAR Calculations

6.11 We also sought to replicate the IAA ANSP's calculated return on capital in a similar way to depreciation. A close match was obtained with the ANSP's calculations. Figure 6.4 shows the results. Again, the IAA ANSP figures are presented as we have modelled their input assumptions, rather than the figures in the Business Plan. The nominal WACC in each year is applied the weighted average net book value (NBV) of fixed assets (where the weighting applies to when new assets are capitalised in the year) and added to accrued capitalised interest (described below). As outlined above, we have corrected the error in the Consultation version of the model that had led to a lower Cost of Capital for 2021 of about €1m, and a slightly higher Cost of Capital for the other years of RP3.

Figure 6.4: Return on Capital over RP3, Compared to IAA ANSP



Source: CAR Calculations

Cost Allocation

6.12 In building the IAA ANSP's RAB ahead of the consultation, we reviewed the cost allocation methodology through which the capital costs are assigned to the En Route, Terminal, and other cost bases. Costs are first allocated to geographical cost centres, such Shannon ACC (Ballycasey), Dublin Airport, Cork Airport, Shannon Airport, North Atlantic Communications (Ballygireen), and Headquarters. Then, where a project is solely associated with the provision of En Route services, such as at Ballycasey, it is allocated 100% to the En Route cost base. If solely associated with the provision of Terminal services, it is allocated 100% to the Terminal cost base. If the project is anticipated to be used for the provision of both En Route and Terminal services at a given location, it is jointly allocated. Thus, the new tower at Dublin Airport has been fully allocated to the Terminal cost base, while the new contingency En Route centre (CEROC) has been fully allocated to the En Route cost base.

6.13 The En Route/Terminal apportionment of jointly allocated projects depends on the location. At Dublin and Shannon ATC centres, costs are allocated 75:25 to En Route, while at Cork the apportionment is 50:50. These allocation keys reflect the extent to which each cost centre provides services to Terminal/En Route traffic, having regard to the 20km rule referenced in Section 4 and the mix of Area Control (ACC), Approach,

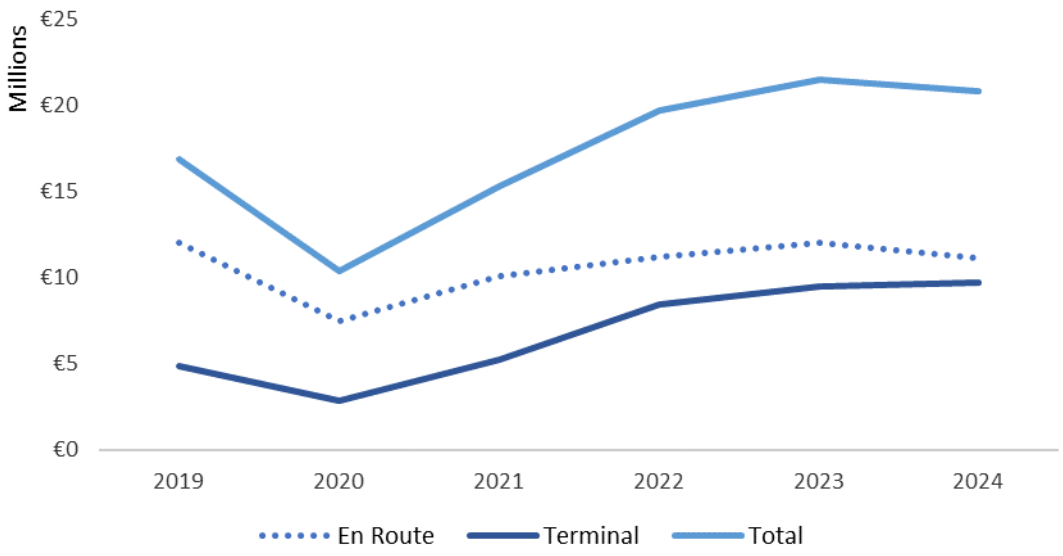
and Tower services provided by each ATC unit. We note that this allocation approach aligns with paragraph 2.5.4 of the Central Route Charges Office (CRCO) guidance material on principles for establishing the cost base for En Route charges.[39]

6.14 Certain RP3 projects, such as Conditional Survey Works, encompass works at the North Atlantic Communications centre, Ballygireen. We have verified that these direct costs have not been apportioned to either the Terminal or En Route cost bases, and that supplementals such as contingency and escalation have also been apportioned based on the split of direct costs within the project.

6.15 We conclude that the IAA ANSP's allocation methodology for capital costs is reasonable, and do not propose to change it as part of this revision to the RP3 Performance Plan. The allocation of each RP3 project, as assigned to the relevant cost centre(s), can be observed in the Performance Plan model.

6.16 Figure 6.5 displays the resulting capital costs by in-scope charging zone for RP3, as well as 2019 actuals.

Figure 6.5: En Route, Terminal, and Total Capital Costs for RP3



Source: CAR Calculations

Submissions Received on the cost allocation

6.17 No submissions raised any questions regarding capital cost allocation.

Decision on the cost allocation

6.18 The NSA has not made any changes to the cost allocation methodology, relative to the consultation proposal.

New RP3 Investments and Project Allowances

6.19 In the Consultation document, we proposed to allow for €141m of new capitalised

[39] https://www.eurocontrol.int/sites/default/files/2019-12/doc-20.60.01-eurocontrol-principles-january-2020-en.pdf

projects. The rationale for the proposed decision (as set out in Section 6 and Appendix 1 of the consultation document) is summarised here. We then consider the consultation responses we received, before setting out our final decision.

6.20 A key feature of the first two years of RP3 is the capitalisation of two large projects, a contingency En Route ACC (CEROC) as back-up to the main Ballycasey centre, and a new control tower at Dublin Airport. Between them, these projects account for almost half of the value that the IAA ANSP expects to capitalise during RP3, leading to a significant step change by 2022 in the size of the ANSP's RAB and the level of capital remuneration flowing from it. We also considered projects with a value below the €5m threshold referenced in Regulation 317/2019 to be material for the purposes of setting charges and consequently addressed such projects at an individual level also.

6.21 In most cases, the NSA accepted the merits of progressing the IAA ANSPs proposed projects during RP3, in the interests of effective and efficient service delivery. For some projects, as we set out in Appendix 1 of the Consultation document, while we understand the merits of the project, the need to progress it immediately, in the circumstances created by the pandemic, was less clear.

6.22 We considered that the IAA ANSP underspent on necessary projects in RP2, and that it has made a strong case that the level of investment in the business should increase relative to RP2. On the other hand, we were not convinced that the scale of the proposed increase would be likely to materialise or is fully warranted during RP3.

6.23 In relation to the cost estimates, we noted that many of these projects and associated costings were developed some time ago. Given that CAR was only assigned the role of NSA in 2020 and the requirement to develop a revised RP3 plan crystallised in late 2020, there was insufficient time to, for example, develop an agreed approach to costing projects for submission to the NSA. Consequently, the level of cost detail available for the projects was varied:

- Costings for the property and security projects were developed by a Quantity Surveyor and align with the level of detail we would expect for projects at this phase of delivery, with the projects not yet having reached detailed design phase.

- As we are already significantly advanced through RP3, for some projects the cost proposal was based on outturns and/or contracted amounts. The Dublin tower and CEROC projects come under this category.

- Certain projects are effectively off-the-shelf systems and are costed on that basis.

- For some projects, little cost detail was available. In some cases, this was a feature of the phase of project development; for example, the COOPANS builds for the latter part of RP3 have not yet been defined. In other cases, it was less explicable.

6.24 In a number of cases, we identified that cost proposals did not appear to fully align with the supporting material provided, and/or certain costing assumptions were higher than we would have expected. These were identified in Appendix 1 of the Performance Plan but are relatively minor in the context of the overall quantum of planned investment.

6.25 Taking account of all of the above, we concluded as follows:

- At a programme level, the efficient level of expenditure to deliver the full set of projects is likely somewhat lower than the cost submissions provided by the IAA ANSP. We were unable to fully quantify this at a project level, given that in some cases cost detail is limited and/or projects are at early stages of design.

- It is unlikely that the IAA ANSP will deliver all of the projects within the timeframe proposed.

6.26 Therefore, rather than disallowing any individual projects or adjusting costings at a project level, we proposed to make a programme level adjustment, reducing the level of forecast capitalisations over 2021-2024, to reflect these points. This adjustment would be set to still allow for a higher level of investment than the outturn levels over RP2 and 2020. Taking all of the above into account, we considered that a 20% reduction in forecast capitalisations, relative to the IAA ANSP proposal, would be reasonable, and more likely to reflect the actual level of expenditure and capitalisations during RP3, relative to what the IAA ANSP proposed.

6.27 However, we proposed to exclude expenditure associated with the Dublin Control Tower, which is expected to be capitalised this year, from the adjustment. This is largely expenditure which has already been incurred, on an outlier project, and over which there is a high level of cost certainty. Thus, we had proposed tower related expenditure would be included in full in the Determined Costs, as would 2020 actual capitalisations, which includes CEROC.

Submissions Received on New RP3 Investments and Project Allowances

6.28 The IAA ANSP, IATA, and several airlines submitted responses seeking clarification on, or changes to, various aspects of the proposed capital programme allowances.

6.29 Aer Lingus has concerns over the Radar Replacements projects, for which a total capital allowance of €12.6m is planned for RP3. It is querying whether any satellite-based alternatives to radar are available that could provide the same outputs at lower cost. Similarly, regarding the Cork ATC Extension to rest and storage facilities, Aer Lingus is asking the NSA to confirm the necessity for additional storage space and to determine what exactly is making the current rest facilities inadequate.

6.30 Aer Lingus also questions the rationale for changing the Temperature Checking Equipment, as Covid-19 restrictions may not be in place for very much longer, and because temporary alternatives can be provided at a significantly lower cost than the €0.2m proposed. Finally, for the BMS Upgrade project, Aer Lingus has asked the NSA to confirm whether this project overlaps in scope with the existing Energy Management Upgrade Works project.

6.31 British Airways requests that where the NSA has identified uncertainty regarding the requirement to progress certain projects during the RP3 period, that it explores these projects in more detail. It also advocates for continued, stringent cost control by the NSA and for ex post reviews to be conducted on projects to determine the efficient costs associated to these projects given their significant cost levels. Finally, British

Airways states that the incremental costs of project delays should not be borne by airspace users.

6.32 IATA expresses concern regarding the likelihood of the IAA ANSP delivering on its Capex plans, which it considers ambitious. It notes the lack of a clear linkage between the quantitative benefits of the programme to the KPIs in Safety/Cost-Efficiency/Capacity and Environment. It requests that the NSA develop a milestone plan with risk assumptions for non-delivery of key projects and that the revised plan identify clear links with RP2 developments, which investments have been completed, delayed, postponed, or cancelled. It also has concerns about specific projects. For example, it has asked that the NSA review the Mt Gabriel project in line with other Capex proposals. It asks that the NSA seek out the €7m of outstanding cost information on the Dublin Tower Project.

6.33 Furthermore, IATA requests additional information on why the COOPANS projects do not have in-built redundancy, which, it argues, would have eliminated the need for the EASDS project. Similarly, it has enquired as to what specific projects will be included as part of the Climate Action Plan, and why the ATCO Screen Replacement costs were, in its view, so high. Finally, IATA expresses similar concerns to Aer Lingus regarding the Radar Replacement projects and the Cork ATC extension project.

6.34 Ryanair expresses similar concerns to both Aer Lingus and IATA on the Dublin Tower cost detail, and on the Radar Replacements, the EASDS Replacement, the Climate Action Plan, the Cork ATC Extension, the ATCO Screen replacement, the Mt Gabriel, and the Temperature Checking Equipment Projects. It also raises questions on whether the IAA ANSP considered using SWIM-delivered feeds as an alternative to the integrated MET server project, and what the benefits of the Capex projects are in terms of the KPI's. Finally, Ryanair considers that the BMS upgrade cost is unjustified but does not provide a specific line of argument.

6.35 On the other hand, the IAA ANSP is opposed to the programme level reduction of 20% to forecast capitalisations we proposed over the period 2021-2024. It states that it is not aware of this type of approach being taken anywhere else in Europe under the Performance Regulations. It states that costs which are eligible and justified should not be deferred to RP4, commenting that *'the consultation doesn't really explain why this is being proposed*.' It states as an example that 20% of EASDS projects related capital costs will be deferred to RP4 under the proposed plan, although EASDS is being delivered within the period.

Decision on New RP3 Investments and Project Allowances

6.36 Many of the questions raised by airlines had already been asked of the IAA ANSP by the NSA ahead of the consultation, and in some cases detail had already included in Appendix 1 of the consultation document, to the extent that the IAA ANSP was able to provide such detail. Additionally, information on the benefits to KPIs of the capex plans was requested during the development of the Performance Plan, and where available was included in appendix 1 of the plan.

6.37 We agree with respondents who suggest that quantified links between certain projects and the associated benefits should be provided. Our view, which was set out in

guidance we provided to the IAA ANSP in February, is that:

- Maintenance Capex proposals should identify the system or equipment that is End of Life and provide evidence of same.

- For a step change in business requirements (e.g. the requirement to develop a new tower at Dublin Airport because of the North Runway), this should be set out and the benefit or necessity of this explained.

- For other projects, we would expect a quantified business case either with reference to achieving efficiencies or a quantified impact on other KPAs.

6.38 In the absence of detail from the ANSP on the third group, into which projects such as COOPANS would be expected to fall, the NSA has developed its own assumptions for the impact of the investment plan on other KPAs. In particular, the Steer forecasts build in a 2% improvement in ATCO productivity by 2024, while cost savings for certain non-staff costs due to the delivery of relevant projects have been estimated at a per project level– a good example being the expected impact of the Climate Action Plan in reducing power consumption. Further details on this are set out in the Steer reports. For consistency, Steer have used the same asset lives and forecast delivery profile as the NSA, and applied the same 20% programme level adjustment, when quantifying the expected savings.

