

# Dublin Airport Operating Expenditure Assessment: Review of Consultation Responses

Commission for Aviation Regulation

19 December 2022



**PUBLISHABLE DRAFT REPORT**

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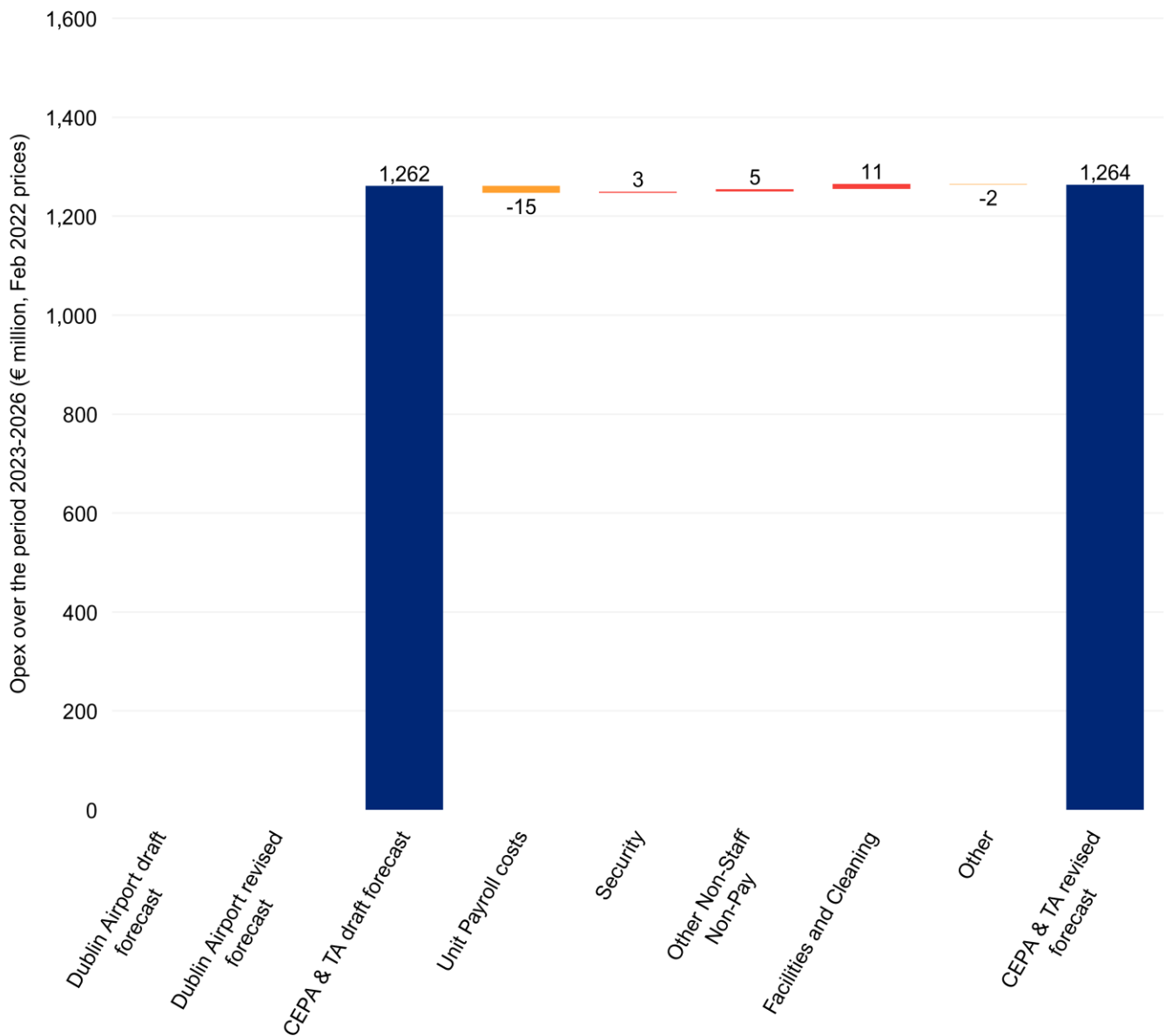
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## Contents

<b>EXECUTIVE SUMMARY .....</b>	<b>4</b>
<b>1. INTRODUCTION .....</b>	<b>8</b>
<b>2. CONTEXT .....</b>	<b>10</b>
<b>3. GENERAL COMMENTS ON OPEX FORECASTS .....</b>	<b>13</b>
<b>4. UNIT PAYROLL COSTS .....</b>	<b>16</b>
<b>5. SECURITY .....</b>	<b>28</b>
<b>6. MAINTENANCE .....</b>	<b>40</b>
<b>7. CENTRAL FUNCTIONS .....</b>	<b>44</b>
<b>8. FACILITIES .....</b>	<b>49</b>
<b>9. CLEANING .....</b>	<b>55</b>
<b>10. INFORMATION TECHNOLOGY .....</b>	<b>59</b>
<b>11. RETAIL .....</b>	<b>65</b>
<b>12. RENT AND RATES .....</b>	<b>67</b>
<b>13. CONSULTANCY SERVICES .....</b>	<b>73</b>
<b>14. UTILITIES .....</b>	<b>75</b>
<b>15. OTHER NON-STAFF COSTS .....</b>	<b>81</b>
<b>16. OTHER STAFF COST CATEGORIES .....</b>	<b>86</b>
<b>17. OTHER NON-PAY COST CATEGORIES .....</b>	<b>89</b>
<b>18. UPDATED FORECAST SUMMARY .....</b>	<b>98</b>
<b>APPENDIX A COMPARISON OF FORECAST WITH DUBLIN AIRPORT .....</b>	<b>102</b>



Figure E.1: Summary of differences between our draft and revised forecasts



Source: CEPA and Taylor Airey analysis

Note: Our revised forecasts are presented using the same passenger volumes as the draft forecasts, so they can be presented on a like-for-like basis.

As detailed in Figure E.1 above, our revised forecast represents a rise in opex of €2 million over the period 2023 to 2026 compared to our draft results. Our 2022 baseline has also changed, rising from €282 million in our draft forecast to €293 million in our revised forecast. This €2 million addition represents changes across many cost categories.

Our payroll forecasts have reduced significantly, whereas our non-payroll forecasts have increased. The reduction in our payroll forecasts is driven by:

- The Central Bank of Ireland (CBI) forecasting much lower real wage growth than it had forecast earlier in the year, which is reflected in our estimates of unit payroll costs.

- Changes to our Security forecasts, where we have revisited several assumptions around the need for additional staff for regulatory compliance purposes, and the impact of introducing C3 on staffing needs. Here, we have also corrected an error where we had used a lower unit payroll cost for security management staff than we had intended to.
- Campus Services where the link between fire service staff and passenger volumes has been removed.

The overall increase in our non-payroll forecasts is driven by the following cost categories:

- Other Non-Staff costs where we have made several changes to our forecasts, such as increasing our estimate of Dublin Airport's expenditure on the MetroLink project and on airside bussing costs, and aligning our forecast of prebooking and credit card commission costs with relevant revenues.
- Non-pay Cleaning costs, where we have increased our estimate of efficient expenditure to be in line with our benchmark estimates.
- Insurance projections, where we have allowed for new cost items such as cyber insurance.

Figure E.1 also shows that our revised forecast remains significantly below Dublin Airport's forecasts, both those provided in the regulatory submission and the revised forecast provided as part of the airport's response to CAR's consultation. Differences in approaches to forecasting payroll expenditure drive much of this difference – as we noted in our draft report, we consider that Dublin Airport has made an error in its application of wage forecasts from the Department of Finance, which as far as we are aware, has not been corrected in the revised forecasts. This is the single biggest driver of the difference between our payroll forecasts and Dublin Airport's. Our forecast for non-payroll categories also remains lower than Dublin Airport's, with the Maintenance, Information Technology, and Other Non-Staff Non-Pay categories contributing much of the difference. This is driven by our conclusion that many of the step increases in expenditure proposed by Dublin Airport fail to demonstrate a genuine need that is additional to the allowance already provided.

In our revised forecast, we assume staffing levels will increase from 2,500 FTEs in 2022 to 2,687 FTEs in 2026, which is a slight decrease from our draft forecasts that projected an increase from 2,507 FTEs in 2022 to 2,676 FTEs in 2026. Our estimates for 2022 assume that staff on flexible rosters remain in place throughout the Winter season, creating a degree of overstaffing that provides resilience for the airport going into the 2023 Summer season. This is certainly the case for Security staffing, where our forecasted FTEs are above Dublin Airport's current headcount.

Whilst we acknowledge that our projections challenge assumptions that Dublin Airport is currently making, we consider them deliverable by an efficient operator. That deliverability assessment has been made by reference to other airports and via review by operational experts. Our revised forecast was calculated using the same passenger numbers as was used in the draft forecast, to enable comparison between our draft and revised forecasts, as well as Dublin Airport's draft forecast on a like-for-like basis.

However, for the final determination, CAR will be using a set of opex forecasts that are aligned with its updated passenger forecasts. Our final opex forecasts, utilising these updated passenger numbers, are presented in Table E.1 below.

Table E.1: Summary of our final forecast of efficient opex at Dublin Airport, 2022-2026 (€ million, February 2022 prices)

	2022	2023	2024	2025	2026
Pay	172.6	171.3	178.1	183.3	187.2
Non-pay	124.0	128.6	132.4	135.6	137.7
<b>Total opex (excluding CIP)</b>	<b>296.6</b>	<b>299.9</b>	<b>310.4</b>	<b>319.0</b>	<b>324.9</b>
CIP	2.2	4.7	7.3	4.5	3.3
<b>Total (including CIP)</b>	<b>298.9</b>	<b>304.6</b>	<b>317.7</b>	<b>323.5</b>	<b>328.3</b>
Opex per passenger, excl. CIP (€)	10.55	9.47	9.24	9.20	9.09
Opex per passenger, incl. CIP (€)	10.63	9.61	9.45	9.33	9.18

Source: CEPA and Taylor Airey analysis

## 1. INTRODUCTION

### 1.1. BACKGROUND

CEPA and Taylor Airey have been commissioned by the Commission for Aviation Regulation (CAR) to assess, on a bottom-up basis, the efficiency of Dublin Airport's operating expenditure (opex). Our draft report, published in July 2022, provided an independent forecast of the efficient level of opex at Dublin Airport over the period 2022 to 2026, which was used by CAR to set the airport's opex allowance in its draft determination.

In our bottom-up assessment, we analysed the efficiency of individual areas of expenditure across Dublin Airport, providing forecasts that account for expected future efficiencies and the impacts of the airport's Capital Investment Programme (CIP). We assessed costs separately for each operational area (e.g., security staffing, utilities, cleaning costs etc.) and determined an efficient level of cost using a combination of quantitative methods, expert judgement, and benchmarking.

Since the publication of the draft determination, CAR has received a number of submissions commenting on their proposals, and our report, from the following stakeholders:

- Dublin Airport;
- ACI Europe;
- Aer Lingus;
- Emerald Airlines,
- The Irish Congress of Trade Unions;
- IATA; and
- Ryanair.

This report details our review of these submissions where they make reference to our opex forecasts. We summarise the comments made during the consultation process for each opex category, then assessing whether these comments warrant a change to our forecasting approach. Should these submissions necessitate forecasting changes, we outline the rationale for this change and present the effect of this change on our forecasts. If our assessment of a comment indicates that no change to our forecasting approach is required, we also provide a rationale for why we have maintained our position. We also update our forecasts to account for CAR's latest passenger projections. Ultimately, this report provides a revised set of forecasts in support of CAR's final determination.

### 1.2. TERMINOLOGY

In this report, we refer to several different opex and passenger forecasts. To provide clarity, we use the following naming convention in this report to refer to the different forecasts:

- **Dublin Airport** have produced two sets of opex and passenger forecasts:
  - A **draft opex forecast** and **draft passenger forecast** produced as part of their regulatory submission (as amended by their security appendix).
  - A **final opex forecast** and **final passenger forecast**, produced as part of their response to CAR's draft determination.
- **CAR** have produced two sets of passenger forecasts:
  - A **draft passenger forecast**, used in the draft determination and used in our draft report.
  - A **final passenger forecast**, which will be used in the final determination.



- **CEPA / Taylor Airey** have produced three sets of opex forecasts:
  - Our **draft opex forecast**, which we presented in our draft report, and which used CAR's draft passenger forecasts.
  - A **revised opex forecast**, presented in this report, which includes revisions to our draft forecasts but still using CAR's draft passenger forecasts. We use this forecast to compare between our draft and revised figures on a consistent basis.
  - A **final opex forecast**, presented in the final section of this report, which updates the revised opex forecast with CAR's final passenger forecasts.

As with our draft report, all figures are quoted in February 2022 prices unless explicitly stated otherwise.

### **1.3. THIS REPORT**

The remainder of this report is structured as follows:

- In **Section 2**, we summarise the context to our draft forecasts, and set out our approach to producing our final forecasts.
- In **Section 3**, we consider overarching comments made in relation to our draft opex forecasts.
- In **Section 4**, we review comments on our estimates of unit payroll costs and wage growth, detailing any revisions that we make to our forecasts.
- In **Sections 5-17**, we review consultation responses related to our draft forecasts of each opex category, detailing any revisions that we make to our forecasting approach.
- Finally, in **Section 18**, following the revisions outlined in all previous sections we summarise our revised forecasts (using a consistent passenger forecast to the one we used in our draft report), and then update our forecasts to account for CAR's revised passenger projections.