6.39 Regarding the specific projects, we have again asked the IAA ANSP to provide the NSA with any further detail on the airlines queries on specific projects, and the ANSP has stated as follows:

- Regarding the Radar replacements projects, the IAA ANSP considers that ADS-B on its own is not sufficient to provide the required dual source of aircraft positional information, necessitating Radar use. The IAA ANSP's long term strategy will involve it supplementing radar with ADS-B, eventually allowing up to 50% rationalisation of overlapping radars.

- For the Cork ATC extension project the IAA ANSP states that under EU Regulation 373 it is required to ensure adequate and appropriate facilities to staff, and that it has a duty of care under the Health and Safety Act to ensure an appropriate work environment is provided. Similarly, ICAO regulations require that appropriate fatigue facilities are provided for operational staff. The new storage aspect of the extension is to replace existing container storage which will be removed to facilitate the building extension.

- Concerning the temperature checking equipment, handheld devices are temporarily in use. However, due to the number of staff working at these premises (700+ employees, plus visitors and contractors) and the number of controlled access points for which staff can use via their approved IDs, this method will not be sustainable once people return to the office.

- Regarding the BMS Upgrade project, the IAA ANSP has confirmed that this project does not overlap in scope with the existing Energy Management Upgrade Works project. The NSA has reviewed the supporting documentation submitted by the

IAA ANSP and there has been no double counting.

- With respect to the Climate Action Plan, the IAA ANSP has provided the NSA with an overview of the various initiatives it plans to undertake in RP3. The aim of these initiatives is to assist the IAA ANSP in becoming carbon neutral in their use of energy. The project is expected to deliver assets such as electric vehicles and charging infrastructure, a photovoltaic farm, building insulation and HVAC works.

- For the ATCO screen replacement project cost, the IAA ANSP has based its cost estimate on the cost of the last screen replacement, in 2007, and no more detailed cost information is available.

- Concerning the Mt Gabriel project, the IAA ANSP has provided additional information to justify the need for this project, which we have now considered. The buildings and facilities at Mt. Gabriel are c50 years old and have had no significant structural/fabric replacement/upgrading for more than 30 years. The ANSP considers that these essential upgrade works are required for the two radar buildings at Mt. Gabriel to ensure that the critical buildings are structurally sound, fit to facilitate operational equipment/personnel and appropriate to ensure the provision of essential operational services. On the basis of the age of the buildings, and the lack of any recent maintenance Capex, the NSA considers this to be reasonable.

- With respect to the EASDS replacement project, the IAA ANSP states that a fully independent backup system is necessary to ensure business continuity in the event of a COOPANS failure.

- Finally, for the integrated MET server project, the IAA ANSP has stated that the AMAP and MDP systems are provided by the same vendor with a direct interface and that there is no need for a SWIM type interface as this would add cost and complexity.

6.40 In relation to the €7m discrepancy between the stated cost of the Dublin Airport tower and the sum of the cost material we had been provided with, the IAA ANSP has now provided us with the rest of the cost detail, which now aligns with the stated total cost.

6.41 In response to the IAA ANSP, we disagree that it has justified the full proposed programme. As set out above, we identified issues in relation to the cost proposals and the immediacy of the requirement for a number of the projects, which were clearly set out in the consultation document. Furthermore, justifying an allowance for the full programme would require a reasonable prospect that it will be delivered to schedule, and we consider the level of step change this would require to be unlikely. This is supported by the fact that the programme is already behind the anticipated schedule.

6.42 In relation to the specific example of EASDS, the IAA ANSP itself requested that the capital allowance be grouped rather than reconciled at a per-project level, which will provide it with flexibility on which projects are progressed. It cannot now point to individual projects for the purpose of suggesting that it will not receive appropriate capital remuneration during RP3; we expect that there are other projects for which it will receive some capital costs during RP3, which will not be capitalised until after RP3.

That is the nature of a programme level allowance. As set out below, we will reconcile the actual capital costs due to the IAA ANSP based on actual capitalised projects, with the actual amount earned at a group level, ensuring the appropriate amounts are earned, including adjustments for overall under or overcollection. The capital allowance still provides for a significant increase in expenditure relative to actual RP2 level, as shown in Figure 6.6 below.

6.43 Overall, after reviewing the above submissions, the NSA does not consider that respondents have provided sufficient evidence to move away from our consultation proposal. We do not consider that the airlines have provided sufficient evidence that any of the projects should be disallowed outright; the NSA had already considered the points in relation to projects such as the Cork ATC facilities and the ATCO screen replacements in arriving at our consultation position. Notwithstanding that the programme is behind schedule, we do not consider that this alone is sufficient to increase the scale of the programme level adjustment, as there is the potential for catch-up later in RP3. We also note the lack of any direct support from stakeholders for increasing the programme level adjustment. On the other hand, the IAA ANSP has not provided any specific rationale addressing the concerns in relation to cost detail, deliverability, and immediacy of requirement which led us to make the 20% programme level adjustment.

Asset Lives

6.44 Article 22(1) of Regulation 317/2019 requires that assets are depreciated over their '*expected operating life*'. This is an important principle in economic regulation, which ensures that the costs of a project are cross-temporally allocated fairly across airspace users who will benefit from the project.

6.45 In the consultation, we considered that in many cases, particularly the Appendix 2 and 3 projects, the asset lives proposed by the IAA ANSP were reasonable. In some cases, particularly the Appendix 1 projects and the major construction projects in Appendix 3, the proposed asset lives were shorter than we would have expected, while one Appendix 1 project was longer than we would expect. In particular, a 20-year assumption for the construction elements of a major operational asset such as CEROC or the Dublin Tower did not, in our view, reflect a reasonable centreline estimate of the expected operating life of these assets.

6.46 We therefore proposed a number of adjustments to the asset lives to better reflect the expected operating life, based on our experience setting lives for similar or comparable assets, material from the IAA ANSP Business Cases or Quantity Surveyor material, as well as our research on the expected useful life of installations such as Mode-S radars.

Submissions Received on asset lives

6.47 The IAA ANSP disagrees with a number of the NSAs proposed asset lives. This includes the Conditional Survey Works project, which is estimated by the IAA ANSP position paper to have a lifespan of 10 years, while the NSA proposed 20 years. The IAA ANSP states that this is asset life is too long although it does not provide specifics or substantiation of this claim.

6.48 The IAA ANSP states that the Fire Suppression System installations must be changed every 10 years in line with a fire safety legislative requirement, which we have overlooked with our proposed 15-year asset life.

6.49 Regarding the Energy Management Upgrade Works project, the IAA ANSP argues that while the solar panels component of this project might survive for 15 years, some other aspects of this project will not, for example LEDs (6 years), and pumps (8 years).

6.50 Finally, the IAA ANSP argues that the extension of the building asset lives, in particular in relation to the Dublin Airport tower, does not account for the need for additional structural works after 30 years to ensure longevity, and that substantial work to structures such as lattice towers would be required after approximately 15 years. The mechanical and electrical aspects of these projects are also argued to have asset lives of 8 years as opposed to the 40 years which the ANSP states we had proposed. Furthermore, the IAA ANSP considers that replacements to the fabric of the building, glass, cladding, flooring, and bathrooms are not being considered by the NSA proposal.

Decision on asset lives

6.51 We have considered and assessed the comments from the IAA ANSP, but ultimately concluded that we should not amend any of the asset lives we proposed for the reasons set out below.

6.52 Regarding the Conditional Survey Works project, while the IAA ANSP is requesting a 10-year asset life, it does not provide substantiation of this number. Based on material we have reviewed, the project largely encompasses works to building structures, finishes, roofing, cladding, building envelope, building services, cracking and spalling repairs. Overall, we would expect 20 years to be a reasonable asset life for this mix of works; we note that many of the older properties have had no significant structural/fabric replacement/upgrading for over 30 years. Furthermore, we note that this view aligns with that of the IAA ANSP's Quantity Surveyor (QS), which identifies the expected lifespan of the asset at approximately 15-20 years. No further evidence has been provided which would change our view on the nature of this project.

6.53 In relation to the Fire Suppression System, we have followed up with the IAA ANSP in relation to the claim that there is a legal obligation to replace the equipment after 10 years (we note that the IAA ANSP used a 5-year asset life in its capital cost calculations, as opposed to the stated 10 years). However, based on our review of the fire safety standards referenced (IS3218 and EN 1968:2002 & EN 1803:2002) there is a requirement that equipment be tested every 10 years, not that it be replaced. The ANSP did not provide a specific reference to a legal requirement, in response to our request. We also note that this project is a mix of new installations and replacing equipment installed in 2006, i.e. more than 10 years ago. Again, 15 years aligns with the QS report on this project and in the absence of a demonstrated legal requirement to replace the equipment after 10 years, we maintain our 15-year proposal.

6.54 Regarding the Energy Management Upgrade Works project, while the IAA ANSP now suggests asset lives of between 8 and 15 years respectively, the investment appraisal for this project expects the newly installed heat pump system and the air to water heat pump to both last 20 years, and for the Smart LED lighting fittings and controls to last

15 years. We note that the project also contains photovoltaic (PV) panels and a minor element of building insulation works, both of which we would expect to have a useful lives of more than 15 years (which again aligns with the investment appraisal- we have previously set asset lives of 25 years for PV panels, which is supported by the appraisal). Based on the mix of assets in this project, 15 years is a reasonable and indeed potentially a conservative adjustment.

6.55 The IAA ANSP disagrees with the proposed building asset lives, in particular the Dublin Airport tower, which are the most significant asset life adjustments in relation to the impact on Determined Costs and Unit Rates. We would firstly refer back to the business plan guidance note provided for the IAA ANSP in February 2021 which stated that the following should be included: '*Proposed asset life and associated explanation/justification (where a blended asset life is proposed for a project, the asset life of the individual components, and the blend, should be set out)*.'

6.56 This latter point is particularly relevant for a large multi-faceted project such as the Dublin Airport tower. When this detail was not included in the draft Business Plan, we again requested substantiation of how the proposed asset lives had been estimated, based on the expected useful life of the assets. This was not provided, instead we received a reference to standard assumptions which the IAA ANSP uses. The ANSP assigned a blanket 20-year asset life to the construction line, the same line it is now saying contains assets ranging in useful life from 8 years to more than 30 years. The consultation response provided a third opportunity for the IAA ANSP to provide a specific alternative proposal based on the expected useful life of the components of this major asset.

6.57 On the specific points now raised:

- We did not adjust the reported Mechanical & Electrical cost line asset life to 40 years, as stated by the IAA ANSP in its response. We used the IAA ANSP's asset life assumption.

- The ANSP has not provided any evidence to support a shorter asset life for the windows, flooring, cladding, it installed in the tower or in other buildings. Nor did it provide an alternative proposal(s) or split out of the construction elements. We agree that certain finishes and installations are likely to have a useful life of less than 40 years. However, these are likely to be a relatively small element of the cost of the new buildings. In the consultation, we considered whether the most appropriate comparator for the core tower asset was an airport pier (40 years) or terminal building (50 years).[40] We believe an argument could be made for a longer asset life than the 40 we proposed. We expect that other elements of the tower (substructure, frame) would have a useful life considerably longer than 40 years. We also proxied for the fact that the single construction line item likely contained some assets with shorter asset lives, by not changing the asset lives of lines such as the safety case and airspace redesign from the 8 years proposed by the ANSP. These lines should ordinarily be depreciated alongside the core asset.

- We agree that maintenance works and finish refreshes (and potentially structural

[40] Noting also that the asset life we assigned to the North Runway itself was also 50 years.

works) will likely be required within the 40-year period. The appropriate approach to such costs is to include them in future Business Plans as and when they become necessary. Similar maintenance costs have been included in the RP3 Performance Plan for existing facilities.

- We continue to maintain the I-ATS and communications installations asset lives at 8 years as per the IAA ANSP proposal.

- We continue to allow architectural and design costs from 2008/2009, before the project was suspended. Where costs of this nature are capitalised and considered eligible, it is appropriate that they are depreciated alongside the life of the core asset to which they relate.

6.58 We therefore took an approach which is reasonable, overall, to depreciating the tower. We consider that it provides a depreciation profile which fairly spreads the costs of the tower across the airspace users who will benefit from it, and is likely similar to the outcome of using an accurately blended asset life. There is nothing in the comments from the IAA ANSP which we had not already considered nor new evidence for us to assess. We still consider the mix of asset lives we used in the consultation to be reasonable and have not changed them.

6.59 The IAA ANSP states that there are multiple inconsistencies between the Performance Plan document and the PP model. However, the inconsistencies that exist are between the IAA ANSP's Excel inputs and its Business Plan/Business case material. As outlined in the consultation document, the Performance Plan model uses the IAA ANSP's calculations rather than the documentation. In a number of cases, the IAA ANSP did use a shorter asset life in its calculations than what is stated in its Business Plan. The NSA has ensured full consistency between the asset lives stated by the NSA to have been used, and those used in the model for the purpose of calculating the determined costs.

Reporting and Reconciliation of Actual Expenditure

6.60 In its Business Plan submission, the IAA ANSP proposed that the RP3 allowances be reconciled at a programme rather than project (or grouping of projects) level. We proposed to accept this suggestion in the consultation. We noted that this would provide flexibility for the ANSP to adjust the programme and continue to prioritise within it over the rest of RP3.[41] We also stated that we would monitor and report actual efficient expenditure at a project level.

Submissions Received on Monitoring and Reporting

6.61 Aer Lingus proposes the introduction of a mechanism similar to the StageGate process employed at Dublin Airport for further consultation and cost review of projects as they move from early design phase to ready for delivery stage throughout the RP3 period. It identifies the New Tower Project, the Climate Action Plan projects and ATCO Screen Replacement as prime candidates for such a process.

[41] Provided that any changes which add, cancel or replace 'major investments' are notified to the NSA, subject to consultation, and approved by the NSA within the period as is required by Article 22(4) of Regulation 317/2019.

6.62 As noted above, IATA expresses concern regarding the likelihood of the IAA ANSP delivering on its Capex plans, which it considers ambitious. It requests that the NSA develop a milestone plan with risk assumptions for non-delivery of key projects and that the revised plan identify clear links with RP2 developments, which investments have been completed, delayed, postponed, or cancelled.

Decision on Monitoring and Reporting

6.63 We do not intend to replicate the StageGate process in our air navigation services oversight at this time. This process was specifically designed for the oversight of Capex at Dublin Airport, a much larger investment programme, and we consider that it would be disproportionate to introduce this level of ongoing oversight for the IAA ANSP at this time.

6.64 We will, however, monitor and report actual expenditure on and delivery of RP3 projects, at an individual project level. If we require users to begin paying for these projects in RP3, we consider that the IAA ANSP should deliver most of the projects set out in in the investment programme, with the associated benefits for airspace users and other stakeholders. We intend to develop a reporting template with the IAA ANSP later this year or on adoption of the Performance Plan, for publication on our website, focusing on what projects have been delivered or are progressing, material changes, and how expenditure is tracking against the Performance Plan assumptions.

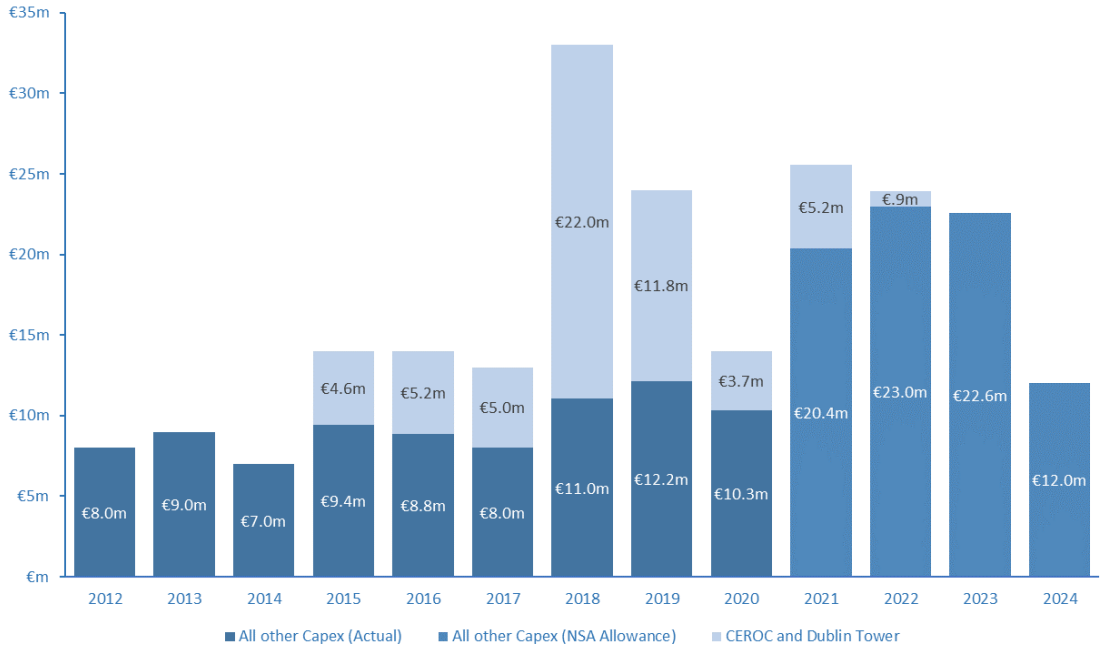
6.65 Should the IAA ANSP underspend the allowance, at a grouped level, this will be clawed back. Should the IAA ANSP deliver more of the programme than we anticipate during RP3, and efficiently incur associated expenditure in excess of what we have allowed for, this can be adjusted for in the unit rate for RP4 (subject to a cap of 5% of total RP3 Determined Cost capitalisations in the Performance Plan). Alternatively, these costs could be considered for inclusion into the RAB from the start of RP4.

Decision Summary- New Capex

6.66 Consequently, the NSA has not made any changes to the allowed Capital Investment Programme, relative to the consultation.

6.67 Figure 6.6 demonstrates our proposed decision translated to allowances for new capital expenditure, relative to the historic trends. Applying the 20% capitalisations reduction to the level of capital expenditure forecast by the IAA ANSP over 2021-2024 means that it is reduced from €99m to €84m.

Figure 6.6: Actual and Anticipated Capital Expenditure, 2012 to 2024



Source: IAA ANSP, CAR Calculations

6.68 Table 6.2 provides a summary table of new RP3 projects, for reference.

Table 6.2: Summary of New RP3 Projects

Project name	IAA ANSP cost proposal	IAA ANSP Asset Life	NSA asset life
Conditional Survey Works	€3,059,700	10 years	20 years
Security Upgrade Works	€1,364,000	10 years	10 years
National Security System Network	€1,937,500	10 years	10 years
Fire Suppression System	€697,500	10 years	15 years
Plant Upgrade Works*	€7,168,750	10 years	15 years
Cork ATC Building Extension	€2,325,000	25 years	25 years
Structural Upgrade Works	€2,092,500	25 years	20 years
Dublin ACC Building Works	€1,162,500	15 years	25 years
New Dublin Radar Building	€3,600,000	20 years	40 years
Energy Management Upgrade Works	€3,600,000	<10 years	15 years
Replacement of Building and Equipment Cooling System	€850,000	10-15 years	15 years
Temperature Checking Equipment	€220,000	<10 years	15 years
Climate Action Plan (Sustainability Management Plan)*	€5,000,000	10-20 years	20 years
Essential Building Upgrade Works at Mt. Gabriel	€775,000	15 years	15 years
2022-2024 ICT Infrastructure Life Cycle Management and Compliance	€3,330,000	3-5 years	3-5 years
Edison Core & Security	€1,020,000	8 years	8 years
IP Network Rollout	€1,020,000	8 years	8 years
Upgrades to Cable Ducting at Remote Sites	€500,000	8 years	20 years
ERIN TDM-IP Network Migration Project	€300,000	8 years	8 years

System Resilience NIS Compliance NIS Directive	€1,200,000	8 years	8 years
CYBERSECURITY NIS Directive	€750,000	8 years	8 years
Test Equipment for Navigational Aid Systems	€300,000	8 years	8 years
PABX Infrastructure Upgrade Ballycasey	€100,000	8 years	12 years
PABX Infrastructure Upgrade	€80,000	12 years	12 years
Airfield Cabling Replacement	€2,000,000	8 years	20 years
Integrated Met Server	€1,800,000	8 years	8 years
Radio Frequency Interference Hunting Upgrade	€100,000	8 years	8 years
Migration of FMTP from IPv4 to IPv6	€100,000	8 years	8 years
Upgrades & Contingency IAA NET	€200,000	8 years	8 years
VHF Replacement Programme	€1,800,000	8 years	8 years
Frequency Expansion Programme	€500,000	8 years	8 years
Tower Training Simulator	€1,000,000	8 years	8 years
IAA Smartmessenger (AFTN/AMHS) System Enhancements and ROFDS Contingency	€500,000	8 years	8 years
Emergency Air Situation Display System (EASDS) Replacement*	€6,500,000	8 years	8 years
New Voice Communications Switch	€4,500,000	8 years	8 years
Navaids Replacement Program*	€9,000,000	12 years	12 years
COOPANS Builds 3.6 to 3.8 Budget*	€8,000,000	8 years	8 years
COOPANS 2019 Roadmap Builds*	€8,000,000	8 years	8 years
Replacement of COOPANS Hardware	€3,000,000	8 years	8 years
ARTAS & SASS-C Upgrades	€500,000	8 years	8 years
ASMGCS Enhancements	€400,000	8 years	8 years
ATC Screen Replacement	€1,500,000	8 years	8 years
BMS Upgrade Dublin and Ballycasey ATCCs	€500,000	8 years	8 years
New En Route Contingency Centre at Ballygirreen*	€12,255,483	Building 20 years & ATM systems 8 years	Building 40 years & ATM systems 8-12 years**
New Dublin Radar 2 Replacement*	€5,000,000	12 years	15 years
National Generator Replacements	€375,000	8 years	8 years
National Radar Upgrades	€4,000,000	12 years	12 years
PSR 2.6GHz Safeguarding	€920,000	8 years	8 years
Radar Site UPS Replacement	€525,000	8 years	8 years
Remote Power Management	€400,000	8 years	8 years
Shannon Tower Generator Replacement	€115,000	8 years	8 years
Terrestrial ADS-B	€500,000	8 years	8 years
Dublin and Ballycasey ATCC UPS Replacements	€270,000	8 years	8 years
Urlanmore and Woodcock Hill Rx Site Generators	€300,000	8 years	8 years
New Tower Parallel Runway Project (NTPR)*	€49,856,000	Tower building 20 years & the ILS & IRVR 8 years	Tower building 40 years & the ILS & IRVR 12 year.

Source: IAA ANSP, CAR. Note that these are project cost values, thus in some cases, not all of this expenditure will occur within RP3, nor are the full costs within the Determined Cost base for RP3.

** Note: These projects are considered 'major investments' within the meaning of regulation 317/2019*

** Note: *The consultation incorrectly noted that the ATM systems of the New En Route Contingency Centre at Ballygirreen were depreciated over 12 years instead of 8. In fact only the PABX line of the ATM components was adjusted from 8 to 12 years.*

7. MET, NSA, other State and Eurocontrol Costs

7.1 This section sets out the RP3 Determined Costs associated with Met Eireann Aviation Services Division (ASD), the NSA, and other State costs including Eurocontrol costs. Submissions from MET ASD and the NSA, as well as reviews by Steer of both cost proposals, are published alongside this document.

MET Eireann Aviation Services Division (ASD)

7.2 The Aviation Services Division (ASD) is a business unit of Met Éireann, Ireland's National Meteorological Service, which is maintained by the State under the UN Convention of the World Meteorological Organisation (WMO). The ASD is designated as Ireland's Meteorological Authority under the ICAO Chicago Convention on International Civil Aviation and since 2006 has been designated as a meteorological Air Navigation Service Provider (MET ANSP) under the EU Single European Skies Service Provision Regulation (CIR EU 550/2004) and therefore has responsibility for the provision of regulated meteorological services to aviation. Regulatory compliance and oversight of the ASD is maintained by the NSA.

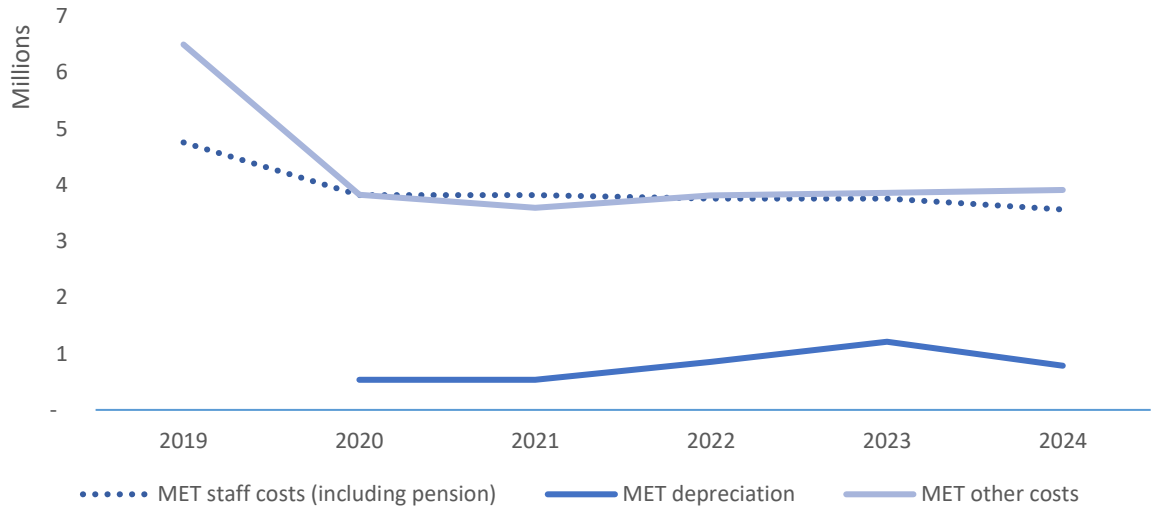
7.3 The aeronautical meteorological services provided by ASD include but are not limited to; the maintenance of the Meteorological Watch Office for the Shannon Flight Information Region (FIR), and the provision of aeronautical forecast and warnings services and maintenance of 5 Aeronautical Meteorological Stations.

7.4 We have made no changes to MET ASD costs relative to the consultation proposals.

7.5 Relative to 2019 actuals, MET plans to reduce the total cost allocated to ANS, by between 22% and 29% in total in each year of RP3. This decline in costs will result from both a proposed 25% reduction in staff costs over the period compared to 2019 levels, and from a reduction in non-staff costs by an average of 28% compared to 2019 levels. During this period there will be some increases in depreciation costs related to systems upgrades. However, some of these system upgrades are then expected to facilitate those reductions in staff costs later in RP3.

7.6 While MET plans to achieve cost savings through the reduction in staffing levels (due largely to efficiency improvements resulting from the introduction of the Aviation Modernisation and Modernisation Project), these reductions are not expected to occur until late in RP3, and until this point staffing levels will remain broadly flat. As MET salaries are driven by the Public Spending Code, staffing numbers are the main avenue (within the control of MET) through which staff cost savings can be found.