## 2. CONTEXT

In this section, we present a high-level summary of our draft opex forecasts for Dublin Airport over the period 2022 to 2026 and summarise how we have considered comments made in relation to these to produce a set of final forecasts.

### 2.1. OUR DRAFT FORECASTS

In general terms, we forecast efficient expenditure separately for each cost category using a Base-Trend-Step approach:

- **Base** – Firstly, we assessed the efficiency of historic expenditure over the period 2019-2021 and used this information to estimate a baseline for efficient expenditure in 2022. Our assessment was informed by:
  - Our estimate of efficient spending levels from our 2019 study into Dublin Airport’s opex, adjusted for outturn passenger volumes,
  - Dublin Airport’s regulatory submission and any narrative and evidence provided by the airport to support any significant changes in expenditure.
  - Additional benchmarking analysis of Dublin Airport’s expenditure against industry comparators.
- **Trend** – We then projected efficient expenditure over the period 2023-2026 using volume/price drivers and elasticities. For most cost categories, we used an elasticity with respect to passenger volumes, though other volume drivers also included terminal space (e.g., for cleaning costs) and overall staff numbers (e.g. for HR staff). For pay costs, we projected in line with economy-wide forecasts of real wage growth.
- **Step** – Finally, we added or subtracted any known step changes in expenditure over the period 2023-2026 e.g. as a result of newly emerging cost pressures, efficiency initiatives, or opex impacts from completed capital projects. Where Dublin Airport was proposing additional expenditure, we applied a three-part test for determining whether the proposal was efficient:
  - Need – Had Dublin Airport made the case that there was a need for the expenditure?
  - Additionality – Were we convinced that the additional spending was genuinely additional to our base estimate or our volume-driven estimate?
  - Efficiency – Had Dublin Airport provided strong evidence to support its estimate of the scale of additional expenditure?

In producing our draft forecasts, we had been conscious of the situation in which Dublin Airport operating, given the impact of the COVID-19 pandemic and faster than expected recovery in passenger volumes. We recognised that a lot of the cost-cutting measures introduced in response to the pandemic were not expected to be made permanent and accounted for this in our draft forecasts. Our resultant forecast is shown in Table 2.1 below.

*Table 2.1: Summary of our draft opex forecast, 2022-2026 (€ million, February 2022 prices)*

	2022	2023	2024	2025	2026
<b>Payroll</b>					
Security	44.2	43.2	45.6	47.4	48.7
Maintenance	15.4	16.6	17.4	18.0	18.4
Central Functions	30.1	31.5	32.9	33.8	34.4
Facilities and Cleaning	19.6	20.8	21.6	22.1	22.5

	2022	2023	2024	2025	2026
Campus Services	19.1	20.1	20.7	21.1	21.4
Retail	16.7	18.9	20.2	22.2	22.6
IT	7.1	7.8	8.5	8.9	9.4
Airside operations	6.3	6.6	6.8	6.9	7.0
Capital Projects	3.3	3.4	3.5	3.6	3.7
<b>Non-pay</b>					
Maintenance	14.0	15.1	15.6	16.0	16.4
Facilities and Cleaning	6.0	6.2	6.3	6.4	6.5
IT	10.0	10.9	11.1	11.4	11.7
Car Parking	∞	∞	∞	∞	∞
Employee-related overheads	6.4	6.5	6.7	6.9	6.9
Rent and rates	17.5	16.0	15.1	14.5	13.8
Consultancy services	7.1	7.1	7.1	7.1	7.1
Marketing	5.3	5.9	6.3	6.6	7.0
Insurance	4.4	4.9	5.2	5.5	5.8
PRM	∞	∞	∞	∞	∞
Other overheads	22.8	24.1	25.5	26.5	27.0
Utilities	13.0	12.7	12.9	13.0	13.0
<b>Totals</b>					
Pay	161.8	168.8	177.2	183.9	188.1
Non-pay	119.6	124.1	128.0	131.4	133.3
<b>Total opex (excluding CIP)</b>	<b>281.4</b>	<b>292.8</b>	<b>305.2</b>	<b>315.3</b>	<b>321.4</b>
CIP	0.4	3.5	7.8	8.0	7.5
<b>Total (including CIP)</b>	<b>281.8</b>	<b>296.3</b>	<b>313.0</b>	<b>323.3</b>	<b>329.0</b>
Opex per passenger, excl. CIP (€)	11.13	9.73	9.46	9.23	9.13
Opex per passenger, incl. CIP (€)	11.15	9.84	9.70	9.46	9.34
<b>Our forecast using Dublin Airport draft passenger projections</b>	<b>277.4</b>	<b>291.3</b>	<b>308.7</b>	<b>320.0</b>	<b>326.0</b>
<b>Dublin Airport draft forecast</b>	<b>274.5</b>	<b>310.1</b>	<b>344.3</b>	<b>365.1</b>	<b>377.5</b>

Source: CEPA and Taylor Airey analysis

## 2.2. APPROACH TO PRODUCING OUR REVISED AND FINAL FORECASTS

In producing our final forecasts, we have considered comments made by stakeholders in response to the draft determination and considered new evidence provided by both the airport and other stakeholders. As well as considering the issues raised by stakeholders, we have also revisited areas of our forecasts where we used placeholder assumptions subject to new evidence provided by Dublin Airport. Where necessary, we have collected new evidence to review the issues raised and undertaken new analysis. We have also been informed by additional

information provided by Dublin Airport in response to clarification requests, and through a series of bilateral engagement sessions covering specific issues.

During the course of our analysis, we have had regard to the strong links, interdependencies and, potentially, overlaps between opex, capex, service level requirements, and commercial revenues. To address this, we have engaged extensively with CAR and Dublin Airport to ensure alignment between our assessment of efficient opex, and CAR's assessment of the CIP, service quality measures, and commercial revenues.

We have also reflected on the experience of Dublin Airport over 2022 and considered the extent to which outturn data needs to be reflected in our forecasts. Most notably, CAR has revised its passenger forecasts upwards to account for the faster-than-expected recovery in passenger volumes. However, we have also considered the operational disruption experienced at the airport during the summer months of 2022, and the extent to which this implied a need to change our forecasts.

### **3. GENERAL COMMENTS ON OPEX FORECASTS**

In this section, we discuss overarching comments made in relation to our draft opex forecasts. The comments followed four broad themes, covered in turn below.

#### **3.1. COMMENTS ON OUR DRAFT FORECASTS**

##### **Dublin Airport and ACI Europe**

Dublin Airport's response to the draft determination raised two separate but related issues:

- The airport argued that the scale of change since 2019 has created a series of operational challenges that can only be resolved through increasing opex allowances, to build a more resilient operation. The changes referenced include volatile passenger volumes and staffing levels, increasing inflation, a different passenger profile, a different operating model for cleaning, and supply chain challenges.
- The airport also argued that the fast (but uncertain) recovery in passenger volumes meant that it is necessary for the airport to resource up prior to passenger volumes materialising.

Dublin Airport argued that our allowances for key areas of spend, such as Security, Facilities and Cleaning, and PRM services, needed to account for these issues. The airport also suggested that our allowances for these cost areas could be adjusted so that they are based on the following year's forecast traffic levels, or alternatively, based on a glide path for the early years of the interim determination period.

ACI Europe raised a similar issue, arguing that passenger expectations of airports have increased over time, and that passengers are willing to pay for an improved experience. They cited a study commissioned by Heathrow Airport that considers customer willingness to pay for performance improvements.<sup>1</sup> The study looked at a) consumer acceptability of different levels of airport charges at Heathrow, b) consumer demand for different improvements to the airport experience, and c) consumer preferences around a range of cost / service propositions.

##### **Accounting for labour market pressures**

ACI Europe also suggested that the experience faced by Schiphol Airport over the summer of 2022, which struggled to recruit sufficient security staff, showed that labour costs were going to be sustained at a higher level for the foreseeable future.

##### **Airlines**

Ryanair, IATA, and Aer Lingus all highlighted that in parts of our draft forecasts, we accepted Dublin Airport's proposals without challenge. They requested that we review these assumptions for our final proposals.

#### **3.2. OUR CONSIDERATION OF THE ISSUES RAISED**

##### **Ensuring our forecasts allow for resilient operations**

We recognise the operational challenges that Dublin Airport has faced in 2022, based on a set of unique circumstances (as described above). But we also recognise that our forecasts will be used to inform allowances for the period 2023-2026, when many of the changes that have affected Dublin Airport will either have dissipated or

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<sup>1</sup> Civil Aviation Authority (2021), Review of Consumer Acceptability Testing Research, October. Available at: <https://publicapps.caa.co.uk/modalapplication.aspx?appid=11&mode=detail&id=10912>

become bedded in (and, therefore, are something that can be planned for). It would not be appropriate to assume that the airport has no ability to manage and mitigate operational challenges over the course of the determination period, without employing more staff on a permanent basis. It would also not be appropriate to assume that the short-term actions taken in 2022 to remedy specific issues, should be reflected in Dublin Airport's medium-term forecasts of 2023 to 2026.

However, our forecasts of efficient opex do need to allow for a certain base level of resilience to account for a) random headwinds that the airport may face over the determination period, and b) permanent changes to passenger expectations since 2019. We consider this would only affect operational areas directly affected by passenger volumes, such as security. We consider these issues separately for the two areas that have faced the most notable operational challenges during 2022, security and cleaning.

We also accept that in some instances, it may be necessary to increase resources in anticipation of higher passenger volumes. The Civil Aviation Authority accepted a similar ramp-up adjustment at Heathrow to account for the reopening of Terminal 4.<sup>2</sup> However, we note that most of the increase in staffing at Dublin Airport is expected in 2022 and 2023, with staffing growth expected to be relatively limited thereafter. This suggests that some ramp up allowance may be appropriate (for operational roles specifically) but resourcing a full year in advance would not be in the user interest. We consider the issues raised by Dublin Airport within Section 5 (Security) and 9 (Cleaning), which as noted above, are the two cost categories most notably affected by operational challenges during 2022.

## Meeting performance expectations

We have reviewed the evidence submitted by ACI Europe in relation to customer willingness to pay for an improved airport experience, and find that it does not support the assertions made:

- Generally, the research showed that consumers had a poor understanding of airport charges and how they relate to air fares. This means that any assessment of willingness to pay for improvements in the airport experience would need to be treated with caution.
- There was considerable variation in demand for improvements to the airport experience and consumer acceptability of different levels of airport charges. Notably, domestic (i.e. UK) passengers were significantly more price sensitive than foreign passengers.
- While the consumer research showed that there was (on average) a demand for improvements to the airport experience, respondents were not given any information on the cost of delivering specific improvements. This means it is inappropriate to claim that passengers were willing to pay for specific performance improvements.
- Instead, respondents were presented with general cost/service propositions, which did not allow them to properly evaluate the trade-offs. Respondents were given three options for charges, accompanied by a narrative description of the overall service offering. Of the three options, one was strictly inferior to the other two (as it involved lower service levels and higher airport charges), while of the remaining two options, one was strictly inferior to the other (as it involved the same service levels and higher airport charges).

While we consider that the study should be treated with caution, we accept ACI Europe's broader point that there must be a link between the opex allowance and assumed service levels. Where CAR is considering tightening expectations around service quality above performance levels seen in 2019, we would suggest that it also consider an accompanying increase in the opex allowance. However, we have not found any evidence to suggest that

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<sup>2</sup> CEPA & Taylor Airey (2022), Review of H7 Opex and Commercial Revenues: Final Assessment and Forecasts (Opex), June. Available at: <http://publicapps.caa.co.uk/docs/33/CAP23661.pdf>

passenger expectations have changed fundamentally as a result of the pandemic, such that the service (and cost) proposition by Dublin Airport needs to change substantively.

### **Accounting for labour market pressures**

We accept that there may be labour market pressures within an airport that mean wage growth for specific roles exceeds the economy-wide average. We also accept that the evidence of staff shortages at airports across Europe at least provides some support for an argument that wage growth in the shorter term may need to exceed wage growth in other sectors.<sup>3</sup> However, we consider that this is already accounted for in our forecasts:

- In our forecasts, we assume that wage growth in 2022 will exceed the growth rates seen in other sectors, such that the wage freezes implemented in 2020 and 2021 are fully unwound. In other words, our forecasts, assume wage growth in 2022 will be made up of wage growth seen elsewhere in the economy over the full period 2020 to 2022.
- Furthermore, for specific functions, where Dublin Airport has presented compelling evidence of wages exceeding this implied level, we have adjusted our forecasts to include that, specifically in Facilities and Cleaning, Maintenance and Retail.

We do not agree that it automatically follows that wage growth within the aviation sector will continue to exceed wage growth in other sectors. The labour market for most airport roles is insufficiently distinct to sustain higher than average wage growth into the medium term.

### **Accepting Dublin Airport's proposals for 2022**

While the airline responses did not identify specific assumptions they disputed, they requested that we revisit areas where Dublin Airport's own assumptions had been used; parts of our draft forecasts contained assumptions provided to us by Dublin Airport that we had not had the opportunity to adequately review prior to the publication of the draft determination. Most of these assumptions relate to security which we revisit in Section 5.

In other areas (e.g., IT staffing levels, Sustainability) we indicated that the evidence presented by Dublin Airport was weak and should be strengthened in its consultation response. We therefore also revisit these assumptions in each respective section.