Figure 7.1: MET Staff Costs, Other Operating Costs, and Depreciation for Each Year of RP3



Source: MET ASD, CAR Calculations. Note that we have included EUMETSAT costs, which is a core cost listed in the ASD submission as an exceptional item, in Other Operating costs for the purposes of this graph.

7.7 Both MET staff costs and MET other operating costs are expected to drop significantly between 2019 and 2020 before flattening out across RP3. Depreciation costs on the other hand will increase steadily from 2021 to 2023 before declining slightly to 2024. The increase between 2021 and 2023 is due to the RADAR Upgrade and IMaMS projects reaching completion, while the decrease between 2023 and 2024 is due to a reduction in depreciation attributed to the AMAP project.

7.8 The allocation of capital costs to aviation on foot of these projects is via the application of a cost allocation methodology which allocates the cost of these projects between aviation and other MET activities. The allocation key used is the direct cost of aviation forecasting divided by the direct cost of all forecasting activity. This coefficient was calculated as 33% for 2020/21 and 27% for 2022, 2023, and 2024 (with this reduction coming as a result of the expansion of MET Éireann's remit).

Table 7.1: Total Core and Direct Costs 2020-24

Cost category	Core	Direct
Staff Costs	-	€19.6m
Other Operating Costs	€7.7m	€4.8m
Depreciation Costs	€3.7m	€0.2m
EUMETSAT (exceptional item)	€6.7m	-
Total	**€18m**	**€24.7m**

Source: Met ASD, CAR Calculations, Nominal Prices. Note that, in the consultation version of this table, EUMETSAT costs were omitted from the 'Core' category. This versions numbers are also in nominal terms, while the consultation table was real.

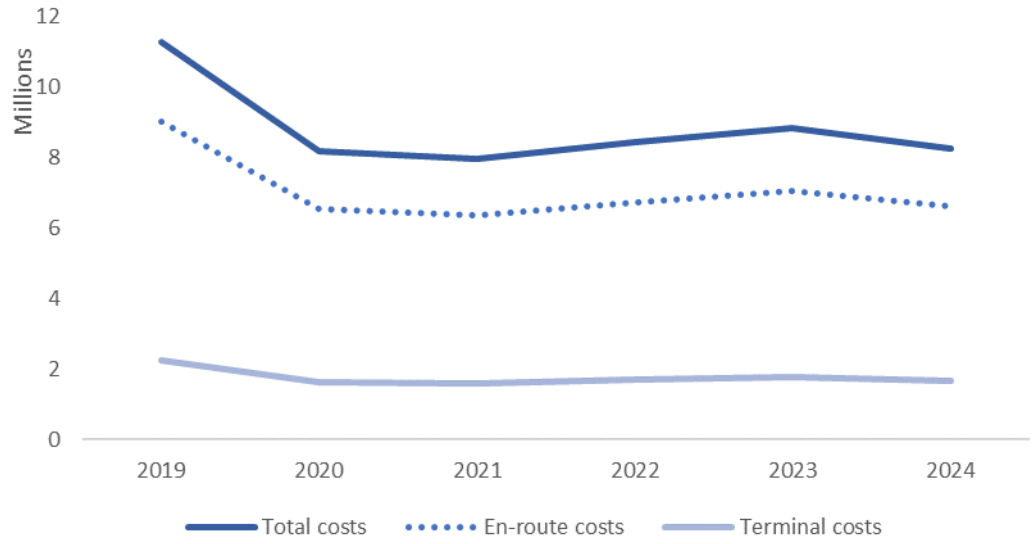
Decision on MET Costs

7.9 There were no submissions received in relation to the MET costs. The MET costs have remained unchanged from the consultation. However, as was detailed in the consultation, we have applied a baseline adjustment relating to MET costs. In assessing

the submission from MET ASD, we noted that the actual 2019 costs provided were considerably higher than the costs previously reported in the tables as actual costs for 2019 (€11.3m as compared to €8.3m). We concluded that the previously reported actual costs were the costs actually charged as opposed to costs actually incurred by ASD. That is, MET's determined costs which it recovered for 2019 were €8.3m, whereas its actual costs were €11.3m.

7.10 For this reason, we set out a proposed baseline adjustment in relation to MET staff costs and for MET other operating costs, such that the correct figure for MET actual costs for 2019 of €11.3m is now used as the baseline. No comments or submissions were received on this point. Consequently, we have implemented this adjustment, which ensures that all entities actual 2019 costs (as opposed to a mix of actual and determined) are used for the 2019 baseline.

Figure 7.2: MET Total, En Route, and Terminal Costs for RP3



Source: MET ASD, CAR Calculations

NSA

7.11 Relative to the consultation, we have:

- Adjusted the NSA costs for 2020 such that they align with the IAA's accounts for 2020.

- Reduced the NSA costs for 2021 by €0.9m to reflect updated information on cost performance year-to-date.

7.12 In the consultation, we noted that the NSA submission shows that it has estimated that its costs for RP3 will be higher than in RP2. This is due in part to the fact that previously reported supervision costs did not reflect the full costs of the oversight as they did not take account of corporate services such as IT, Finance and HR services. In previous years, some of these costs were not disaggregated within the IAA and thus were not reported as supervision costs. These costs now need to be reported as supervision costs due to the upcoming separation of the ANSP from the IAA and the subsequent

merger of the IAA SRD with CAR.

7.13 The higher RP3 costs are also due to expected increases in staff costs resulting from increases in staffing levels in certain units, and increases in other operating costs. Some of these increases are related to the changed institutional arrangements, while others, such as the new SAR officer positions, are related to other drivers.

7.14 Increases in the NSA cost figures are offset by reductions in the corporate services staff levels assumed for the ANSP, given the anticipated smaller size of the newly incorporated ANSP.

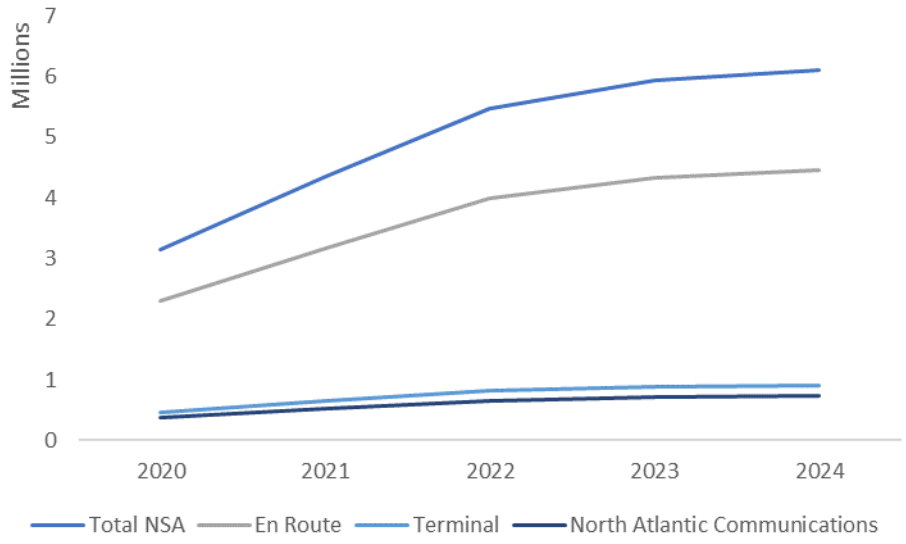
Table 7.2: Overview of Proposed NSA Costs, 2020-2024

Cost type	2020	2021	2022	2023	2024
Staff	€2.30m	€2.28m	€3.36m	€3.83m	€3.81m
Of which is pension	€0.43m	€0.39m	€0.58m	€0.66m	€0.66m
Other Opex	€0.82m	€2.05m	€1.82m	€1.82m	€2.01m
Depreciation	€0.02m	€0.02m	€0.29m	€0.29m	€0.29m
Total NSA Costs	**€3.14m**	**€4.35m**	**€5.47m**	**€5.94m**	**€6.11m**

Source: IAA SRD, CAR Calculations, Nominal Prices

7.15 The costs outlined above were proposed to be distributed between En Route (73%), Terminal (15%), and North Atlantic Communications (12%) for RP3.

Figure 7.3: NSA Total, En Route, Terminal, and NAC Costs for RP3



Source: IAA, CAR Calculations, Nominal Prices

Submissions Received on NSA Costs

7.16 The IAA ANSP points out that NSA costs are rising significantly over RP3, stating that the NSA is receiving a more than 100% increase in costs over the period.

Decision on NSA Costs

7.17 NSA costs have remained unchanged for 2022-2024. The NSA costs for 2020 have been

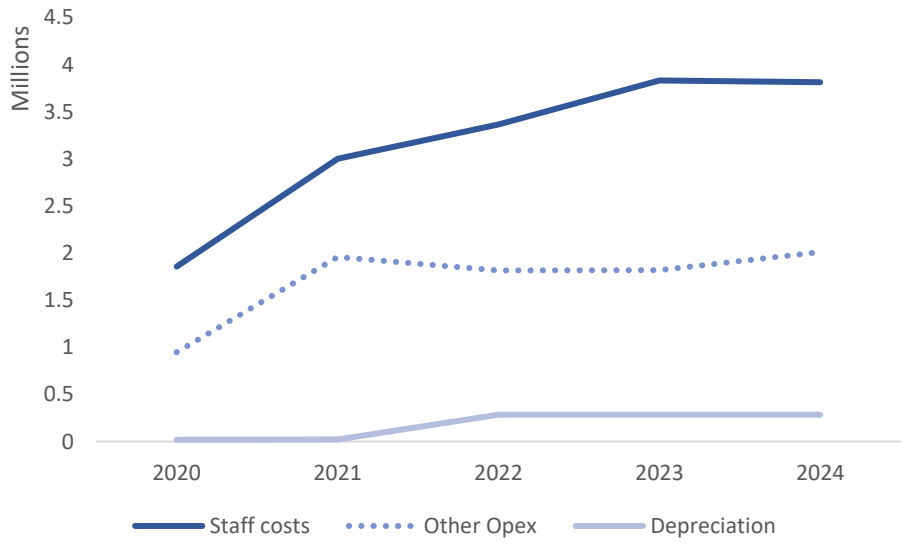
adjusted to match the IAA's internal cost allocations, in order to ensure consistency with how costs have been allocated in 2020 prior to the separation.

7.18 As flagged in the consultation, the costs for 2021 have been revised down by approximately €0.9m, following a review of the performance against the budget, year to date. This addresses the issue identified in the Steer report on the NSA cost forecasts with an unexplained increase in administration costs.

7.19 Regarding the comment from the IAA ANSP about the growth in NSA costs over RP3, we have set out the full detail of the derivation and allocation of NSA costs in the consultation document, inviting any specific comments on these assumptions. Consistent with the original performance plan, the full costs of Supervision now need to be allocated as such, due to the separation of the IAA, which contributes partially to the increasing costs as corporate services costs were not previously disaggregated within the IAA.

7.20 Additionally, we have applied a methodology to the NSA costs in the consultation document which if replicated precisely for the ANSP Determined Costs, would result in a decrease in the ANSP's costs compared to how they have been determined in the Performance Plan.

Figure 7.4: NSA Total Staff Costs, Pension Costs, Other Operating Costs, and Depreciation Across RP3



Source: IAA, CAR Calculations, nominal prices

Other State Costs (including Eurocontrol costs)

7.21 Table 7.3 below provides an overview of the costs. The figures are presented as they have been received from these organisations.

Table 7.3: Overview of Costs Resulting from the Policies of Aviation Organisations

Organisation	2020	2021	2022	2023	2024
Department of Transport	€2.75m	€2.88m	€2.96m	€3.01m	€3.07m
ICAO	€0.51m	€0.50m	€0.50m	€0.50m	€0.50m

ECAC	€0.04m	€0.04m	€0.04m	€0.04m	€0.04m
Eurocontrol	€7.15m	€7.35m	€7.54m	€7.54m	€7.55m
TOTAL	**€10.4m**	**€10.8m**	**€11.0m**	**€11.1m**	**€11.2m**

Source: Eurocontrol, Department of Transport, CAR Calculations, Nominal Prices

Decision on Other State Costs

7.22 There were no submissions received in relation to other State costs. However, there have been a few changes relative to the consultation. Firstly, the Department of Transport has provided updated policy costs which are now reflected in the Performance Plan. The updated costs are relatively similar to the ones in the Consultation.

7.23 Costs for Eurocontrol, ICAO and ECAC are all still fully assigned to En Route. However, the Department of Transport costs allocations have changed. This is due to clarification in relation to how Department of Transport costs were previously assigned within the IAA. The costs were actually assigned on the basis of the same allocations as the NSA costs. Thus, we have now assigned the Department's costs on the basis of the same allocation keys as the NSA costs for RP3.

8. Safety KPA

8.1 This section provides an overview of the targets for safety, environment and capacity KPAs for RP3. The submissions from stakeholders on each of these KPAs is also discussed.

8.2 Safety targets have been chosen to promote the effectiveness of safety management (EoSM). The safety targets have remained as proposed in the Consultation. Consistent with the provisions of Commission Implementing Decision (EU) 2021/891, the NSA has mandated that the IAA ANSP shall comply with the Union-wide targets during RP3 by ensuring EoSM that is at least "Level D" in the objective of safety risk management and at least "Level C" in the other safety objectives of culture, policy and objectives, promotion and assurance.

Table 8.1: Irish Targets for RP3, and Actual Performance for 2020

Safety management objective	2020		2021	2022	2023	2024
	Target	Actual	Target	Target	Target	Target
Safety policy and objectives	C	C	C	C	C	C
Safety risk management	D	C	D	D	D	D
Safety assurance	C	D	C	C	C	C
Safety promotion	C	C	C	C	C	C
Safety culture	C	D	C	C	C	C

Submissions Received on Safety Targets

8.3 The IAA ANSP considers that the consultation did not recognise the impact of EU Regulation 2017/373 on the approach to and oversight of safety. The ANSP has stated that they will not allow safety to be impacted but that this will have a negative effect on the other KPAs.

8.4 IATA and Ryanair express their support for the maintenance of the current safety targets as outlined in the Consultation.

Decision on Safety Targets

8.5 The safety targets remain unchanged from the Consultation. There was general support for the safety targets during the consultation process. The points raised by the IAA ANSP are related to the level of determined costs and interdependencies rather than proposing an adjustment to the safety targets, and as such are discussed in the Opex and Interdependencies sections.

9. Environment KPA

9.1 National KEA targets, or reference values, for each state, are calculated by the Network Manager, in order to meet the KEA target at an EU level.[42] The original and revised Irish KEA targets for RP3 are shown in the table below. For context, the actual performance of the IAA ANSP in 2019, the last year of 'normal' activity, was 1.24%. Consistent with our consultation proposal, the NSA has decided to adopt these national reference values as the revised KEA targets for RP3.

Table 9.1: IAA ANSP Targets, and Actual Performance for 2020

Horizontal flight efficiency (KEA)	2020		2021	2022	2023	2024
	Target	Actual	Target	Target	Target	Target
Original targets	1.56%	1.11%	1.54%	1.53%	1.53%	1.53%
Revised targets	1.56%	-	1.13%	1.13%	1.13%	1.13%
Percentage Reduction in target	-	-	26%	26%	26%	26%

Source: Ireland October 2019 Performance Plan & NM advice on the revision of performance targets

Submissions Received on Environment

9.2 The Staff Panel raises concerns that the targets are unattainable due to the fact that the neighbouring airspaces do not offer direct routings which directly impacts the IAA ANSPs environmental performance.

9.3 The IAA ANSP states that while it supports ambitious targets, many elements relating to the environmental targets are outside of its control due to the practices in neighbouring airspaces. It claims this makes the suggested targets overly ambitious and unachievable. The IAA ANSP points out that the targets for Ireland are lower than the overall European targets, and that the targets are based on 2020 performance, not a true representation of typical traffic levels, which means that horizontal flight efficiency was improved across almost all ANSPs in Europe. It states that the principles used to define the local targets should reflect the principles outlined in Recital 15 of the Commission Implementing Decision (EU) 2021/891 in relation to the revision of the Union-wide targets. The IAA ANSP also states, again, that the correct KEA figure for 2020 is 1.13% rather than 1.11% as provided by the Network Manager (NM). Finally, it states that it is not responsible for inefficiencies caused by airline flight planning preferences.

9.4 IATA supports the environment targets. However, it asks for some detail on the potential impact of the opening of the second runway at Dublin Airport on this KPA.

9.5 Ryanair supports the proposed environment targets.

Decision on the Environment KPA

9.6 We have decided to maintain the environment targets as set out in the Consultation and as per the assigned national reference values. We agree with the IAA ANSP and

[42] For details on the methodology, see: https://ansperformance.eu/methodology/horizontal-flight-efficiency-pi/

Staff Panel that the environment targets are challenging and are more ambitious than the EU wide targets. We agree with the IAA ANSP that practices of neighbouring airspaces as well as the flight planning preferences of airlines are significantly outside of its control. However, the introduction of Free Route Airspace (FRA) in the UK should allow for improved performance relative to 2019. While the IAA ANSP states that it *'supports setting ambitious targets to drive improved performance'* it has proposed alternative targets which would in fact allow for significant deterioration in performance relative to 2019 performance (a target of 1.53% compared to 1.24% in 2019).

9.7 A challenging target which requires improved performance relative to 2019 will drive a focus for both ANSP and NSA to continuously assess and monitor performance, and to identify any potential measures within the control of ANSP to improve performance any further. From that perspective, it is preferable to have a target which, while challenging, seeks to drive performance improvements.

9.8 We also note that, should traffic levels deviate from the forecasts by more than 10%, it is possible to request a revision of the target within the period, given the potential impact of this on KEA performance.

9.9 Regarding the IAA ANSP's point in relation to Recital 15, we understand this to relate to union wide performance, not each set of national reference values. The NM has confirmed the national reference value for Ireland as 1.13% for each year 2021-2024, and including the target proposed by the IAA ANSP would be considered inconsistent with the national reference value.

9.10 The IAA ANSP has again stated that the KEA figure for 2020 provided by the NM is incorrect. Notwithstanding a previous request from the NSA, it has not provided any substantiation or explanation of this. In the absence of this we continue to take the figure of 1.11%, as provided by the NM and as pre-filled in the Performance Plan template, as the actual performance in 2020.

9.11 In relation to the impact of the North Runway on environmental performance, this will likely lead to an overall improvement, all else equal, in taxi-out times at Dublin Airport. As traffic recovers towards 2019 levels, expected by 2024, the runway will alleviate the ground infrastructure-related additional taxi times observed in 2019 in particular. It should also translate into an improvement in the additional time in terminal airspace metric. The runway is expected to be completed in late August 2022.

10. Capacity KPA

10.1 Tobjective of the capacity key performance area is to achieve capacity levels that closely match with demand. There are two KPIs within the KPA of capacity, one relating to En Route capacity and one relating to terminal capacity, both of which are detailed below.

En Route Capacity

10.2 The NSA has decided to adopt the national reference values provided by the Network Manager, consistent with the union-wide targets above, as the En Route capacity targets for RP3. This is in line with our consultation proposal. The original and revised Irish En Route capacity targets for RP3 are shown in the table below.

Table 10.1: Irish En Route ATFM Delay Targets, and Actual 2020 Performance

ATFM delay mins. per flight	2020		2021	2022	2023	2024
	Target	Actual	Target	Target	Target	Target
Original targets	0.07	-	0.07	0.07	0.04	0.03
Revised targets	0.07	-	0.01	0.03	0.03	0.03
Percentage Reduction in target	-	-	86%	57%	25%	-

Source: Ireland October 2019 Performance Plan & Network Manager

Terminal Capacity

10.3 There are no union-wide targets for terminal capacity, so these targets must therefore be set a local level by the NSA. The only Irish airport which generates arrival ATFM delay is Dublin Airport and almost all delay is not ANSP-attributable. In the original RP3 Performance Plan, the terminal capacity targets were therefore set at a level consistent with the average minutes of delay per arrival at Dublin airport in RP2.

10.4 Given that the levels of arrival ATFM delay have remained broadly unchanged notwithstanding the traffic reduction in 2020, and most of the delay is not ANSP-attributable in any case, we have decided to retain these targets from the original RP3 Performance Plan, as was proposed in the Consultation.

Table 10.2: IAA ANSP Terminal Delay Targets, and Actual 2020 Performance

Arrival ATFM delay mins. per flight	2020		2021	2022	2023	2024
	Target	Actual	Target	Target	Target	Target
Original targets	0.25	0.11	0.25	0.2	0.2	0.2
Revised targets	0.25	-	0.25	0.2	0.2	0.2

Source: Ireland October 2019 draft Performance Plan

Submissions Received on Capacity

10.5 Aer Lingus notes that in RP2 the ANSP operated with zero delay, and that it expects a similar level of delay performance to be achieved throughout RP3.

10.6 Atlas Air considers that increased levels of delay can ultimately lead to reduced safety, and as such, it hopes that the current performance can continue, and that the NSAs will continue to promote the low delay levels.

10.7 British Airways outlines a preference for a balance between low levels of delay and cost efficiency.

10.8 The Staff Panel raises concerns about the IAA ANSP's ability to meet the targets with the proposed staff numbers for RP3.

10.9 Similarly, the IAA ANSP details concerns about whether the level of determined costs and staff levels will allow it to meet the capacity targets. The IAA ANSP has had an assessment carried out by the NM, which suggests that should insufficient staffing result in a reduction of available sectors, this would lead to potential delays of between 70,000 and 400,000 minutes. In the scenarios detailed in the NM report, the level of delay caused by this staff reduction would lead to the IAA ANSP exceeding the capacity target.

10.10 The IAA ANSP further states that this will lead to delays and reroutings, which means longer routes and less efficient flight profiles which will also negatively impact environmental performance. It notes that the European Commission has recognised the importance of ANSPs having the necessary resources to continue to function and to ensure that ANSPs are ready when traffic recovers, and the ANSP does not believe that the NSA is considering capacity from this perspective.

10.11 The IAA ANSP states that the target of 0.03 minutes is equivalent to zero delay, and if it is the case that the airlines do not want to pay for zero delay, then the targets should reflect this.

10.12 IATA supports the proposed capacity targets. IATA states that given the historic performance of the IAA in RP2, including instances of managing an average of 8% additional traffic over the forecast while achieving zero CRSTMP delay, the targets are appropriate and achievable. IATA also noted that airlines do not want a zero delay ambition.

10.13 Ryanair supports the proposed capacity targets. Ryanair states that although the IAA ANSP has expressed the concern that it may not meet the targets, no clear evidence of this has been presented. Ryanair states that the IAA ANSP has developed the plan with a target of zero delay, despite airlines' preference for a balance between cost efficiency and low levels of delay.

Decision on Capacity

10.14 The capacity targets are unchanged from the Consultation proposal. There is support from airlines for the capacity targets that were proposed. Some of the concerns expressed by the Staff Panel and the IAA ANSP are related to the level of determined costs and how this affects the ANSP's ability to meet the targets. As the required capacity performance to meet the forecast traffic levels is an input to the level of determined costs, this is discussed further in sections 4 and 12.

10.15 There is general support from stakeholders for the capacity target levels, with the

exception of the IAA ANSP and the Staff Panel. The target of 0.03 minutes of delay is not equivalent to zero delay, a point which was made clear in the original IAA submitted 2019 Draft Performance Plan. The responses from airspace users and IATA broadly support an efficient level of cost for an appropriate service quality, rather than seeking to eliminate all delay.

10.16 Based on the previous performance by the IAA ANSP, the expansion in investment that we have allowed for, and the fact that the Steer forecasts are based on maintaining this historic level of performance, these targets are realistic and achievable. Neither the capacity targets nor cost allowances are based on eliminating all delay, but rather on maintaining low levels of delay. Furthermore, as set out in Section 11, we have assessed the financial viability of the regulatory settlement and it is clear that even if the IAA ANSP underperforms on cost relative to our targets, the regulatory settlement provides for a regulated revenue stream sufficient to allow the ANSP to still meet the capacity targets from a financial resourcing perspective.

11. Cost Efficiency KPA

11.1 At a Union-wide level, the cost efficiency KPA includes one KPI, which is the year-on-year change to determined unit costs (DUC) for En Route air navigation services, starting from the 2019 baseline DUC level. The PRB has set Union-wide DUC targets for both the 2019 baseline value and the year-on-year change throughout RP3. At a Member State level, the cost efficiency KPI includes two KPIs; the DUC for En Route services and the DUC for terminal services.

11.2 When the EC/PRB assess the performance plans for approval, the En Route DUC is assessed with reference to the Union-wide target trend, the baseline DUC relative to each Member State's comparator group (which for Ireland includes Denmark, Finland, Norway and Sweden) and whether any deviations from the Union-wide trend can be justified in terms of achievement of other KPA targets or longer-term benefits for airspace users. The terminal DUC is assessed with reference to the En Route DUC trend and the DUC level at similar airports.

11.3 In order to calculate an appropriate level of allowed determined costs for the ANSP in RP3, the NSA has followed the regulatory building blocks approach, consistent with the regulations, its previous regulatory decisions and its general approach to economic regulation. The building blocks used to calculate the determined costs for RP3 include:

- An efficient level of operating costs based on the forecast level of traffic and required level of resources;
- Depreciation charges based on capital expenditure prior to RP3 and the allowed level of capital expenditure in RP3;
- The cost of capital based on the allowed asset base and an efficient WACC; and
- Exceptional items for costs related to VSS (Voluntary Severance Schemes) and VER (Voluntary Early Retirement) in 2021.

11.4 This section sets out consultation responses received on the cost efficiency KPA and our decision on the DUC and unit rates based on the consultation – note that the DUC and unit rate are ultimately driven by the level of ANSP, MET and Supervision costs, which are set out in the sections above.

Submissions Received on Cost Efficiency KPA

11.5 On the DUC, IATA states that all SES states should comply with, and preferably outperform, all Union-wide KPA targets and notes Ireland will achieve the cost-efficiency target, though this is due to the cumulative effect over the period and further improvement in performance could be achieved. Aer Lingus welcomes the update of the Performance Plan in line with the targets. Ryanair states that it is '*disappointed Ireland will underperform on cost efficiency*' and that alignment with the targets should be the minimum.

11.6 The IAA ANSP notes that the European Commission has stated that performance

against Union-wide targets will be assessed in context of network-wide requirements and local circumstances. In addition, the Irish unit rate is below the Union-wide average and reducing costs further to meet Union-wide targets does not consider existing efficiencies or the risks attached to not allowing modest cost increases.

11.7 On unit rates, IATA and Ryanair both state that the level of unit rates in RP3 is a concern (particularly at the start of the period) and asks that the Irish state considers funding the forgone ANSP revenue from 2020 and 2021 (instead of it being funded by unit rate adjustments) and IATA also states that the Irish state should consider reducing unit rates below the calculated level in line with Article 29(6) of Regulation 2019/317. Aer Lingus asks whether unit costs and rates could be smoothed over the period to mitigate the impact of the steep increase in 2022.

11.8 The IAA states that it does not agree with the NSA proposal to extend the recovery of the 2020/21 lost revenue to 2029 and that the NSA should provide appropriate reasoning why seven, instead of five, years are required for the recovery. The IAA also states that the profitability projected by CAR for the years 2022 to 2024, in EBITDA and net income terms, is incorrect and overstates profitability.

NSA Response and Analysis on Cost Efficiency KPA

Union-wide Targets

11.9 The original and revised Union-wide En Route cost efficiency targets are shown in the table below. 2020 and 2021 have been combined as one period for the cost efficiency KPA, with the DUC target revised upwards significantly. The DUC target trend is reduced in the remaining years of RP3, though the implied DUC level is higher relative to the original targets at the end of the period.