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<sup>3</sup> We note that Ryanair has suggested that the staff shortages have been due to airports insufficiently preparing for the recovery in passenger volumes, rather than wages being too low.

## 4. UNIT PAYROLL COSTS

In this section, we discuss overarching comments made in relation to our staff salary and unit payroll cost assumptions, detail our consideration of the issues raised, and present our revised assumptions.

### 4.1. OUR APPROACH TO PRODUCING DRAFT FORECASTS

In our draft report, we noted that average unit payroll costs fell in 2020 and 2021 from a high point in 2019, mostly due to government wage support, a pay-freeze, and the introduction of a voluntary severance scheme (VSS). We considered the movement in average unit payroll costs between 2019 and 2021 represents a positive move towards efficiency, following a period of inefficient wage growth above the Irish economy-wide average in prior years.

We also noted that, as discussed in our 2019 study there still exists a wage differential between staff on older, pre-2010 contracts and those hired on contracts with more modern terms and conditions. But one effect of the VSS has been to reduce the number and proportion of staff on older contracts, making the impact of it on wages less pronounced.

To produce our 2022 baseline of efficient unit payroll costs, we started with estimates of efficient unit costs from the 2019 study and projected forwards using economy-wide wage growth rates, adjustments to account for changes in the proportion of staff on older contracts vs new contracts, and adjustments to account for longstanding pay deals agreed with airport staff and unions. The one exception to this was Retail staff where we set our 2022 baseline at the level proposed by Dublin Airport, following evidence provided to support the pay rates being offered.

For most roles, our estimates of 2022 unit costs were within €1,000 p.a. of Dublin Airport’s proposals, except for Maintenance and Facilities & Cleaning (where our estimates were lower) and Airside Operations (where our estimate was higher). To avoid cherry-picking the lowest value, we applied this higher estimate in our forecast.

To project forward unit costs from 2022, we applied a composite forecast of economy-wide wage growth using estimates from the Central Bank of Ireland (CBI) and European Commission. In line with our 2019 forecast, we also assumed wage growth for staff on older contracts occurred at half the standard rate, to maintain the incentive on Dublin Airport to reduce the impact of pre-2010 terms on its cost base. The resultant forecast by role is summarised in the table below.

Table 4.1: Our draft forecast unit payroll costs, 2022-2026 (€ per FTE, February 2022 prices)

	2022	2023	2024	2025	2026
Admin	✂	✂	✂	✂	✂
Airside Operations	✂	✂	✂	✂	✂
Commercial	✂	✂	✂	✂	✂
Central Finance	✂	✂	✂	✂	✂
Finance (SSC)	✂	✂	✂	✂	✂
Fire / Police	✂	✂	✂	✂	✂
IT	✂	✂	✂	✂	✂
Maintenance *	✂	✂	✂	✂	✂
Facilities and Cleaning *	✂	✂	✂	✂	✂
Retail *	✂	✂	✂	✂	✂
Security *	✂	✂	✂	✂	✂



Source: CEPA analysis of Dublin Airport data

Notes: (\*) Weighted average of staff on pre-2010 contracts and those on post-2010 contracts.

Figures rounded to nearest 100 for presentational purposes.

## 4.2. COMMENTS ON BASELINE ESTIMATES OF UNIT PAYROLL COSTS

We received representations from a range of airport, airline, and trade union stakeholders in relation to our unit payroll cost assumptions. These broadly fit the following themes:

- A suggestion that our wage growth assumptions needed to be adjusted upwards to reflect labour market and inflationary pressures.
- Stakeholders disagreeing with our short-run wage growth assumptions for 2022 to 2024.
- Stakeholders disagreeing with our lower long-run wage growth assumption, applied to wages in 2025 and 2026.
- A suggestion that our wage growth assumptions needed to account for a higher proportion of Dublin Airport staff being at the bottom of the pay-band than has been the case historically.
- A request for clarification as to how Dublin Airport's voluntary severance scheme (VSS) has been incorporated into our forecast.
- Dublin Airport specifically disagreeing with our estimate of 2022 efficient unit payroll costs for Maintenance staff and Facilities and Cleaning staff.

### Context underpinning wage growth assumptions

The responses by ACI Europe, the Irish Congress of Trade Unions (ICTU), and Dublin Airport, all made reference to labour market pressures being faced by Dublin Airport and other airports across Europe, and to recent increases in inflation. Although not explicitly stated, we assume the suggestion is that our standard wage growth assumptions should be adjusted upwards to reflect these labour market and inflationary pressures, i.e., we should assume wage growth would be higher than that of the Irish labour market more generally.

### Short-run wage growth assumption

For our draft forecasts, our short-run wage growth assumptions for 2022 to 2024 were based on an average of the European Commission's Economic Forecasts (for 2022-2023), as well as the Central Bank of Ireland's Quarterly Bulletin (for 2022 to 2024). By adopting these averages, we assumed that real wages would fall by 3.3% in 2022, and then grow by 3.3% in 2023 and 3.0% in 2024.

The ICTU argued that our wage growth projections of 6% between 2023 and 2026 were neither 'reasonable' nor 'realistic' and needed significant upwards adjustment. To support their argument, they quote figures from ESRI, the Department of Finance and the European Commission. However, we note that the figures quoted by ICTU were presented in nominal terms, whereas the 6% growth figure quoted from our forecasts was real.

Conversely, Ryanair argued that our real assumptions for 2023 and 2024 overstate real wage growth by misusing forecasts from the European Commission's Spring Economic Forecast and the Central Bank of Ireland's Quarterly Bulletin. They interpreted the European Commission's 2023 forecast as frontloading real wage growth (4.7% in 2023), with the Central Bank projecting a steadier recovery across 2023 and 2024 (1.9% in 2023 and 3% in 2024). It was their view that averaging over the years included in both projections, and adopting wage growth projections from the one with a longer timeline for later years, leads to a higher average forecast wage growth over the total period, than both projections individually.

## Long-run wage growth assumption

In our draft forecasts, and in our 2019 efficiency study, we assumed that wages would grow by 1.5% per year in the long-run. We adopted this assumption following a historical analysis of wages across the Irish economy, finding that over recent decades real wages grew by this amount on average.

Some stakeholders argued that we should be using a shorter-time horizon for estimating long-run wage growth, instead of the multiple-decade time horizon we adopted.

Dublin Airport suggested that the historical time horizon for estimating long-run wage growth should be shortened, arguing that their real wage inflation average of 3% over the past five years is a more appropriate approximation than the 1.5% average we used. Dublin Airport argued that the 3% is much closer to the short-run wage growth assumptions we use for 2023 and 2024.

Ryanair also argued against our long-run wage growth assumption, contending that there is both historical evidence and regulatory precedent that long-run real wage growth is lower than 1.5%. Ryanair also asserted that this long-term wage growth assumption does not account for the fact that wage growth across the whole of the Irish economy is driven primarily by occupations related to finance and IT, and Dublin Airport has a lower proportion of employees in these occupations than the Irish economy as a whole.

## Impact of new entrant staff on average payroll costs

IATA noted that our draft forecasts made no direct adjustment to reflect new entrant staff joining at the bottom of the pay scale and suggested that such an adjustment ought to be made given the degree of staff turnover in recent years. IATA argued that if there were concerns about lower productivity of newer staff relative to existing staff, this should be estimated and modelled separately rather than assuming the effect of lower wages would be cancelled out by lower productivity.

## Impact of voluntary severance scheme

Aer Lingus stated that our forecasts were unclear as to the scale of savings generated by the switch to more flexible contracts and the reduction in the number of staff on older terms and conditions through the voluntary severance scheme. They also stated that it was unclear whether our forecasts assumed any further efficiencies from the natural attrition of staff on older terms.

## Maintenance wages

Dublin Airport disagreed with our estimate of efficient Maintenance unit costs for 2022. In our draft forecasts, we estimated efficient unit payroll costs in 2022 to be €1,200 (as shown in the table below). This compared with a Dublin Airport draft forecast for 2022 of €1,500 and an average outturn for 2019 of €1,300. Our estimate of efficient unit payroll costs was marginally lower in 2022 than our equivalent estimate in 2019, reflecting the change in the mix of staff on Pre/Post-2010 terms.

Table 4.2: Comparison of unit payroll costs for maintenance staff at Dublin Airport (€, February 2022 prices)

	2019		2022	
	Unit payroll costs	FTEs	Unit payroll costs	FTEs
Pre-2010 terms	€1,200	1.0	€1,200	1.0
Post-2010 terms	€1,300	1.0	€1,500	1.0
<b>CEPA estimate</b>	€1,200	1.0	€1,200	1.0
<b>Dublin Airport estimate</b>	€1,500	1.0	€1,500	1.0

Source: CEPA analysis of Dublin Airport data

Dublin Airport argued that our estimate of efficient unit payroll costs in 2022 for maintenance staff did not reflect the labour market pressures they were facing and, that, our estimate should be adjusted upwards. Specifically, they argued that maintenance technicians (who make up the majority of maintenance staff) are currently being recruited at a more experienced pay band (highlighted in the table below) as suitable applicants have not been forthcoming at the lowest pay band.

Table 4.3: Dublin Airport salary bands for maintenance technician roles in 2022 (€, nominal)

Qualifying Experience	Base salary	Total salary (incl. overtime and performance related pay)	Total salary costs (incl. social insurance and pensions)
5 years	✂	✂	✂
3 years	✂	✂	✂
0 years	✂	✂	✂

Source: Dublin Airport consultation response, Recreated from Figure 10 – Maintenance technician market rates

## Facilities and Cleaning wages

Similarly, Dublin Airport disagreed with our estimate of efficient unit payroll costs for Facilities and Cleaning staff. In our draft forecasts, we estimated efficient unit costs in 2022 to be ✂ ✂ ✂ (as shown in the table below). This compared with a Dublin Airport average for 2022 of ✂ ✂ ✂ and an average outturn for 2019 of ✂ ✂ ✂.

Table 4.4: Comparison of unit payroll costs for facilities and cleaning staff at Dublin Airport (February 2022 prices)

	2019		2022	
	Unit payroll costs	FTEs	Unit payroll costs	FTEs
Pre-2010 terms	✂	✂	✂	✂
Post-2010 terms	✂	✂	✂	✂
<b>CEPA estimate</b>	✂	✂	✂	✂
<b>Dublin Airport estimate</b>	✂	✂	✂	✂

Source: CEPA analysis of Dublin Airport data

Dublin Airport, in its response provided a breakdown of unit payroll costs for different roles within Facilities and Cleaning (below) highlighting that the base salary of a team member of ✂ ✂ ✂ equated to an hourly salary of ✂ ✂ ✂. Dublin Airport argued that this compared favourably with salaries on offer for similar roles at Lidl, when adjusted for roster patterns.

## 4.3. OUR ANALYSIS AND RESPONSE

### Context underpinning wage growth assumptions

We note that there is anecdotal evidence of wages being a factor in the staffing shortages faced by Dublin Airport (and other European airports) during 2022, and further evidence of pressure from labour unions for more generous pay settlements.

However, we do not find this sufficiently compelling to assume that wage growth will be higher at Dublin Airport than the Irish economy more generally, for the following reasons:

- We consider that pay pressures faced within the aviation sector were already recognised in our draft forecasts, as we assumed that the pay freeze instituted in 2020 and 2021 were fully unwound in 2022. This implied a cumulative nominal wage growth of 8% in 2022.

- We also note that much of the more recent pressure for more generous pay settlements relates to recent inflationary pressures, though agreed pay deals remain below current levels of inflation. For example, public sector workers recently agreed a 3% (nominal pay rise) in 2022,<sup>4</sup> against a backdrop of 8% expected inflation in 2022.<sup>5</sup> More generally, as our wage growth assumptions are set in real terms, nominal wage growth will automatically adjust to any further movements to the inflation rate.
- Finally, in our forecasts, we adjusted our estimates of efficient 2022 wages for specific functions such as retail, where Dublin Airport provided evidence of market pay rates being higher than assumed in our analysis. We consider it continues to be appropriate to consider this on a function-by-function basis, rather than to assume that all airport staff are subject to greater wage increases than the general economy-wide average.

### **Long-run wage growth assumption**

Both Dublin Airport and Ryanair said that we should be using a shorter-time horizon for our wage growth assumption, recommending the use of five and three years respectively. We disagree with this. A shorter time horizon of three to five years does not capture wage growth over the course of a full economic cycle. We would expect that during periods of business cycle expansion, wage growth is higher than the long-term average and during economic downturns, wage growth is lower than the long-term average.