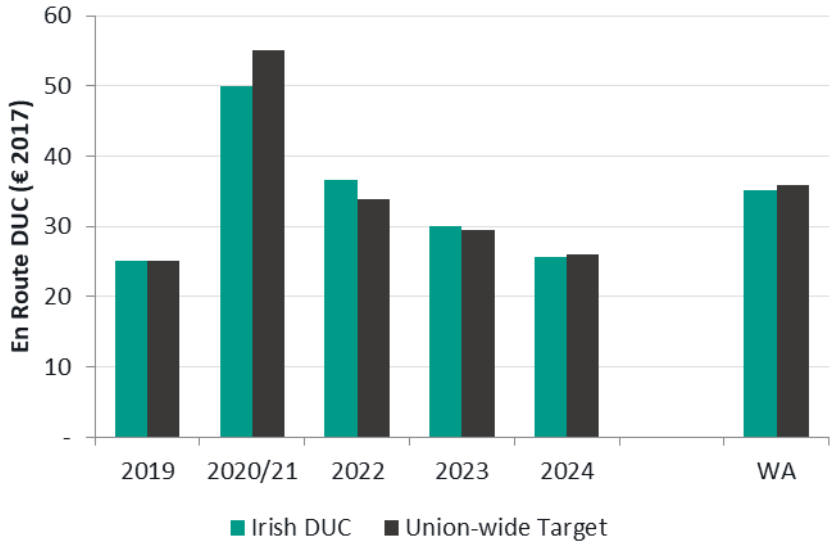
Table 11.1: Cost Efficiency KPA: Union-wide Targets

En Route DUC growth	Metric	2020	2021	2022	2023	2024
Original targets	YoY Change %	-1.9%	-1.9%	-1.9%	-1.9%	-1.9%
	Index (2019=100)	98.1	96.2	94.4	92.6	90.9
Revised targets	YoY Change %	+104.2%		-36.5%	-15.0%	-12.4%
	Index (2019=100)	204.0		125.5	108.9	96.4

Source: Commission Implementing Decision (EU) 2019/903 & Commission Implementing Decision (EU) 2021/891

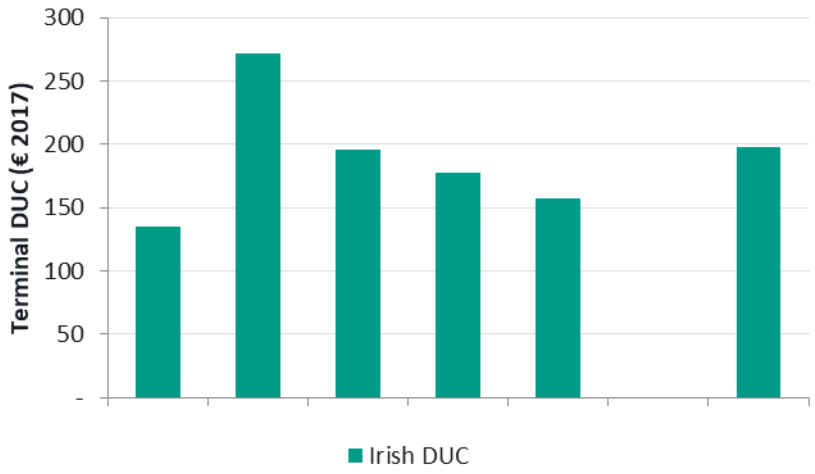
11.10 The En Route DUC, against the Union-wide target trend, and the Terminal DUC across RP3 are shown in the figures below. The DUCs and Union-wide target trend are shown relative to the 2019 baseline value and include IAA ANSP, MET ASD, and supervision costs (though exclude exceptional items for costs related to VSS and VER in 2021).

Figure 11.1: Cost Efficiency KPA: En Route DUC vs. Union-wide Targets



Source: CAR Calculations

Figure 11.2: Cost Efficiency KPA: Terminal DUC



Source: CAR Calculations

11.11 The year-on-year change to the En Route DUC is in line with the Union-wide trend, though there is some variation between years. In particular, 2022 is above the target; in that context we note that while the Eurocontrol May forecast was generally higher than the previous forecast, the 2022 En Route service units actually reduced. Overall, however, the weighted average (WA) En Route DUC (weighted by SUs) is €0.67 (1.9%) lower than equivalent value implied by the En Route Union-wide DUC target and 2024 is below target, including the baseline adjustments to correct MET ASD 2019 actual costs and to account for the transition to actual flight trajectories in RP3. The calculated weighted average also does not include the restructuring costs from 2021, in line with, though there is some variation between years, the Terminal DUC follows a similar trend over the period.

11.12 With respect to the submissions received, in determining an appropriate level of determined costs, as set out above, we have followed the regulatory building blocks approach and have not targeted a specific DUC level. While the En Route DUC is above the Union-wide target in some years of the period, it is below at the end of the period and across the period (based on the WA DUC level).

11.13 In particular, in order to ensure compliance with the requirements of Regulation (EU) 2017/373, as advised by Steer and specific local factors which were not in the cost base in 2019 include the En-route Contingency Centre (CEROC), and the new tower and commencement of parallel runway operations at Dublin Airport. The CEROC will enhance the capability of the IAA ANSP to reliably provide the required level of safety, capacity, and environmental performance for to En Route traffic. Parallel runway operations at Dublin Airport will, in the context of the anticipated recovery in traffic by 2023/2024, have a significant impact on taxi-out times and alleviate the airfield capacity related congestion experienced in 2019. As well as the associated capital investment, these projects will require additional training, engineering capability and, once operational, operational expenses, as have been provided for by Steer in their forecasts.

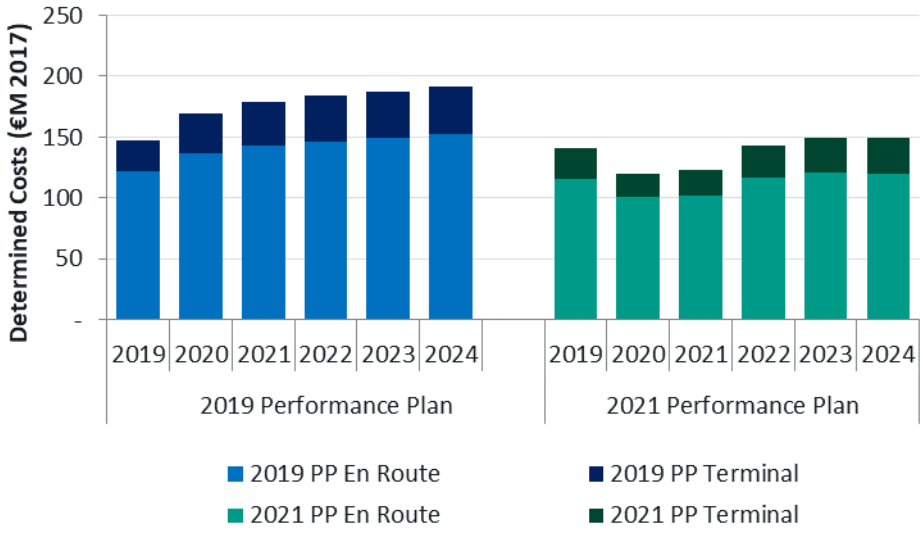
11.14 Overall, our analysis suggests that, in real terms, the IAA ANSP's costs will need to escalate above 2019 levels in 2022, and with further, more moderated, escalation required in 2023 and 2024. It should be noted that the above DUC analysis relative to the target is inclusive of the €3m baseline adjustment in relation to MET ASD actual costs for 2019, as described in Section 7.

Comparison with 2019 RP3 Performance Plan

11.15 As noted above, the regulated entities have developed fully revised Business Plans, and we have developed a fully revised Performance Plan, as compared to the original RP3 plan. That plan was developed in anticipation of a very different set of prevailing circumstances during RP3, and we consider it important to ensure that the new plan appropriately reflects the changed circumstances.

11.16 Total determined costs, across ANSP, MET and supervision services, within the 2019 performance plan (PP) and the 2021 Performance Plan (i.e., this decision document) are shown in the figure below. We consider that this figure reflects the extent to which the regulated entities and the NSA have sought to take account of these circumstances.

Figure 11.3: Cost Efficiency KPA: Total Determined Costs vs. 2019 PP

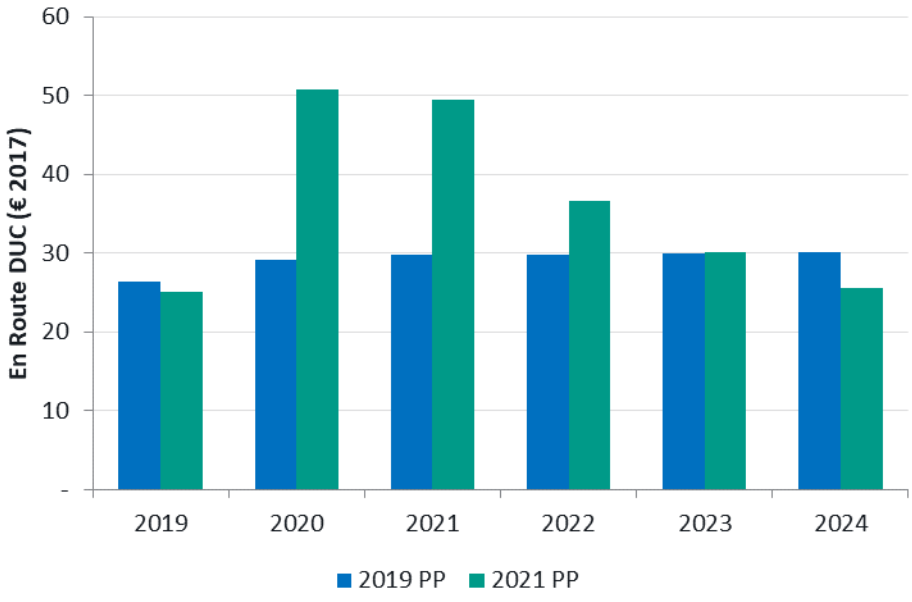


Source: 2019 Draft PP, CAR Calculations

11.17 Due to the 2019 baseline figures in the 2019 Performance Plan being projected figures, but actual figures within the 2021 Performance Plan, the 2019 baseline value is €6.3 million lower in the 2021 Performance Plan in real terms. The Determined Costs across RP3 are also lower than the previous plan due to a combination of lower levels of traffic, reductions in allowed operational and capital expenditure and a more efficient WACC. Total Determined Costs are €226 million (24.8%) lower across RP3 in real terms, relative to the original plan.

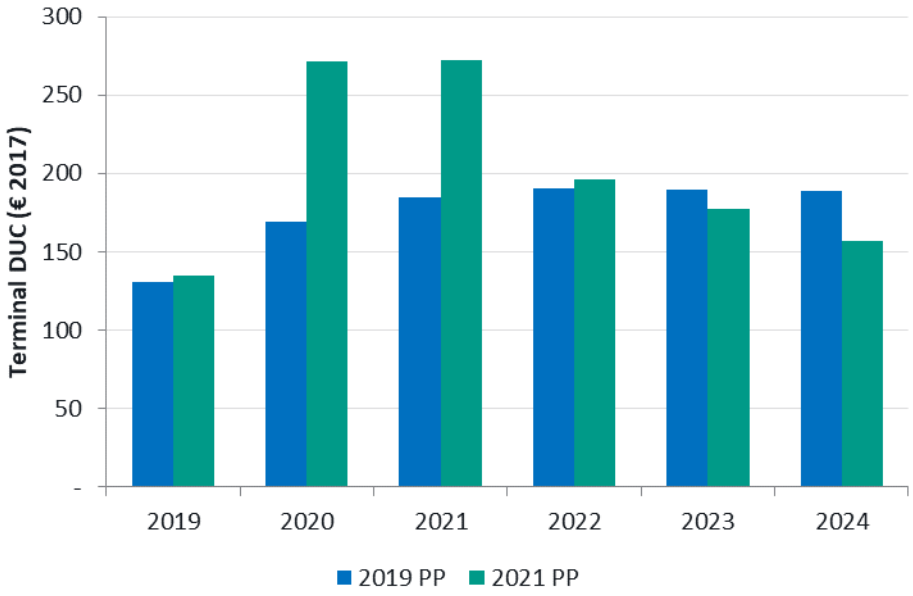
11.18 The DUCs for En Route and Terminal navigation services are shown in the figures below.

Figure 11.4: Cost Efficiency KPA: En Route DUC vs. 2019 PP



Source: 2019 Draft PP, CAR Calculations

Figure 11.5: Cost Efficiency KPA: Terminal vs. 2019 PP



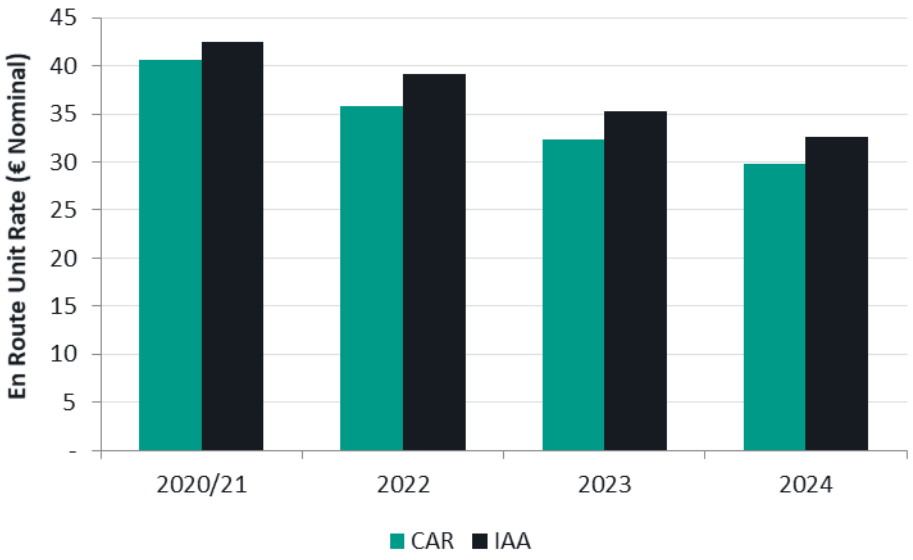
Source: 2019 Draft PP, CAR Calculations

11.19 Due to the significantly reduced level of SUs in 2020 and 2021, relative to the levels projected in the 2019 Performance Plan, the En Route and Terminal DUC is higher in these years. As traffic is projected to recover in the subsequent years of the period, both the En Route and Terminal DUC is reduced to below the level of the 2019 Performance Plan by the end of the period.

Unit Rates

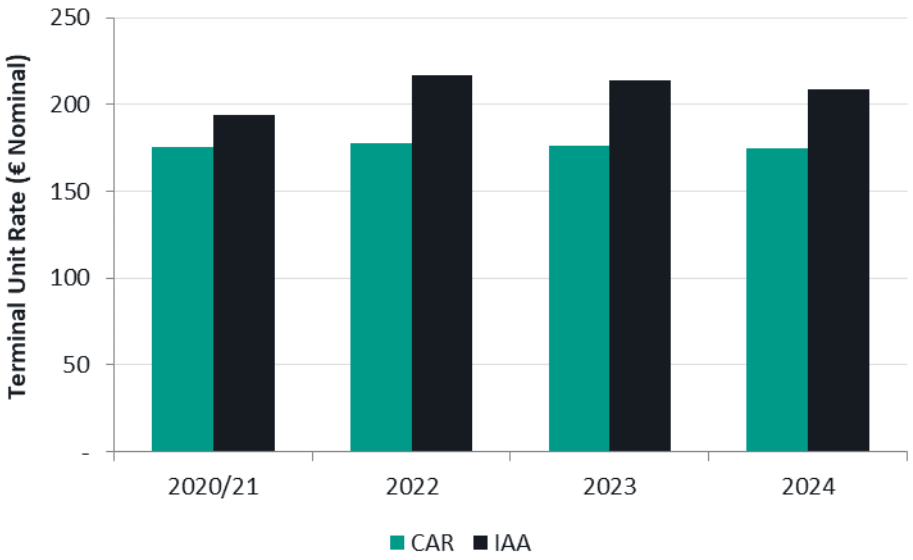
11.20 The En Route and Terminal forecast unit rates across RP3, relative to those inferred from the IAA ANSP Business Plan, are shown in the figures below in nominal prices. The unit rates shown include only adjustments relating to previous periods at the start of the period, and adjustments relating to lost revenue (in 2020 and 2021) impacting from 2023. Other potential within-period adjustments, such as in relation to inflation and traffic risk sharing, are not known at this stage.

Figure 11.6: Cost Efficiency KPA: En Route Unit Rate vs. IAA ANSP BP Proposal



Source: CAR Calculations

Figure 11.7: Cost Efficiency KPA: Terminal Unit Rate vs. IAA ANSP BP Proposal



Source: CAR Calculations

11.21 Relative to the IAA ANSP BP proposal, the En route and Terminal unit rates are 7.3% and 15.5% lower respectively, with difference driven by reductions to ANSP operating costs, capital expenditure and WACC. The variance between the En Route and Terminal reductions is driven by the higher capital to operating cost ratio forecast for the provision of Terminal services, and the fact that overall our adjustments have had more impact on capital rather than operating costs (in particular, the adjusted asset life of the Dublin tower). MET and supervision costs are unchanged across the CAR and IAA ANSP figures shown, and are in line with the figures presented in Section 7.

11.22 In response to the submissions received, we have decided that the revenue lost in 2020 and 2021 should be recovered over the maximum allowed period of seven years, in order to, as far as possible, smooth the profile of the impact on unit rates in each year.

However, it is not clear to us that the SES regulatory framework permits 'smoothing' of rates, with the deferred revenue, across years, as suggested by Aer Lingus, and the decision on whether to reduce rates below the calculated level (in line with Article 29(6) of the Regulation 3019/317) is not within the NSA's jurisdiction.

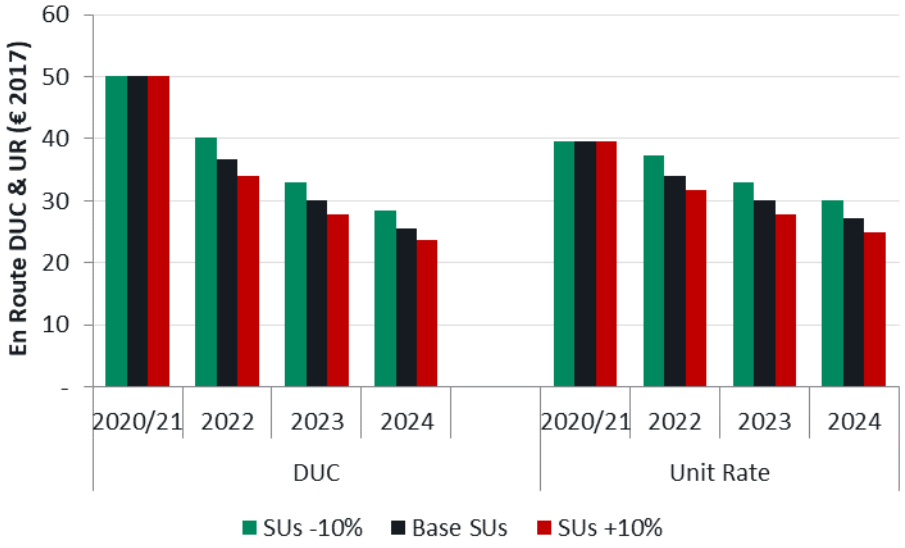
11.23 Note that, in reality, there are likely to be a number of other adjustments to unit rates from 2022, arising from the inflation, the traffic risk sharing, cost sharing mechanisms, as well as other revenues and incentive payments. These adjustments will increase or decrease the unit rate depending on the level of costs, traffic or delay relative to the projections within this Performance Plan. Unit rate assumptions can be adjusted in the model.

Scenario Analysis

11.24 As described in Section 3, in a letter dated 5 July, the European Commission suggested that plans may be updated for the revised Eurocontrol forecasts as part of the verification of completeness phase. In contemplation of this, we have assessed the impact of 10% higher and 10% lower forecast SUs on our cost forecasts, from 2022, relative to current projections. These variations represent revised forecasts that would be included within the final Performance Plan, not variations in actual traffic levels relative to forecasts within the period (which means that no traffic risk sharing mechanism payments would be triggered, but rather the DC and DUC would be adjusted).

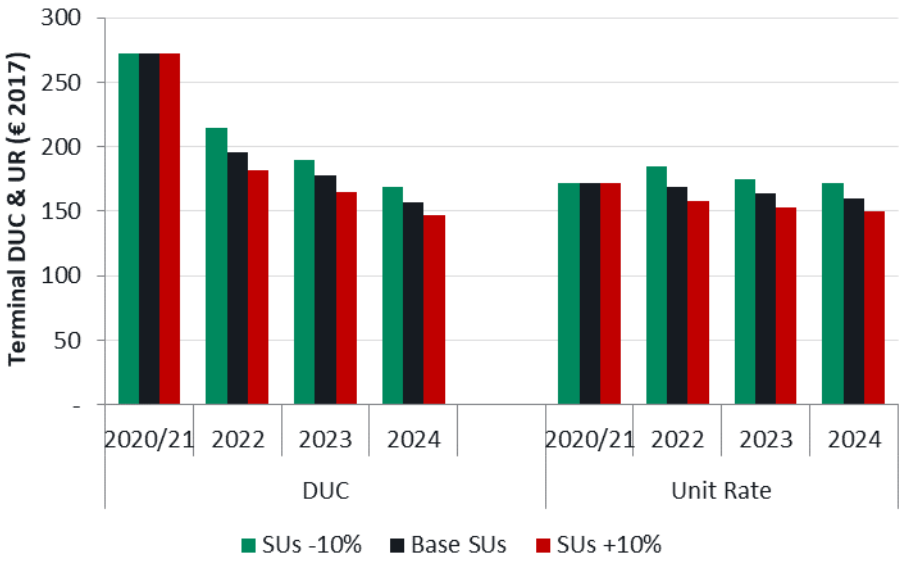
11.25 The impact of these two scenarios on En Route and Terminal DUC and unit rates is shown in the figures below. To estimate these scenarios, we have used the Opex model developed by Steer. The revised Capex programme is relatively insensitive to the traffic levels; the scenarios below assume that the allowed programme would remain unchanged.

Figure 11.8: Cost Efficiency KPA: En Route DUC & Unit Rate +/-10% SUs



Source: Steer Opex Model & CAR Calculations

Figure 11.9: Cost Efficiency KPA: Terminal DUC & Unit Rate +/-10% SUs



Source: Steer Opex Model & CAR Calculations

11.26 Based on our assessment of an efficient level of ANSP operating costs, more or less traffic implies the operating cost requirement will marginally increase or decrease accordingly. Therefore, at a total cost level, ANSP operating costs increase, from 2022, when SUs are increased by +10% and decrease when SUs are reduced by -10%. However, due to the IAA ANSP's high level of fixed costs, only a small proportion of operating costs are affected; capital expenditure, MET costs and supervision costs are not affected, at least within the bounds of a 10% variation.

11.27 The majority of the impact is therefore due to different SU forecasts being used to calculate the DUC and unit rates; given the majority of costs are fixed, changes to the level of SUs will affect DUC and unit rates far more at a unit, than at a total, level. The impacts are summarised in the table below.

Table 11.2: Cost Efficiency KPA: Impact of +/-10% Sus (2022-2024)

Scenario	En Route		Terminal	
	DUC	Unit Rate	DUC	Unit Rate
+10% SUs	(7.5%)	(7.5%)	(6.8%)	(6.6%)
-10% SUs	9.9%	9.9%	8.0%	7.7%

Source: CAR Calculations

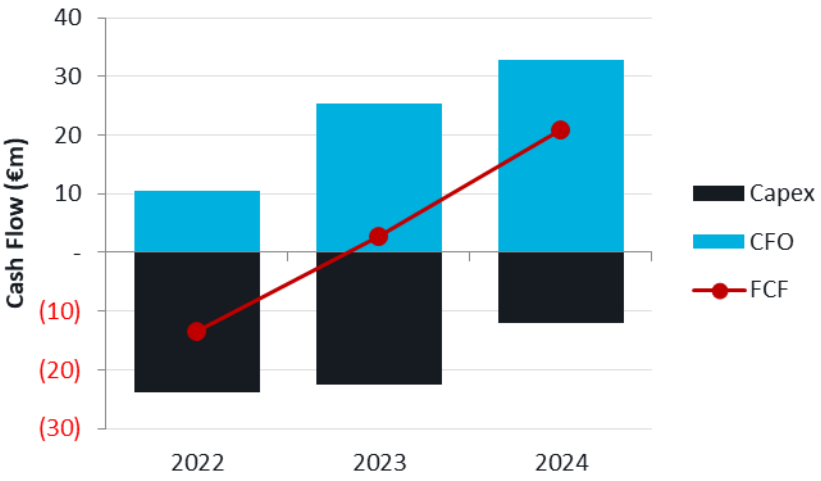
Financial Analysis

11.28 As is our normal practice in economic regulation, we have also assessed the financial viability of the regulated entity and stress tested our determined cost decision. Within our consultation proposal, this analysis included an assessment of profitability, which we have not included in the assessment below. The emergency measures for 2020/2021 have created an unusual accounting situation. The profit recognised by the IAA in 2020 and 2021 relates to costs incurred in these years, but the revenue will flow to the newly incorporated ANSP from 2023 to 2029 (in the form of the revenue recovery mechanism). While we disagree with the IAA ANSP that it was an '*error*' to

forecast profitability as we did within our consultation proposal, it is not central to our financeability assessment (which is based on cash flow). Given that the IAA ANSP has chosen to recognise the profits differently, we have not included a projection of profitability in the final model.

11.29 The IAA ANSP's projected cash flow in the remaining years on RP3, based on only the regulated activities outlined above, is shown in the figure below.

Figure 11.10: Cost Efficiency KPA: IAA Cash Flow



Source: CAR Calculations

11.30 Due to a significant level of planned capex described above, free cash flow (FCF) is projected to be negative in 2022 and positive, but small, in 2023. As outlined above, unrecovered allowed revenues in 2020/2021 will be recoverable from 2023.

11.31 The IAA currently has no debt and the level of cash reserves the IAA ANSP will have at the start of 2022 as a result of the restructuring of the organisation is unknown at this time. Therefore, given the uncertainty and as a limit case which ensures that the financial position can only be better than what we model, we test a scenario of zero cash at 1 January 2022 for the purposes of the below analysis.

11.32 The IAA's cash flow from operations (CFO)/Debt ratio is shown in the table below. Under the base scenario projections, the CFO/Debt ratio is well within a sustainable range; the maximum cash/debt requirement peaks at €13.5m.

11.33 An unplanned 10% increase in operating costs from 2022-2024 worsens the CFO/Debt ratio somewhat, but we still consider this to be at a sustainable level – particularly given the IAA's low cost of debt. The reduced Free Cash Flow modelled under this downside scenario might also represent an equivalent level of Capex overspend of about €10m per year.