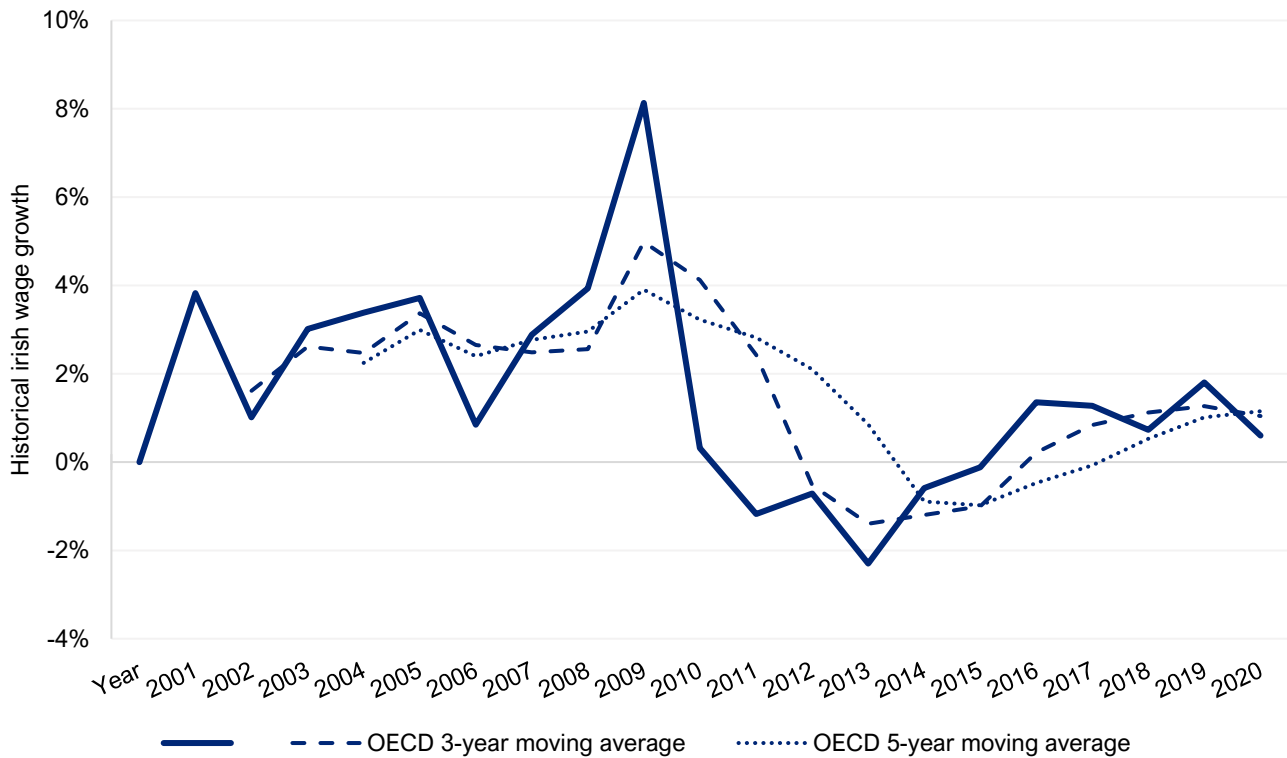
To illustrate this, we present Figure 4.1 below.

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<sup>4</sup> DPER (2022), Minister McGrath notes final instalment of current Building Momentum pay deal due on 1 October 2022. Available at: <https://www.gov.ie/en/press-release/0d8a7-minister-mcgrath-notes-final-instalment-of-current-building-momentum-pay-deal-due-on-1-october-2022/>

<sup>5</sup> Central Bank of Ireland (2022), Quarterly Bulletin No.4 2022, October. Available at: <https://www.centralbank.ie/publication/quarterly-bulletins/quarterly-bulletin-q4-2022>

Figure 4.1: Historical wage growth in the Irish economy.



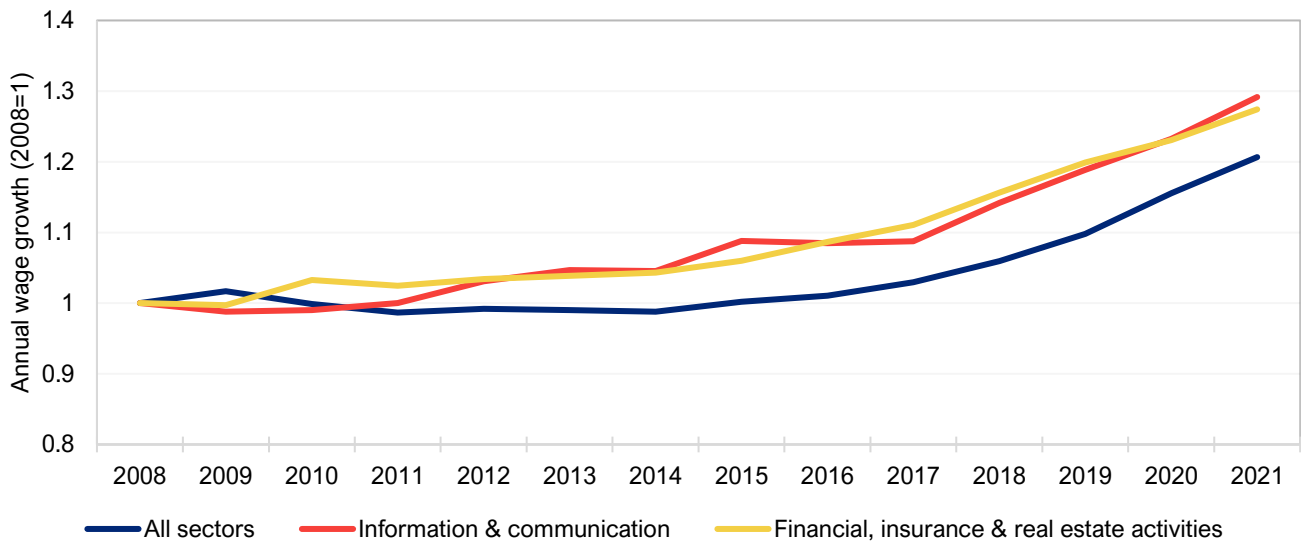
Source: OECD & CEPA analysis

As the fluctuations in the three- or five-year moving averages shown on Figure 4.1 indicate, average wage growth over a three- or five-year period could vary significantly, depending on where in the business cycle the average is taken. For example, the OECD data would produce a significantly different average between 2007-2009, and 2010-2012, despite both averages having the same time horizon.

CSO data shows that real wages grew by 1.13% annually between 2008 and 2021. Further, data on earnings from the OECD suggested that real wages grew by 1.52% annually between 2000 and 2021. Taking a longer-term horizon continues to support the view that a 1.5% annual growth assumption is appropriate, but there is evidence suggesting that wage growth following the financial crisis has been lower. It is yet unclear whether this is a permanent shift.

Moreover, following Ryanair’s comment around Dublin Airport having a lower proportion of employees in finance and IT than the rest of the Irish economy and these sectors driving wage growth in the Irish economy, we analysed both wage growth and employment in these sectors. First, we looked at wage growth in Finance and IT against that in the Irish economy more generally. Figure 4.2 illustrates that wage growth in Finance and IT outpaced economy-wide wages in Ireland.

Figure 4.2: Wage growth in the Irish economy for selected sectors.



Source: CSO

Next, we have compared the number of staff in these occupational categories to that in the Irish economy as a whole. As shown in Table 4.5, the difference between the proportion of IT staff in Dublin Airport and the Irish economy is within 2 percent, whereas the finance proportions are approximately both 3.2%. We believe that this small disparity is not enough of a justification to change our real wage growth assumptions, despite wages in these sectors growing at a faster rate than wages across the Irish economy. For these reasons, we continue to adopt our 1.5% long-term wage growth assumption.

Table 4.5: Comparison of Dublin Airport’s IT and Finance staffing levels as a percentage of its total staff, versus that in the Irish economy more generally

Dublin Airport Staff Category	% of total workforce	Equivalent Ireland NACE categorisation	% of total workforce
IT & technology	3.2%	Computer programming, consultancy and related activities & Information service activities	4.7%
Finance	3.2%	Financial service activities	3.2%

Source: Dublin Airport, Eurostat, CEPA analysis

Based on the above, we maintain 1.5% as our long-run wage growth assumption, to be used to estimate wage growth in 2025 and 2026. While there is some evidence to suggest wage growth has slowed over the past decade, compared with previous decades, it is yet unclear whether this is permanent.

### Short-run wage growth assumption

As we have considered the same sources for wage forecasts as ICTU, we do not consider that their arguments warrant a change in our forecasting approach. The wage forecasts presented in our analysis have been adjusted for inflation, and presented in real terms.

We do however note that economic conditions have changed since the draft determination, and thus updated real wage growth forecasts for 2023 and 2024 are presented in the table below. Whilst these forecasts from the CBI (which is the only source that has provided updated forecasts) suggests substantial nominal wage increases, real wage growth is likely to be substantially weaker than previously envisaged due to rising inflation forecasts.

Table 4.6: Year-on-year % nominal and real wage growth forecasts

	2021	2022	2023	2024
<b>Draft Forecast (Real)</b>	<b>0.3</b>	<b>-3.3</b>	<b>3.3</b>	<b>3.0</b>
CBI Quarterly Bulletin Q1 2022	-0.7	-4.2	1.9	3.0
European Commission, Spring 2022	1.2	-2.3	4.7	-
<b>Revised Forecast (Real)</b>	<b>1.2</b>	<b>-4.2</b>	<b>-0.5</b>	<b>2.1</b>
CBI Quarterly Bulletin Q4 2022	-	-4.2	-0.5	2.1
CSO, Annual Total Earnings for Full-Time employees	1.2	-	-	-
<b>Forecasts (Nominal)</b>				
Draft	2.7	3.1	6.3	5.1
Revised	3.5	3.8	5.8	4.9

Sources: CEPA analysis of various sources

We can see the logic behind Ryanair’s argument that real wage growth may be overstated in our initial forecasts. It is possible that the difference in wage growth assumptions between the CBI and European Commission are due to differing assumptions around the pace of wage recovery. As such taking a simple average of the two forecasts, where both forecasts do not project up to 2024, may lead to a biased forecast. Given that no other updated source is yet available for 2024, we have accepted Ryanair’s argument and use only the CBI Quarterly Bulletin estimates for our short-run wage growth assumptions.

### Impact of new entrant staff on average payroll costs

In our draft forecasts, we expected that Dublin Airport would be hiring a large number of new staff over the period 2022 to 2026 and those staff would be at the bottom of the pay band, reducing the unit payroll cost. However, we did not adjust our forecast of unit payroll costs to account for this, as we also expected that newer staff would be less productive than their more experienced colleagues. We assumed that these two effects would cancel out.

While we recognise IATA’s point that these two effects may not necessarily cancel out in all circumstances, we consider that there is likely to be substantial noise in the data making it difficult disentangle the two effects on a reliable basis. While it may be possible for Dublin Airport to provide data on the number of staff at different pay bands for key operational functions, it is unlikely that productivity metrics are tracked at such a granular level. Any top-down assessment would be challenging, particularly for 2022 where there has been substantial disruption in airport operations, as it would be difficult to identify the impact of inefficiency versus the impact of low productivity of less experienced staff.

From an economic theory perspective, there is logic to the two effects cancelling each other out, given competitive wages ought to be set at the marginal product of labour (i.e. wages ought to match productivity). Though in practice, wages can diverge from productivity such that a large influx of new staff (as experienced by Dublin Airport) can temporarily reduce costs. Given the challenges with modelling this on a bottom-up basis and given that the theory supports assuming the two effects cancel each other out, we have decided to retain our simplified assumption.

### Impact of voluntary severance scheme

We are not able to precisely calculate the savings associated with the voluntary severance scheme, but we can produce a broad estimate based on the information provided to us by Dublin Airport. Looking at the three main operational roles within the airport only – Security, Facilities and Cleaning, and Maintenance – we estimate the

annual saving in payroll costs from the VSS accelerating the attrition of staff on pre-2010 contracts, to be approximately €3 million.<sup>6</sup>

Our wage forecasts assume further savings to the costs associated with staff on older terms and conditions (by assuming wage growth at half the rate of standard wage growth). However, in our draft report, we did not make any explicit adjustment to account for further natural attrition through retirements etc. Although we made this adjustment in our 2019 forecast, we considered it was less appropriate to include this for our current forecasts, as we expect the voluntary severance scheme will have brought forward the retirement of many staff on pre-2010 contracts. As a result, we would expect there to be lower levels of attrition in the shorter term.

In response to Aer Lingus' concerns regarding our attrition assumption, we requested data on the number of years to retirement for staff on pre-2010 terms to validate the assumption we made in our draft report. The data provided suggests that it would be appropriate to assume a certain level of attrition over the period 2023 to 2026. As such, we have revised our assumptions, as shown in the table below.

Table 4.7: Assumed attrition rates for staff on pre-2010 terms

	2022	2023	2024	2025	2026
Assumed attrition rate (%)	-	6%	2%	1%	2%

Source: CEPA analysis of Dublin Airport data

## Maintenance wages

Dublin Airport has suggested that most of the difference between our wage estimate for 2022 for Maintenance staff and its estimated wage for 2022 is due to higher-than-expected wage growth for maintenance technicians. There are three specific parts to this suggestion:

- Wage growth since 2019 is almost entirely due to wage growth for technical roles.
- Wages for those in technical roles in 2022 are efficient.
- Wages for other roles were efficient in 2019 and continue to be efficient into 2022.

**The evidence provided by the airport supports the first of these points** – the information (as shown in the two tables below) indicates that growth in (nominal) wages between 2019 and 2022 can be explained almost entirely by the growth in wages for those in technical roles (i.e., technicians and engineers). Unit payroll costs for other roles has largely stayed the same in nominal terms over the same period.

Table 4.8: Maintenance unit payroll costs in 2019 and 2022 (€, nominal)

	FTEs		Base salary incl. allowances		Total average cost per FTE	
	2019	2022	2019	2022	2019	2022
Technicians	✂	✂	✂	✂	✂	✂
Team lead	✂	✂	✂	✂	✂	✂
Engineer	✂	✂	✂	✂	✂	✂
Gardener	✂	✂	✂	✂	✂	✂
Business support	✂	✂	✂	✂	✂	✂

<sup>6</sup> We estimate the saving based on the conservative assumption that without the VSS, the proportion of staff on pre-2010 terms would be 5% lower than it was in 2017 (the last pre-VSS year for which we have data). In other words, we assume the natural rate of attrition between 2017 and 2022 would have been 5%.



	FTEs		Base salary incl. allowances		Total average cost per FTE	
	2019	2022	2019	2022	2019	2022
Maintenance management	✂	✂	✂	✂	✂	✂

Source: Adapted from Figure 9 in Dublin Airport consultation response and further information from Dublin Airport

**The second point, that wages for technical roles are efficient, is partly supported by the evidence.** Beyond Dublin Airport’s claims that they have been unable to recruit technicians at the bottom of the pay band, no supporting evidence has been presented. So, as a sense check, we have reviewed a small sample of job adverts for maintenance technician roles within the Greater Dublin area, salaries for which tend fall in the range €50,000 and €60,000 depending on experience.<sup>7</sup> The advertised salaries are in line with the pay bands being offered by Dublin Airport (as shown in Table 4.3), though we note that there is a substantial difference between the pay bands for new staff, and the average base salary assumed by the airport for technical roles in 2022, at ✂ ✂ ✂ ✂.

**The third of Dublin Airport’s points is not borne by the evidence.** Our 2019 efficiency study found a gap between our estimate of efficient 2019 unit payroll costs and Dublin Airport’s estimates. This gap continues to exist when looking at outturn 2019 data, and has increased when looking to 2022, as shown in the extract from our draft forecasts below.

Table 4.9: Baseline unit payroll costs, compared with Dublin Airport 2022 estimate (€ per FTE, February 2022 prices) Staffing

	2019 – CEPA efficient baseline	2019 – Dublin Airport actual	2022 – CEPA efficient baseline	2022 – Dublin Airport estimate
Maintenance	✂	✂	✂	✂

Source: CEPA draft report

Note: We estimate lower unit payroll costs in 2022 relative to 2019 due to the impact of the VSS reducing the proportion of staff on pre-2010 terms.

The evidence provided by Dublin Airport explains why the gap has widened but does not explain the initial difference. The difference in salary costs for technicians at the bottom of the pay band and the next pay band is not sufficiently large enough to fully explain the gap between our respective estimates of efficient 2022 unit payroll costs, which suggests that salaries for existing staff continue to be inefficient.

Overall, we increase our estimate of 2022 efficient unit payroll costs to reflect new hires being paid at approximately ✂ ✂ ✂ rather than ✂ ✂ ✂, aligning with the salaries being advertised by other organisations. However, there is still a differential between our forecast and Dublin Airport’s.

We have made a top-down adjustment to our estimate of efficient unit payroll costs for staff on newer terms and conditions (i.e. those on post-2010 contracts), to account for the labour market pressures. Specifically, we assume that unit payroll costs for those working as maintenance technicians are approximately ✂ ✂ ✂ higher than assumed in our draft forecasts. This adds approximately ✂ ✂ ✂ per FTE to our estimate of efficient unit payroll costs when averaged across the whole maintenance function, and leads to a revised estimate of 2022 efficient unit payroll costs of ✂ ✂ ✂. While we recognise that there remains a gap between our estimate of 2022 efficient unit payroll costs and Dublin Airport’s, we do not consider it necessary to include a glidepath as our overall Maintenance forecast for 2022 continues to be higher than Dublin Airport’s forecast.

<sup>7</sup> The roles we looked at included roles that required working shifts at unsocial hours.

## Facilities and Cleaning wages

We have been able to broadly validate the comparison Dublin Airport made between its proposed hourly salary for Facilities and Cleaning staff and the salaries on offer at Lidl.<sup>8</sup> When adjusting Lidl’s advertised hourly pay to match Dublin Airport’s roster patterns (i.e. accounting for shift premiums for working on Sundays or working unsociable hours), we find an hourly cost ranging from € 12.50 to € 15.00. As a sense check we calculate that the upper bound also matches the salaries on offer at the retailer Aldi.

While the use of a single comparator limits the value of the evidence presented, we consider Dublin Airport’s comparison of hourly payroll costs for Facilities and Cleaning team members provides some support for the efficiency of its salaries for the role. While there is a small premium to Dublin Airport’s hourly wages relative to the Lidl comparator (at € 12.50 compared with € 12.00), we consider this is likely to be justified given the range of tasks expected of facilities team members.

We requested further information from Dublin Airport on how facilities and cleaning staffing and wages have evolved over the period 2019 to 2022. We see that average salaries at an individual role level have not materially increased between 2019 and 2022, though we also note that supervisory roles make up a slightly greater proportion of the total number of FTEs in 2022 when compared with 2019.

Table 4.10: Facilities and Cleaning unit payroll costs in 2019 and 2022 (€, nominal)

	FTEs		Base salary incl. allowances		Total average cost per FTE	
	2019	2022	2019	2022	2019	2022
Airport Duty Manager	1	1	15,000	15,000	15,000	15,000
Business Support	1	1	12,000	12,000	12,000	12,000
Ops Management	1	1	12,000	12,000	12,000	12,000
Service Delivery Manager	1	1	12,000	12,000	12,000	12,000
Team Lead	1	1	12,000	12,000	12,000	12,000
Team Member	1	1	12,000	12,000	12,000	12,000

Source: Adapted from Figure 11 in Dublin Airport consultation response and further information from Dublin Airport

Overall, however, we consider that Dublin Airport has made the case for their proposed unit payroll costs in 2022 being efficient, as the hourly rates proposed for team members are broadly in line with the two comparators we have looked at. Consequently, we update our forecast accordingly.

### 4.4. REVISED FORECAST

The effect of these changes on our baseline and forecasts is set out below. The main changes from our draft forecasts are:

- Increases in our estimate of efficient 2022 unit payroll costs for Maintenance staff and Facilities and Cleaning staff, to reflect additional evidence provided by Dublin Airport
- Updates to our projections through to 2026 to reflect a more negative outlook for real wage growth.

<sup>8</sup> We consider Lidl to be an appropriate comparator given the limited training and skill requirements, the similar degree of shift work required, and the physical intensity of the work.

Table 4.11: Baseline unit payroll costs, compared with Dublin Airport 2022 estimate (€ per FTE, February 2022 prices)

Staffing group	Original CEPA efficient baseline	Dublin Airport estimate	Revised CEPA efficient baseline
Admin **	✂	✂	✂
Airside Operations	✂	✂	✂
Commercial **	✂	✂	✂
Central Finance **	✂	✂	✂
Finance (SSC) **	✂	✂	✂
Fire / Police **	✂	✂	✂
IT	✂	✂	✂
Maintenance *	✂	✂	✂
Facilities and Cleaning *	✂	✂	✂
Retail *	✂	✂	✂
Security *	✂	✂	✂

Source: CEPA analysis of Dublin Airport data

Notes: (\*) For groups where staff on older contracts are considered separately to those on newer contracts, a weighted average is included. (\*\*) For these categories, we are unable to make a like-for-like comparison with Dublin Airport's estimates as payroll costs and FTEs are categorised differently.

Table 4.12: Forecast unit payroll costs, 2022-2026 (€ per FTE, February 2022 prices)

	2022	2023	2024	2025	2026
Admin	✂	✂	✂	✂	✂
Airside Operations	✂	✂	✂	✂	✂
Commercial	✂	✂	✂	✂	✂
Central Finance	✂	✂	✂	✂	✂
Finance (SSC)	✂	✂	✂	✂	✂
Fire / Police	✂	✂	✂	✂	✂
IT	✂	✂	✂	✂	✂
Maintenance *	✂	✂	✂	✂	✂
Facilities and Cleaning *	✂	✂	✂	✂	✂
Retail *	✂	✂	✂	✂	✂
Security *	✂	✂	✂	✂	✂

Source: CEPA analysis of Dublin Airport data

\* Weighted average of staff on pre-2010 contracts and those on post-2010 contracts

2023 figures are lower than 2022 figures as the CBI is assuming negative real wage growth continues into 2023, as shown in Table 4.6.







the equipment in the existing security footprint without delivering the associated CIPs/new search area layouts. We have not been able to produce a phased staffing approach for this change either, so for simplicity, we have assumed that the change is fully implemented by the start of 2025.

### Tray throughput rates, IPP and passenger throughput rates

Dublin Airport has revised its tray throughput rates based on modelling of the new lane layouts with C3 implemented. The following table presents Dublin Airport’s assumed current and future throughput capacities, given full processing in both terminals. It should be noted that Dublin Airport restricts the throughput of some lanes to 60% operation in its analysis to estimate peak in-lane staffing requirements.

Table 5.2: Our assessment of Dublin Airport’s tray and passenger throughput rates pre and post C3 implementation

Terminal	# lanes	Trays / Hr	Total Trays / Hr	IPP	Total Pax / Hr
<b>Current</b>					
T1	15	420	6,300	1.7	3,705
T2	18	315	5,670	1.93	2,937
<b>Total</b>			<b>11,970</b>		<b>6,643</b>
<b>Future (with C3)</b>					
T1 – 23.5m lane	6	465	4,935 (411 per lane)	1.5	3,290 (274 per lane)
T1 – 17.5m lane	3	375			
T1 – 17.5m lane	2	345			
T1 – 17.0m lane	1	330			
T2 – 17.5m lane	9	375	5,175 (370 per lane)	1.5	3,450 (246 per lane)
T2 – 16.7m lane	5	360			
<b>Total</b>			<b>10,110</b> <b>(-18.4%)</b>		<b>6,740</b> <b>(+1.4%)</b>

Source: Dublin Airport, Taylor Airey Analysis

With the implementation of C3, Dublin Airport’s forecasts suggest an overall reduction in tray throughput capacity of 18.4%. This is driven by a reduction in the number of security lanes as well as by a fall in tray throughput per lane. ATRS has not yet been introduced in T2 and therefore a reduction in tray throughput due to C3 implementation will be offset by improvements driven by ATRS implementation. The benefits of ATRS have already been realised in T1.

Conversely, the estimated IPP rates provided by Dublin Airport for C3 implementation result in a marginal increase in passenger throughput of +1.4%.

The tray throughput rates are broadly in line with Dublin Airport’s previous position, which indicated a 25% increase in tray throughput due to ATRS implementation, offset by a 5% reduction in throughput due to the implementation of C3.

### Staffing levels by pair of lanes

Dublin Airport has re-considered its staffing based on the new lane layouts, including C3, ATRS and two body scanners per pair of lanes.

Table 5.3: Dublin Airport’s security lane staffing requirements pre and post C3 implementation

	Current		Future with C3 (initial submission)	Future with C3 (revised submission)	
	T1	T2	(T1/T2) <sup>9</sup>	T1 (new layout) Long lane / short lane	T2 (new layout)
Loader	4	2	4	4 / 4	4
WTMD / body scanner	2	2	4	6 / 4	4
Bag search	4	2	4	4 / 4	4
Screener	2	2	3	4 / 3	3
Host / Trouble shooter	-	-		2 / 2	2
<b>Total</b>	<b>12</b>	<b>8</b>	<b>15</b>	<b>20 / 17</b>	<b>17</b>

Source: Dublin Airport

Dublin Airport argues that a substantial increase in staffing is required for each pair of lanes to ensure compliance and to meet the planned security throughput rates. Initial estimates in the 2022 Dublin Airport operating expenditure submission suggested a staffing requirement of 15 staff per pair of lanes with C3 implemented, however these estimates have been increased to between 17 and 20 staff per pair of lanes in Dublin Airport’s revised submission, including additional hosts, screeners and body scanner staff.

### 5.3. OUR ANALYSIS AND RESPONSE

#### Baseline staffing and Roster Assumptions

##### Efficiency of roster design

Dublin Airport has provided partial roster information for the current Winter 2022 season. The information includes 120 staff in a Flexi Roster Group that are not currently allocated any hours. It has stated that the same rosters were deployed during the Summer 2022 period as part of the introduction of New Ways of Working (NWOW). The Flexi Roster Group allows Dublin Airport to make demand driven adjustments to ASU resourcing on a four-week rolling basis that should enable a closer alignment between supply and demand. It is accepted that roster information for recent years will be difficult to assess in the same systematic way as previously undertaken due to the disruption to passenger demand caused by travel restrictions over 2020-2021 and the impact of staff shortages on security operations in Summer 2022.