Table 11.3: Cost Efficiency KPA: IAA ANSP Coverage Ratios

Scenario	Ratio	2022	2023	2024
Base	CFO/Debt	-	1.88	3.07
+10% Opex	CFO/Debt	-	0.58	0.65

Source: CAR Calculations

11.34 Having regard to the above, we are confident that even in the event of a severe downside scenario where actual costs exceed Determined Costs, our permitted level of Determined Costs will generate a regulated revenue stream which is sufficient to enable the financial viability of the regulated entity. We have set targets which we consider to be achievable, while achieving compliance with the other KPAs, but even if the IAA ANSP is unable to fully meet our cost efficiency targets, performance in the other KPAs does not need to be degraded.

11.35 We also note that, should there be a significant change in circumstances within the period, the regulation provides for a process whereby the Performance Plan may be re-opened.

12. Interdependencies

12.1 An important element of the target-setting process for each of the KPAs is the consideration of the extent to which interdependencies exist, and therefore the extent to which there are trade-offs between the achievement of each KPA performance targets.

12.2 Conceptually, there is a trade-off between cost efficiency and each of the other three KPAs – capacity, environment, and safety. Improving performance in each of these areas may require additional resources, which will increase costs and reduce cost-efficiency performance. The trade-off between cost efficiency and the other three KPAs also implies that there are potential trade-offs between the capacity, environment, and safety KPAs. If performance improvements are mutually exclusive, costs incurred in improving one KPA implies foregoing improving another. In practice, performance across KPAs is unlikely to be fully mutually exclusive though some level of trade-off is likely to exist.

12.3 Interdependencies and trade-offs can inform the target-setting process such that KPA targets are set at the optimum point that maximises the combined performance achieved across all KPAs. However, the extent to which this can be achieved in practice is limited by regulatory and other constraints. The remainder of this section discusses the interdependencies and trade-offs between the KPAs, and sets out submissions received from stakeholders and our decision in relation to KPA interdependencies.

Safety and the Other KPAs

12.4 The required level of safety, capacity and environmental performance have been used as inputs to the level of determined costs forecast by the NSA in relation to, for example, staff headcount forecasts (which allow for increases associated with EU Regulation 2017/373 compliance measures) and capital investment requirements.

12.5 While, conceptually, a trade-off between safety KPA performance and other KPA performance is likely to exist, the importance of ensuring the required level of operational safety and safety management means that these trade-offs should not exist in practice. In the context of other KPAs, all necessary costs should be incurred in order to achieve the required level of safety performance, irrespective of whether the funds and resources associated with these costs could yield greater improvements in performance in other KPAs (or adversely affect performance in other KPAs).

Capacity and Cost Efficiency

12.6 The relationship between cost efficiency and ANSP-attributable delay is largely long term; though incremental additional capacity can be provided in the short term, material increases in capacity can be provided by either by capital investment in infrastructure and/or training of additional ATCOs, both with long lead times. The IAA ANSP stated within its RP3 Business Plan that if staffing levels are not increased in line with its proposals, there is likely to be increased delays in peak months later in RP3, implying staffing levels are primary driver of the interdependency between capacity and cost efficiency.

12.7 Ideally, capacity targets should be set at the optimum point where the marginal cost associated any additional reduction in delay exceeds the marginal economic benefits associated with any further delay reduction, in line with the PRB's economic cost of delay concept.

12.8 Throughout RP2, Ireland's ANSP-attributable delay was close to zero and was significantly below target, and although the capacity reference values and targets have been reduced for RP3, Ireland's delay is not projected to exceed the new targets in RP3 – due in part to the fact traffic is projected to remain below 2019 levels throughout most of RP3. Based on current levels of delay and the PRB targets, the IAA ANSP appears to be operating at a point where there is limited scope for further reduction in delay and the monetary costs associated with this are likely to exceed the value of any savings in terms of the cost of delay.

Capacity and Environment

12.9 While a trade-off between improving performance in either the capacity or environment KPA could exist (if improving one KPA meant forgoing improvements in the other), in practice it appears there is currently little or no trade-off between improving performance in either of these KPAs in Irish airspace.

12.10 Less capacity and more congested airspace imply that airspace users have less ability to use the most efficient flight routing and, conversely, more capacity implies more efficient flight paths can be achieved. Therefore, while performance in these KPAs appears to be interdependent, there does not appear to be an inherent trade-off.

12.11 It is possible, in some circumstances, particularly in very congested airspace, that the most efficient flightpath could have an adverse impact on capacity and increase delay; however, this does not appear to currently be the case in Irish airspace. The IAA ANSP states in its RP3 Business Plan that the implementation of any measures that restrict capacity will adversely impact environmental performance, implying that, in its view, performance in each of the two KPAs is instead correlated.

Submissions Received on Interdependencies

12.12 The IAA Staff Panel states that the modelling of operating costs did not take account of interdependencies between safety, capacity and cost, and that, in particular, the modelled cost reductions did not take account of the effect on safety.

12.13 The IAA ANSP also states that the consultation proposals did not attempt to account for the interdependencies between cost, safety, capacity and environment, and has not provided sufficient detail on interdependencies and the assumptions used to assess those trade-offs between the KPAs.

12.14 IATA and Ryanair both state that they do not support the IAA's 'zero-delay' ambition, rather, they expect efficient cost for the appropriate level of service quality.

NSA Response on Interdependencies

12.15 As made clear in earlier Sections, in particular Sections 4 and 6, and also in the Steer reports, interdependencies were taken into account as part of the cost efficiency and

other KPA target proposals. The assessment of the level of resources required to efficiently deliver the required safety and capacity performance is the cornerstone of the cost forecasting we have carried out. As part of the operating cost modelling, for example, ATCO staff requirements are based on traffic projections while maintaining capacity and safety performance (including compliance with Regulation (EU) 2017/373). The contribution to KPA performance has also been taken into account when determining the required level of capital expenditure, in allowing for major projects such as COOPANS, which will deliver safety and productivity benefits, and the EASDS replacement, which is required from a safety perspective.

12.16 As noted above, the new ANSP will not have any significant debt, while it is set to benefit from the recovery of significant additional revenues from 2023. While we have set cost forecasts which we consider achievable, even if IAA ANSP is unable to fully meet the cost efficiency KPA targets, performance in the other KPAs does not need to be degraded. It is therefore the NSA's view that, in the event that the IAA ANSP is at some point unable to meet all KPA targets simultaneously, it is the actual cost efficiency performance against the target DUC which the IAA ANSP should opt to degrade.

13. Traffic Risk Sharing and Incentives

Traffic Risk Sharing

13.1 The parameters for the TRS are set out in Regulation 2019/317, however, the NSA can decide to alter these in order to increase (though not decrease) the ANSP's revenue risk exposure above the 4.4%. In line with our consultation proposal, the NSA has decided that the TRS parameters for the IAA ANSP will not be altered above the default level.

13.2 The TRS is the central risk sharing mechanism in RP3 and applies to the ANSPs' determined costs based on the difference between Performance Plan forecast and actual service units. Service unit variance of +/-2% of the Performance Plan forecast results in no adjustments, SU variance of +/-2% to +/-10% around the forecast result in 70% of the difference passed onto airspace users and SUs +/-10% around the forecast result in all of the difference being passed onto airspace users. The ANSP's maximum traffic risk exposure is therefore +/- 4.4% of determined costs (2%+(30%*8%)). The adjustments are made to the unit rate in year n+2.

13.3 In normal circumstances, a +/-10% variation is considered a large variation and at this point a revision of the Performance Plan may be appropriate.

Decision on Traffic Risk Sharing

13.4 There were no submissions received in relation to the traffic risk sharing mechanism. As such, the traffic risk sharing mechanism will remain as was detailed in the Consultation, in the Performance Plan.

Environment Incentive Scheme

13.5 As set out in Section 9, the IAA ANSP's KEA performance throughout RP2 was relatively strong and was consistently outperforming the target level. While there could be some scope to improve the KEA score further, unlike delay it is unclear what proportion of KEA is ANSP-attributable. The ANSP should only be financially incentivised to reduce KEA that is within its control, and without this information, it is difficult to implement a fair and effective incentive scheme. Furthermore, as set out in Section 9, we believe that the IAA ANSP has been assigned a challenging target based on a challenging national reference value, which should in itself be sufficient to ensure a focus on improving this indicator to the extent possible.

13.6 We also note that, within the original RP3 Performance Plan, only the UK CAA opted to include an environmental incentive scheme. If an environmental incentive scheme were to be implemented, more work would need to be undertaken to establish the key drivers of KEA performance in Ireland, and consequently whether an incentive scheme would be likely to produce better performance.

13.7 There were no submissions relating to the environment incentive scheme. However, the IAA ANSP did note in relation to the environmental targets that while there was not a penalty for not achieving targets that there would be significant reputational damage if these targets are not met. This is addressed in Section 9.

13.8 Therefore, as in the Consultation, we do not propose to implement an environment KPA incentive scheme for RP3.

Capacity Incentive Scheme

13.9 The NSA has decided that the parameters of the scheme will be in line with our consultation proposal.

13.10 The En Route incentive scheme parameters are set in the context of Ireland having very low levels of delay. It is not possible to incentivise materially improved delay performance. However, it is possible to disincentive delay above this level given that, historically, a material amount of delay has been ANSP-attributable. Delay above the national target level is a reasonable point for the ANSP to start paying penalties; the pivot value has therefore been modulated throughout the period in order to achieve this, given the requirement for the deadband and threshold to remain constant.

13.11 In summary, the IAA ANSP will begin to incur financial penalties if performance were to deteriorate beyond the annual target. If this does not occur, no penalties or bonuses will be applicable.

Table 13.1: En Route Incentive Scheme Parameters

Service	Parameters	Unit	2020	2021	2022	2023	2024
En Route	Target	Avg. mins delay	0.07	0.01	0.03	0.03	0.03
	Pivot value	Avg. mins delay	N/A		0	0	0
	Deadband	%			+/-0.03		
	Threshold	Avg. mins delay			+/-0.05		
	Max. bonus	% of DC			0%		
	Max. penalty	% of DC			1.0%		

13.12 While the En Route capacity incentive scheme is based on the reference values associated with the union-wide ATFM delay target, no such union-wide targets exist for arrival ATFM delay and the terminal capacity and incentive schemes. Therefore, NSAs are required to set the terminal capacity target based on factors such as historical performance trends and comparison of performance with similar airports.

13.13 The terminal incentive scheme parameters should be set in the context of the ANSP having little control of the vast majority (c.98%) of arrival ATFM delay and the payments being minimised order to avoid, as much as possible, being rewarded or penalised for things that are largely not within its control. While the pivot value can be modulated based on ANSP-attributable delay, the deadband and threshold are based on all delay causes; it is therefore not possible to implement an ANSP-attributable delay incentive scheme, which would be more appropriate in this case.

Table 13.2: Proposed Terminal Incentive Scheme Parameters

Service	Parameters	Unit	2020	2021	2022	2023	2024
Terminal	Target	Avg. mins delay	0.25	0.25	0.2	0.2	0.2
	Pivot value	Avg. mins delay	N/A		0.2	0.2	0.2
	Deadband	%			+/-50%		

	Threshold	Avg. mins delay		+/-50%
	Max. bonus	% of DC		-
	Max. penalty	% of DC		0.5%

Submissions Received on the Incentive Schemes

13.14 British Airways supports the implementation of penalty only schemes for capacity.

13.15 The IAA ANSP states that given the reductions in ATCOs, it will be impossible to meet capacity targets which will result in at least €1 million in penalties. The IAA ANSP further states that the penalty has been proposed without evidence.

13.16 The IAA ANSP notes that CAR compared the penalties to the quality of service penalties that are in place in Dublin Airport, which the IAA ANSP does not agree with, stating that given that most penalties in place at Dublin Airport are €0.01 per passenger and assuming there are 30 million passengers in a year, the price cap at risk would be 0.01% of revenue. Therefore, it is the opinion of the ANSP that the financial penalty being proposed for not meeting the delay targets or 1% is not comparable to the penalties at Dublin Airport.

13.17 IATA states its full support for the penalty only incentive schemes for En Route and Terminal capacity.

Decision on Incentive Schemes

13.18 The incentive schemes remain unchanged from the consultation proposal. The 1% penalty limit is in line with the original RP3 Performance Plan from 2019.

13.19 It was noted by the NSA during the consultation meeting that the incentive scheme was similar to that in place for quality of service at Dublin Airport in that it is a penalty only scheme. It was not suggested, as the IAA ANSP states in its response, that the service quality schemes were similar overall, as this is clearly not the case. There are 22 quality of service measures set out for Dublin Airport, as opposed to 2 for the IAA ANSP. Comparing individual targets within a suite of 22 to one target within a suite of 2 is not sensible. There is also a much broader range of targets and penalties in place at Dublin Airport, some of which are daily, others which are annual, and some which apply for each breach of the target.

13.20 The example outlined by the IAA ANSP is where one annual target is breached, however there is a maximum of €0.36 of the annual price cap at risk for breaching the quality of service targets[43]. This represents 4.5 % of the average price cap over the period of the 2019 Determination, which is higher than the percentage of revenue at risk for the IAA ANSP if it were to breach all capacity targets, which is 1.5%.

13.21 Notwithstanding this, the most comparable target to the capacity KPA target (in terms of an objective measure of providing the required level of resourcing capacity to meet demand at a key processor) is the security queue time target. This target applies on a

[43] For full details on the quality of service scheme defined for Dublin Airport in the 2019 Determination see Section 2 & 11: https://www.aviationreg.ie/_fileupload/2019%20Determination/Final%20Determination/2020-2024%20Determination.pdf

daily basis, and the annual penalty associated with missing this target are capped at 2.6% of revenue. A security queue exceeding 45 minutes on 11 or more days in a given year would result in the full penalty being applied. This target alone (leaving aside the other 21) therefore puts a higher percentage of daa's revenue at risk than all of the revenue at risk which we proposed in the consultation. Thus, as demonstrated here it is easy to pick features of different service quality schemes to show a conclusion which is not particularly instructive.