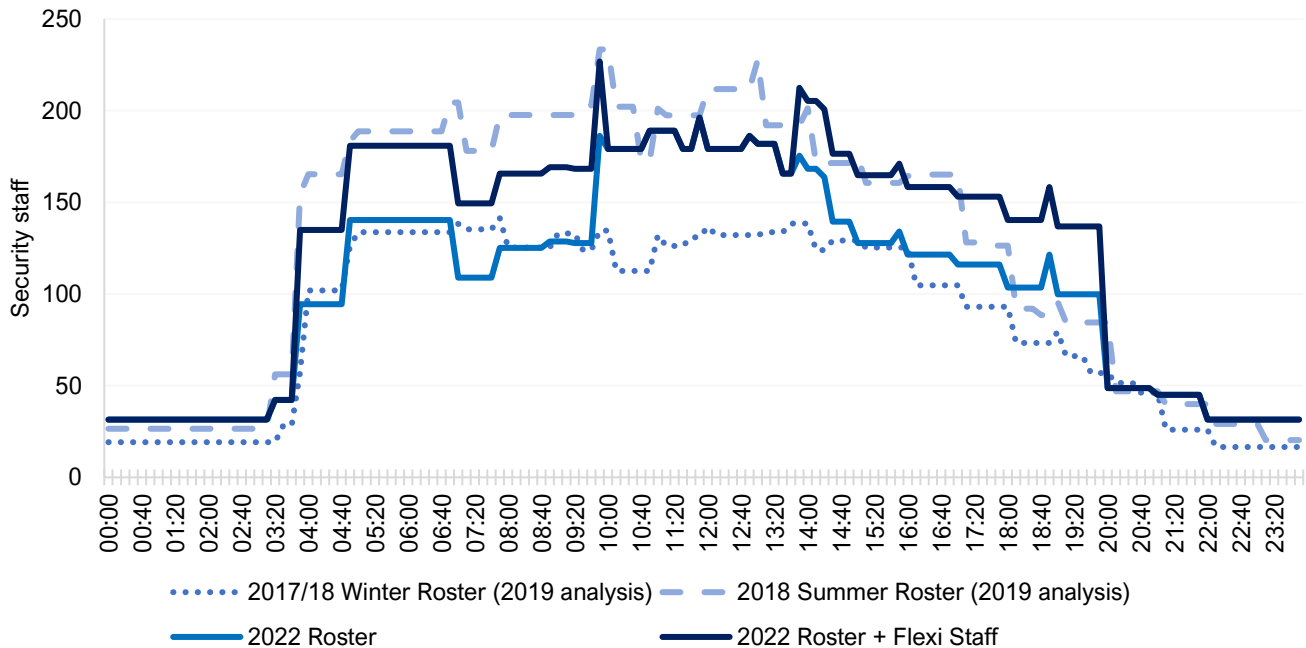
We have therefore undertaken a simple piece of analysis to compare the new roster staffing levels with a typical day from the Winter 2017/18 and Summer 2018 rosters, based on analysis previously undertaken for the 2019 determination report. As Dublin Airport has not provided us with examples of typical flexi-roster allocation data, we have made some assumptions regarding the distribution of these resources on a typical weekday. Dublin Airport confirmed that the flexi-roster contracts are based on a minimum provision of 30 working hours per week. We have allocated these hours into our rostering model demonstrating that the airport is running with significant excess capacity in terms of ASU staff during the Winter. This will give Dublin Airport the opportunity to catch up on mandatory security training that was deferred during COVID-19 but this level of in-efficiency is not sustainable. Based on previous analysis undertaken for the 2019 determination report, we would expect that Winter rostered

<sup>9</sup> Based on DAA 2022 Operating Expenditure Submission



hours would be approximately 88% of hours rostered in the Summer period. While travel patterns may be different in future years, we would not expect this relationship to change materially.

Figure 5.1: Comparison of Dublin Airport rosters for T1 and T2 between 2017/18 and 2022, considering 10% break allowance



Source: Taylor Airey analysis of Dublin Airport data

During meetings with Dublin Airport it was acknowledged that the security function is carrying excess ASU staff for the Winter period due to current labour market challenges around staff recruitment and retention. Dublin Airport is currently recruiting security officers on a full-time basis as they argue they cannot secure new staff on flexible contracts with hours ranging between 20 and 40 per week. This raises a concern that excess security FTEs will be carried into future winter seasons. From next winter onwards our projections expect that Dublin Airport will achieve a more efficient allocation of resources across the seasons. In our experience, this could be achieved by using fixed term contracts for roles that require less training such as Hosts or Loaders.

**Including an allowance for resilience**

We have separately considered Dublin Airport’s request that, in determining efficient staffing levels, we take account of:

- The need for the airport to have staff in place prior to passenger volumes materialising, given lengthy training requirements.
- The need to ensure staffing levels are resilient to a less predictable walk-up profile of passengers.

We consider both issues have been captured within our forecasts through our decision not to apply a roster efficiency adjustment to our 2022 forecasts. We note above that Dublin Airport is running with significant excess capacity, particularly for the winter season, which provides a degree of resilience to a change in the walk-up profile of passengers and ensures that most staff are already in place for the expected growth in passenger volumes in 2023.

**COVID-19 absence allowance within rosters**

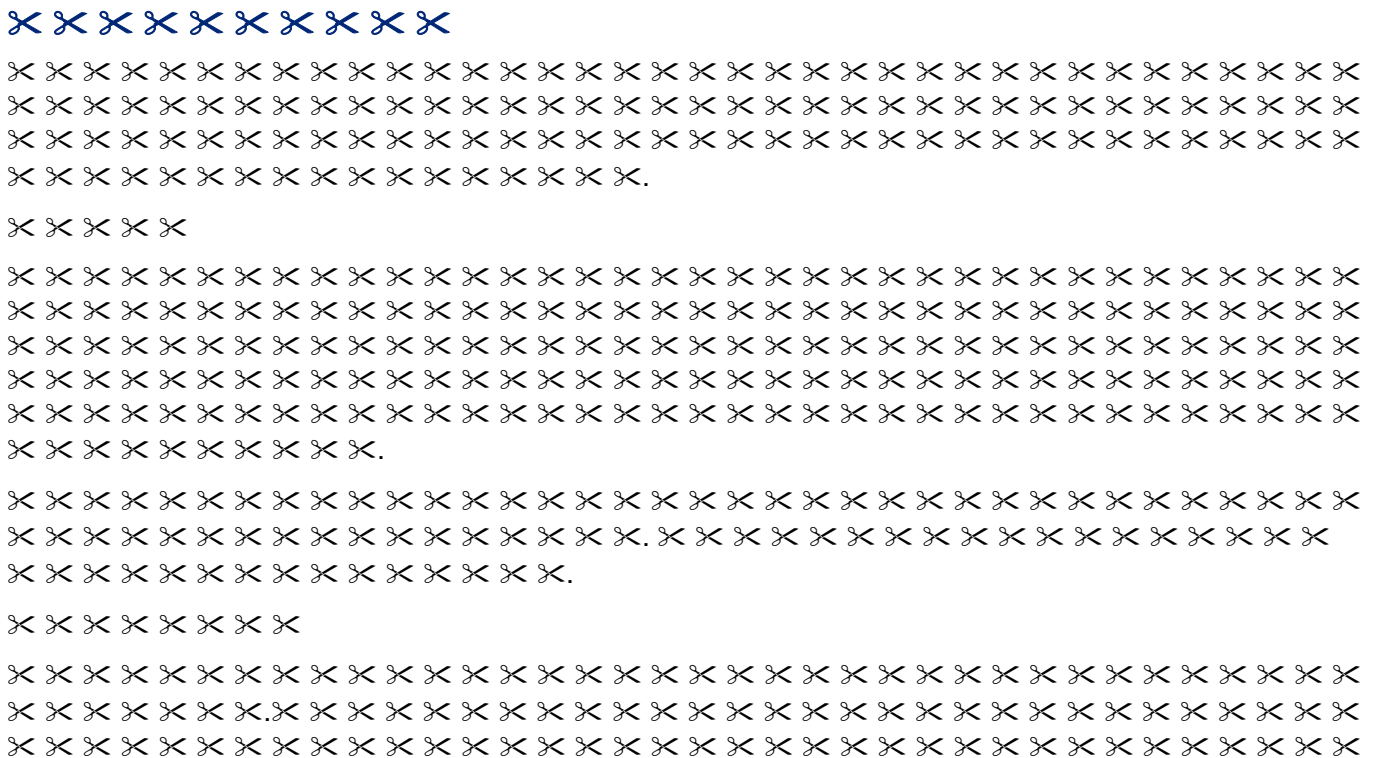
Dublin Airport has also stated that additional levels of absence due to COVID-19 are expected to be sustained throughout the determination period. While official statistics relating to employee absence for 2022 are not yet available, we would not expect sickness rates to be sustained at COVID-19 levels through the next few years. A follow up discussion with Ryanair has confirmed that they are not planning to incorporate any additional COVID-19 related absence allowances within their staff rosters for the immediate years post COVID-19.

We understand that this reflects the base planning assumptions being used across aviation and other public transport sectors where absence rates due to COVID-19 have substantially improved. We know that this is particularly the case for front line staff within rail operations and maintenance. We have included an additional sickness allowance of 2.67% for 2023 and 1.33% for 2024 for in-lane security staff to reflect that we would expect sickness to return to normal levels relatively quickly. This provides a level of additional resilience within the proposed staffing levels during the first two years of the determination period.

**VCP Elasticity**

We understand that VCP security staff screen a variety of vehicles such as catering and in-flight supplies, aviation fuel deliveries and maintenance vehicles. VCP staff are essential for ensuring secure airside operations. The screening of vehicles takes place using a variety of methods such as explosive trace detection, manual searches, and x-ray screening.

Dublin Airport has assumed an elasticity to passenger numbers for VCP officers however we had considered that these posts are primarily inelastic with regards to passenger numbers due to the static configuration of the access points to the airfield. Any increase in staffing due to a larger CIP should be defined in absolute numbers rather than linked to passenger numbers. However, Dublin Airport has demonstrated that during a period when passenger numbers were falling, the number of VCP officers was also reduced. We recognise that airfield traffic will increase during periods when passenger numbers increase, therefore we have amended our assumptions to include an elasticity of 0.2 for VCP officers with respect to passenger volumes, in line with Dublin Airport’s submission. This results in an overall increase of 10 FTEs over the determination period.









### **Impact of the New Technology (C3 scanners, full body scanners and ATRS)**

We have reviewed Dublin Airport’s revised C3 assumptions and modelling with a particular focus on proposed changes to lane configuration, number of lanes, tray throughput, IPP and the resultant passenger throughput. We have undertaken changes to our own security staffing model to reflect any assumptions that we have deemed relevant to our assessment. We have also reviewed Dublin Airport’s revised proposal for staffing each of the lane configurations and determined our own staffing assumptions.

#### **Tray throughput rates, IPP and passenger throughput rates**

We have considered Dublin Airport’s revised tray throughput rates and believe that these are potentially conservative due to the following reasons:

- There appears to be no increase in throughput capacity, however we would expect an increase due to the implementation of two body scanners per pair of lanes. ACI’s Smart Security Implementation Guide suggests that body scanner capacity tends to be the primary bottleneck of security throughput and up to 500 pax / hr can be achieved when implementing multiple scanners. Although we could not verify the basis of the tray throughput capacity estimate noted by ACI, this does however suggest that significant improvements in passenger throughput should be achievable with an increase in body scanners.
- The X-Ray scan evaluation time assumed by Dublin Airport in its tray throughput modelling considers a rate of 12 seconds per image. Although we recognise that some additional evaluation time may be required for screeners as they familiarise with the CT scanning technology implemented by C3, this should be reduced as operation of C3 matures. ACI notes that an evaluation time of between 8 and 11 seconds should be expected with C3.

We have also considered Dublin Airport’s revised IPP rates and believe these are reasonable. Dublin Airport did not previously appear to consider reduced IPP rates in its FTE forecasting. However, it has now reduced its proposed IPP rates in its latest response to 1.5 following the implementation of C3. In our draft forecast, we estimated a 30% reduction in IPP from current IPP rates based on ACI’s evaluation, which also aligned to the statement previously provided by Dublin Airport’s in CIP.20.06.001. However, we note that the currently achieved IPP rates of 1.7 and 1.93 for T1 and T2 respectively are already relatively low compared to benchmarks from other airports and therefore there will be a diminishing benefit in IPP reduction from C3 for Dublin Airport. Dublin Airport’s revised IPP rate of 1.5 appears reasonable and consistent with rates used at other airports when implementing C3 technology during Summer operations.

In our experience, other airports who have implemented C3 scanners have experienced improvements in throughput and flow through the security checkpoint, resulting in better efficiency. Reasons for this include:

- Reduced IPP as fewer items need to be removed from luggage<sup>10</sup>
- More streamlined process making it simpler for passengers and staff

<sup>10</sup> Industry trials show that images per person and trays reduce by a factor of 0.4 with the introduction of C3 Source: <https://www.smiths.com/what-we-do/our-innovations/2018/07/screening-passengers-faster>

- Operators have a user-friendly screen interface with better quality images which supports lower false alarms and faster decisions. The C3 scanning technology also flags suspicious materials with an alarm so that a level of subjective judgement is removed from the process.

Whilst we believe that the tray throughput and resultant passenger throughput rates proposed by the Dublin Airport might be slightly conservative, we consider that they provide a reasonable set of assumptions for planning the implementation of new C3, ATRS and body scanning equipment. The revised assumed IPP rate of 1.5 during the Summer season is a figure that is consistent with other airports that have implemented, or are planning to implement, C3 scanning technology. These parameters have been used within our own in-lane security staff model in support of this determination.

### **Staffing Levels by pair of lanes**

While we understand that the new lane layouts will create some additional staffing requirements, we do not understand why such a significant increase in staffing is required. We have analysed Dublin Airport's proposals for each of the in-lane staffing areas:

- The number of loaders is proposed as four, with no change in T1, but an increase from two loaders in T2. The role of a loader is currently focused on ensuring that liquids and large electricals are separated to ensure effective and efficient screening. Once the requirement to remove such items from luggage is removed due to the implementation of C3, the role of loader will be much simplified in terms of smooth loading of trays as the need to respond to queries from passengers will be reduced. This assumption is supported by data that we have reviewed from C3 equipment trials at other airports.
- The number of body scanners per pair of lanes is increasing from one to two. Therefore, it is reasonable to increase the number of body scanning staff given that body scanning is on the critical path. However, it is not clear why six body scanner staff are required for the long lanes given that the number of body scanners is the same as the shorter lanes. We understand that body scanner throughput needs to be aligned with tray throughput on the lanes however, if short lanes can accommodate up to 375 trays/hour with four body scanner staff then the anticipated throughput of 465 trays/hour on the long lane should only require one additional staff member on the body scanners.
- The number of bag search staff is proposed as unchanged for T1 but increased for T2. In our experience, a significant number of bag searches are attributed to passengers leaving liquids or large electrical items in their luggage. This requirement will be significantly reduced when factoring in the capability of C3 technology to scan liquids and large electrical items within the luggage. The implementation of C3 standard technology at Amsterdam Schiphol Airport has resulted in bag search rates becoming lower than regular security procedures. They also confirmed that the deployment of the new equipment improved throughput by 10-20%. These benefits resulted in Schiphol Airport's decision to become an early adopter of C3 cabin baggage scanning equipment.<sup>11</sup>
- The number of screeners is proposed to increase from two to three for a short lane, and to four for a long lane. We recognise that C3 technology may initially require some additional evaluation time for screeners, however this should be reduced as the screeners become familiar with CT images, and the increased evaluation times of X-ray images should be offset by the reduced IPP rates.
- The addition of two host and trouble shooter roles per pair of lanes appears to add excessive staffing given that the implementation of C3 should have minimal impact on the customer's interface with the security equipment. The host role might be important during the implementation phase when passengers require

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<sup>11</sup> ECAC News #67 Aviation Security – Better, smarter, more innovative, Autumn 2018

more guidance and reassurance prior to arrival at the divest positions, however this requirement should reduce over time. Such roles should also float across an area rather than be retained as a fixed position per pair of lanes. We accept that the ratio of Supervisor to in-lane security staff can be increased to 1:15, so this should provide more in-lane supervision capable of covering the troubleshooting element of these proposed roles.

We have proposed an alternative economically efficient staffing model based on benchmarks that we have previously used for the implementation of C3 in a major UK international airport and other regulatory determinations.

*Table 5.4: Comparison of Dublin Airport and our proposed staffing levels for the ASU post C3 implementation*

	Dublin Airport staffing model		CEPA/TA staffing model	
	Long lane	Short lane	Long lane	Short lane
Loader	4	4	2	2
WTMD / body scanner	6	4	5	4
Bag search	4	4	4	3
Screener	4	3	3	2
Host / Troubleshooter	2	2	1	1
<b>Total</b>	<b>20</b>	<b>17</b>	<b>15</b>	<b>12</b>

*Source: Dublin Airport, Taylor Airey Analysis*

We believe that the total number of staff per lane presented is adequate, however we accept that the exact mix of staff for each role will be subject to trial and regular review during the implementation phase. We also believe that there is opportunity for Dublin Airport to further increase the efficiency of the security operation once the new technology has been implemented, and once both staff and passengers have become accustomed to the new security processes and equipment. We have not been able to quantify this potential benefit due to the uncertain implementation programme provided to date.

## 5.4. REVISED FORECAST

Using the same passenger numbers forecast as the draft forecast, we present our revised forecast in Table 5.5 below. As well as making the changes outlined above, we also correct an error from our draft forecasts where we mistakenly applied a lower unit payroll cost for security management staff than intended. In Section 18, we presented our updated forecasts of efficient expenditure using CAR's latest passenger forecast.

*Table 5.5: Our revised forecast of security payroll costs, 2022-2026 (€ million, February 2022 prices)*

	2022	2023	2024	2025	2026
Total security payroll (excl. CIP)	46.6	44.0	46.0	47.7	49.1
<b>Total security payroll (incl. CIP)</b>	<b>46.6</b>	<b>44.0</b>	<b>46.3</b>	<b>46.6</b>	<b>47.6</b>
<i>Our draft forecast</i>	44.2	43.2	46.9	48.8	50.1

*Source: Taylor Airey analysis*

## 6. MAINTENANCE

In this section, we discuss comments made in relation to our draft forecasts of efficient Maintenance expenditure and detail our consideration of the issues raised.

### 6.1. OUR APPROACH TO PRODUCING DRAFT FORECASTS

In our draft report, we concluded that Dublin Airport’s proposals for Maintenance in 2022 were broadly efficient, in terms of staffing levels and non-pay expenditure, based on the benchmark analysis we had undertaken. The one exception to this was their estimate for unit payroll costs for Maintenance staff (as discussed in Section 4). As a result, we set 2022 baseline expenditure at €15.6 million for pay costs and €14.1 million for non-pay costs, which compared against Dublin Airport’s forecasts of €16.6 million and €13.5 million respectively.

From 2023 onwards, we assumed staffing levels will grow using a passenger elasticity of 0.3 until passenger numbers recover to 2019 levels, and then 0.4 thereafter. For non-pay expenditure we assumed an elasticity of 0.3 with respect to passenger volumes. We also allowed for step changes in maintenance expenditure for new assets, namely the new North Runway, several new fixed electrical ground power units, and hold baggage screening machinery. Our resultant draft forecasts are summarised in Table 6.1 below.

Table 6.1: Our draft forecast of maintenance non-pay costs, 2022-2026 (€ million, February 2022 prices)

	2022	2023	2024	2025	2026
<b>Total maintenance excl. CIP</b>					
- of which pay	15.4	16.6	17.4	18.0	18.4
- of which non-pay	14.0	15.1	15.6	16.0	16.4
<b>Total maintenance CIP</b>					
- of which pay	0.1	0.9	0.9	1.0	1.0
- of which non-pay	0.1	1.6	3.3	3.5	3.7
<b>Total maintenance incl. CIP</b>					
- of which pay	15.6	17.5	18.3	18.9	19.4
- of which non-pay	14.1	16.8	18.9	19.5	20.0

Source: CEPA analysis

### 6.2. COMMENTS ON OUR DRAFT FORECASTS

#### Dublin Airport

Dublin Airport did not provide any specific comment on our forecasts of efficient Maintenance staffing levels, or of efficient non-pay expenditure. However, they did state that they are making efforts to increase the efficiency and reliability of assets throughout the campus and requested that CAR account for the expenditure involved in these efforts. Specifically, Dublin Airport stated they were making continued efforts to upskill staff, enhance training, strengthen service level agreement performance, and optimise repair and maintenance periods during off-peak hours



## Airlines

Ryanair argued that the uplift of 4 FTE by 2026 to cover sustainability initiatives (particularly around noise compliance), had not been justified. It argued that Dublin Airport had not adequately explained what had changed in terms of additional regulatory requirements that led to a need for additional staff.

IATA noted that when commissioning new assets, there is usually a phase in of maintenance costs, and as such we needed to explain our rationale for allowing €1.5 million non-pay maintenance for C3 starting in 2024.

## 6.3. OUR ANALYSIS AND RESPONSE

### Allowance for enhanced maintenance regime

We note Dublin Airport's ambitions for improving the efficiency and reliability of assets and accept that Dublin Airport will require sufficient resources to deliver this ambition. We consider this to have been reflected in our draft forecasts of staffing levels and non-pay expenditure – we note that our draft forecasts of staffing levels were closely aligned with Dublin Airport's regulatory submission, and that our forecasts of non-pay expenditure were higher than Dublin Airport's proposals. We are also of the view that the activities Dublin Airport are proposing to take are what would be expected from any similar organisation managing a large asset base and, therefore, should be reflected in historic cost allowances.

### Sustainability FTEs

With regards to Ryanair's challenge of our uplift to staffing levels for new sustainability initiatives, we note that there has been a step change in ambition from the Government in relation to sustainability, and particularly, reaching Net Zero. We also recognise that Dublin Airport has committed to several new noise related initiatives, following the opening of the new North Runway and ANCA's decision to relax the limit on night flights.

In its regulatory submission, Dublin Airport provided some detail on the purpose of the new roles:

*Noise and Environmental Compliance – 2 roles for noise and 1 role for environment, PM noise insulation scheme, Noise track flight monitoring analyst, Flight procedures and rules management, Environmental officer (does not include wider infrastructure Capex sustainability reporting) (4 FTEs)*

We see this as providing adequate justification for the additional roles, given the step change in obligations on the airport closely mirror the new roles identified.

We have separately considered Dublin Airport's proposals for a sustainability-related uplift to Central Functions staffing (covered in Section 7). As we have made an efficiency adjustment to those proposals, we do not consider it necessary to make any adjustment to Dublin Airport's proposals within Maintenance.

### Phase in of maintenance for new assets

We acknowledge that for some new assets, there can often be a phase in of maintenance activity as newer assets would typically be expected to be more reliable. As such, less preventative and reactive maintenance would be needed.

However, there are two reasons why we expect this not to apply to the CT scanners being introduced into security:

- The technology being introduced is new to airports, and as such, there are likely to be bedding in issues that require maintenance time.
- The technology is being introduced to a business-critical operational process, which means it would be prudent for Dublin Airport to begin maintenance activities from commissioning. It is also likely that a certain degree of maintenance is required to ensure compliance with the asset warranty.

Consequently, we consider it appropriate to maintain our assumption that there is no phase in of maintenance spending for the C3 assets.

Although this has not been raised by stakeholders, it could also be argued that new assets often have teething issues that require additional maintenance activity in the shorter term. However, we would expect the costs associated with such activity to be capitalised and/or covered within a warranty, rather than requiring higher opex.

## 6.4. REVISED FORECAST

In the table below, we present our revised estimate of Maintenance payroll costs, assuming the same passenger forecasts as per the draft determination. In Section 18, we presented our updated forecasts of efficient expenditure using CAR's latest passenger forecast.

Table 6.2: Our revised forecast of maintenance staff and payroll costs, 2022-2026 (FTEs)

	2022	2023	2024	2025	2026
Maintenance staff (passenger driven)	162	171	175	179	182
Maintenance staff (non-passenger driven)	45	45	45	45	45
Sustainability (noise and env. compliance)	0	1	2	3	4
<b>Total maintenance staff (excl. CIP)</b>	<b>206</b>	<b>217</b>	<b>222</b>	<b>227</b>	<b>230</b>
Fixed Electrical Ground Power	2	2	2	2	2
Hold Baggage Screening	0	4	4	4	4
North Runway	0	6	6	6	6
<b>Total maintenance staff (incl. CIP)</b>	<b>208</b>	<b>229</b>	<b>234</b>	<b>239</b>	<b>242</b>
<b>Total maintenance payroll (excl. CIP)</b>	<b>16.0</b>	<b>16.7</b>	<b>17.4</b>	<b>18.0</b>	<b>18.5</b>
<b>Total maintenance payroll (incl. CIP)</b>	<b>16.2</b>	<b>17.7</b>	<b>18.3</b>	<b>19.0</b>	<b>19.5</b>
<b>Our draft forecasts</b>					
- excl. CIP	15.4	16.6	17.4	18.0	18.4
- incl. CIP	15.6	17.5	18.3	18.9	19.4

Source: CEPA analysis

In the table below, we present our revised estimate of Maintenance non-pay costs, assuming the same passenger forecasts as the draft determination.

Table 6.3: Our revised forecast of maintenance non-pay costs, 2022-2026 (€ million, February 2022 prices)

	2022	2023	2024	2025	2026
<b>Total maintenance non-pay (excl. CIP)</b>	<b>14.0</b>	<b>15.1</b>	<b>15.6</b>	<b>16.0</b>	<b>16.4</b>
HBS ST3 screening	0.0	0.8	0.8	0.8	0.8
C3 Security Screening	0.0	0.0	1.5	1.5	1.5
CIP-related car parking	0.0	0.0	0.0	0.2	0.3
North Runway	0.0	0.7	0.7	0.7	0.7
Battery storage / microgrid generation	0.0	0.0	0.0	0.0	0.0
Other CIP	0.1	0.1	0.3	0.1	0.0

	2022	2023	2024	2025	2026
<b>Total maintenance non-pay (incl. CIP)</b>	<b>14.1</b>	<b>16.8</b>	<b>18.9</b>	<b>19.3</b>	<b>19.7</b>
<b><i>Our draft forecasts</i></b>					
- <i>excl. CIP</i>	14.0	15.1	15.6	16.0	16.4
- <i>incl. CIP</i>	14.1	16.8	18.9	19.5	20.0

Source: CEPA analysis

## 7. CENTRAL FUNCTIONS

In this section, we outline the comments made in relation to our draft forecasts of efficient Central Functions expenditure and detail our consideration of the issues raised.

### 7.1. OUR APPROACH TO PRODUCING DRAFT FORECASTS

In our draft report, we acknowledged that Dublin Airport had implemented some significant cost savings in 2020 and 2021, and that some of these savings were not permanent and would be reversed from 2022 onwards. However, we also indicated that a large proportion of those savings should be made permanent so that overall Central Functions staffing remained in line with other airport benchmarks. Dublin Airport, on the other hand, assumed a rapid reversal of most of the cost savings introduced in 2020 and 2021.

In our draft forecasts, we allowed 8 additional FTEs in 2022 rising to 14 FTEs by 2026 for new roles related to sustainability initiatives. We indicated that Dublin Airport's proposals for the additional roles had met the needs case but had not fully met the additionality case and had not met the efficiency test. As such we recommended Dublin Airport provide further evidence in support of their proposals

Our resultant draft forecasts for Central Functions are presented in the table below.

Table 7.1: Our draft forecast of Central Functions staffing levels and payroll costs at Dublin Airport, 2022-2026

	2022	2023	2024	2025	2026
Central Functions staffing levels (FTEs)	320	324	329	333	333
Central Functions expenditure (€ million)	30.1	31.4	32.9	33.8	34.4

Source: CEPA analysis

### 7.2. COMMENTS ON OUR DRAFT FORECASTS

#### Dublin Airport

Dublin Airport raised two issues with our Central Functions forecasts.

Firstly, in our draft report, we noted that there had been a lot of unexplained growth in strategy, policy and regulation roles, which we were not convinced was efficient. We recommended Dublin Airport provide further evidence as to why these roles are needed, genuinely additional to existing roles, and efficiently resourced. In response, Dublin Airport has suggested that these roles are ones moved from other parts of the business into Other Support Staff, rather than being new roles, as shown in Table 7.2.

Table 7.2: Reconciliation of FTE movement across staff categories

FTEs that moved into BU10631 – Strategic Programmes	FTEs	Previous category
10625 – Terminal Standards & Planning	6	Facilities and Cleaning
10141 – Airside Standards & Planning	4	Airside Operations Staff
10623 – Operations Business Management	5	Central Functions
10652 – Mail and Print Services	3	Central Functions
10651 – Operations Performance & Assurance	5	Central Functions

Source: Adapted from Figure 40 in Dublin Airport consultation response

Secondly, Dublin Airport also argued that we applied an incorrect unit payroll cost for property and advertising staff working in commercial roles, using an average of €49,500, which compares against our Central Functions average of €94,000 and a Dublin Airport 2022 actual of €104,000.

They noted that these roles are mostly senior manager and manager roles pertaining to managing the various commercial businesses across the whole Dublin Airport estate including commercial property, commercial planning and development, media and advertising and DATS (Dublin Airport Travel Services).

## **Ryanair**

Ryanair, in its response to CAR's Draft Determination raised the following issues:

- They argued that the 50% increase in Central Functions staffing between 2018 and 2019 was evidence of inefficiency, and as such agreed with our view that it was inappropriate to use 2019 staffing levels as a baseline.
- They suggested that Dublin Airport had provided insufficient justification for its proposal to add 10 FTE to work on sustainability initiatives, arguing that many sustainability requirements would have been present previously and the needs case had not been made for additional staff. They also considered that there was significant risk of double counting the additional compliance staff proposed within the Maintenance function.
- Finally, they noted that our Central Functions forecast on a cost per passenger basis is materially higher than proposed in our 2019 efficiency study, and that the share of Central Functions expenditure as a proportion of opex stays the same through the interim determination period (despite passenger volumes growing and Central Functions being characterised by largely fixed costs).

## **7.3. OUR ANALYSIS AND RESPONSE**

### **Disallowed Other Support Staff**

We have investigated the specific business units that Dublin Airport indicated have been moved from other CAR categories into Other Support Staff. Of the 23 FTE differential highlighted by Dublin Airport, 6 FTEs were moved from Facilities and Cleaning, 4 FTEs from Airside Operations, and 13 FTEs from other areas within Central Functions.

- The 6 FTEs that have transferred from Facilities and Cleaning (10625 – Terminals Standards & Planning) are already implicitly captured within our Facilities and Cleaning forecasts. To better align our revised forecasts with Dublin Airport's, we move the 6 FTEs from Facilities and Cleaning to Central Functions.
- The 4 FTEs that have transferred from Airside Operations (10141 – Airside Standards & Planning) were assumed by us (in our draft forecasts) to be an efficiency saving. Dublin Airport's response suggests that this was not an efficiency saving, and consequently, we increase our Central Functions staffing forecast by 4 FTEs to account for this transfer.
- The 13 FTEs from other areas within Central Functions were also already captured within our draft forecasts.

With the exception of the 4 FTEs highlighted above, the evidence provided by Dublin Airport does not make a compelling case that our forecast of Central Functions staffing levels was set too low in our draft forecasts. The airport has not provided a convincing justification for the levels of staffing it had in 2019, which were higher than we had previously determined to be efficient, and which the airport is expecting to return to over the interim determination period. In particular:

- Dublin Airport has not made the case that there is a new administrative requirement, that creates a need for additional Central Functions resource to deliver the quality of service expected, and that was omitted from our original analysis.
- It has not conclusively made the case that we excluded roles transferred from other parts of the business, while also ‘banking’ the staffing reduction from those other business areas.

### **Incorrect unit payroll costs for commercial management staff**

We have reviewed our modelling and concluded that we did make an error in our draft forecasts, applying a Facilities and Cleaning unit payroll cost to commercial management staff instead of the Commercial unit payroll costs. We correct this error in our revised forecasts.

### **Additional sustainability staff**

We note that Ryanair has challenged Dublin Airport’s proposals for additional sustainability staff, and also note that Dublin Airport did not initially provide further evidence in support of its proposal. Consequently, we submitted a clarification question to Dublin Airport on this issue and received the following breakdown of proposed staffing levels.

*Table 7.3: Dublin Airport clarification of planned sustainability staff increase (non-capitalised staff only)*

<b>Area</b>	<b>Responsibility</b>	<b>Current FTEs</b>	<b>Future FTEs</b>
Core team	Strategy, policy development, external stakeholder engagement and management, research and innovation, environmental compliance, environmental management, internal stakeholder alignment, education and engagement	4	4
Procurement	Redesign Dublin Airport’s procurement procedures and then review the sustainability element of tender returns	0	1
Financial Reporting	Lead the adoption of EU Taxonomy and Taskforce on Climate-related Finance Disclosures, and complete annual reporting requirements	0	1
Sustainability Delivery*	Sustainability strategy (1), project development (1), governance and compliance (1), assurance, training, engagement (1), mobility (1)	2	3
Compliance*	Environmental regulations and compliance – noise (7), air (3), water (2), energy and carbon (4), land use (2)	4	11
<b>Total</b>		<b>10</b>	<b>20</b>

*Source: Adapted from information provided by Dublin Airport*

*Note: Dublin Airport assume that staff in starred areas spend 40% of time on capital projects.*

We have been unable to find any publicly available benchmarks to compare Dublin Airport’s proposed sustainability staffing levels. However, we have compared this against staffing levels at other airports we have worked with previously, and found that the increase would lead to a sustainability function that is more than twice the size.<sup>12</sup> While recognising that requirements on Dublin Airport have increased recently, and CAR’s statutory objective in relation to sustainability policy, we find that the proposed scale of increase is likely to be disproportionate, at 10 additional FTEs in 2022 rising to 17 additional FTEs by 2026.

<sup>12</sup> We have benchmarked against airport sustainability functions as they existed prior to the COVID-19 pandemic. We also note that our benchmarks are exposed to fewer noise-related compliance requirements than Dublin Airport.

Some of the responsibilities identified in the table above could be delivered effectively through a change in emphasis or refocusing of existing roles, rather than requiring several new roles. While some central coordination and oversight of sustainability initiatives may be required, we expect most of Dublin Airport's sustainability targets will need to be met through a change in focus of the entirety of the airport workforce.

As such, we allow 8 additional FTEs related to new sustainability requirements – 1 procurement, 1 financial reporting, 1 sustainability delivery, and 5 compliance roles related mostly to noise and carbon. We consider this allowance, in conjunction with the sustainability allowance already included within Maintenance, provides sufficient resource for Dublin Airport to meet its new obligations, which primarily relate to noise and carbon. This is a 1.5 FTE increase on our draft forecasts for 2022, we maintain staffing at this level through the length of the interim determination period, rather than assuming that staffing levels increase over time.

### **Increase in Central Functions cost per passenger relative to 2019 study**

We note the comment made by Ryanair about Dublin Airport's increase in Central Functions staffing between 2018 and 2019 and consider that this has been captured in our estimate of efficient 2022 staffing levels.

We acknowledge Ryanair's point that the Central Functions opex per passenger proposed in our draft forecasts is materially higher than that proposed in our 2019 forecasts. However, we consider there are two legitimate reasons for this increase:

- Central Functions staffing is relatively inelastic to passenger volumes and,<sup>13</sup> given the lower passenger base expected in our draft forecasts relative to the 2019 Determination, expenditure per passenger can be expected to be higher. This accounts for over 90% of the difference between the two forecasts when compared on a per passenger basis.
- Dublin Airport has restructured many parts of its business since the 2019 Determination was finalised, which has led to certain roles being recategorised as Central Functions. Although this has inflated the Central Functions forecast in our draft forecasts it is accompanied by an associated reduction in the other cost categories.

## **7.4. REVISED FORECAST**

We have made the following changes to our Central Functions staffing forecast:

- We transfer 6 FTEs from Facilities and Cleaning into Central Functions to match Dublin Airport's reorganisation of functions.
- We add a further 4 FTE to our Central Functions forecast, to represent the roles that were moved over from Airside Operations.
- We change our forecast of sustainability staffing to a flat allowance of 8 FTEs over the determination period.
- We update our error in unit payroll costs for commercial staff to reflect their correct rate.

Using the same passenger numbers forecast as the draft forecast, we present our revised forecast in Table 7.4 below. In Section 18, we presented our updated forecasts of efficient expenditure using CAR's latest passenger forecast.

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<sup>13</sup> We use an elasticity of 0 with respect to passenger volumes for most Central Functions roles, with the exception of HR (which is linked to staffing levels) and Platinum Services (linked to passenger volumes).

Table 7.4: Our revised forecast of Central Functions staffing levels and payroll costs at Dublin Airport, 2022-2026

	2022	2023	2024	2025	2026
<b>Central Functions staffing levels (FTEs)</b>	<b>330</b>	<b>332</b>	<b>335</b>	<b>336</b>	<b>337</b>
<b>Central Functions expenditure (€ million)</b>	<b>32.0</b>	<b>32.1</b>	<b>33.0</b>	<b>33.6</b>	<b>34.2</b>
<i>Our draft forecast (€ million)</i>	30.1	31.4	32.9	33.8	34.4

Source: CEPA analysis



## 8. FACILITIES

In this section, we discuss the comments made in relation to our draft forecasts of efficient Facilities expenditure and detail our consideration of the issues raised.

### 8.1. OUR APPROACH TO PRODUCING DRAFT FORECASTS

In our draft report, we noted that Dublin Airport had adjusted the way it operated Facilities. Prior to the COVID-19 pandemic, Facilities staff were separated into groups performing single duties. Dublin Airport has now adjusted its approach, in line with the recommendations set out in our 2019 report. Terminal facilities staff working across functions have been rationalized into cross-functional units, that allow a more flexible approach driven by need. In combination with the reduction in passenger figures, we indicated that we expected that these operational efficiencies should result in a notably lower level of FTEs in 2022 relative to 2019.

We therefore determined the efficient 2022 baseline FTEs by taking our 2019 efficient staffing levels and adjusting for the change in passenger volumes. For wage costs we used our estimate of efficient unit payroll costs for Facilities & Cleaning. This resulted in a baseline of €12.6 million. We projected in-house facilities FTE forward using an elasticity of 0.4 with respect to passenger volumes. This resulted in growth to a cost €15 million by 2026. Lastly, we included the expected impact from CIP projects related to Facilities.

Table 8.1: Our draft forecast of Facilities expenditure, 2022-2026

	2022	2023	2024	2025	2026
<b>Staffing levels (FTEs)</b>					
Facilities (excl. CIP)	254	269	276	281	283
Facilities (incl. CIP) *	254	281	301	316	318
<b>Payroll expenditure (€ million, February 2022 prices)</b>					
Facilities payroll (excl. CIP)	12.6	13.6	14.2	14.7	15.0
Facilities payroll (incl. CIP)	12.6	14.2	15.5	16.5	16.9

Source: CEPA analysis

Note: Dublin Airport's CIP proposals do not distinguish between Facilities staff and Cleaning staff. However, we expect that most of the requirement relates to Facilities staff.

### 8.2. COMMENTS ON OUR DRAFT FORECASTS

#### Dublin Airport

In its response, Dublin Airport stated that we disallowed 26 FTEs in 2022, of which approximately 14 FTE are staff working at the airport's transfer facility. They suggested that these staff members had inadvertently been excluded from our draft forecasts, as the relevant staff were previously captured within the Central Functions category. To estimate the Facilities staffing required for its 2022 operation, Dublin Airport prepared a detailed task requirement on a bottom-up basis for a typical day, shown in Figure 8.1 below.

Figure 8.1: Detailed Facilities staffing requirement (hours)

TERMINAL FACILITIES	LANDSIDE
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✂

<b>Hours required per day</b>	<b>571</b>	<b>Hours required per day</b>	<b>423</b>
Hours per year	207,844	Hours per year	153,972
FTE Hours	1,920	FTE Hours	1,920
FTEs (no roster coverage)	108	FTEs (no roster coverage)	80
<b>Incl. 6% roster coverage</b>	<b>115</b>	<b>Incl. 6% roster coverage</b>	<b>85</b>

✂ ✂ ✂ ✂ ✂ ✂ Dublin Airport also suggested that by 2024, a further 64 FTEs would be required due to (i) growth in passenger numbers, and (ii) additional roles and tasks, as shown in the table below.

Table 8.2: Dublin Airport's proposed additional Facilities roles (FTEs)

	2022	2023	2024	2025	2026
Airport Operations Centre (APOC)			5	7	7
5G Bussing			9	9	9
USCBP remote bussing		5	10	10	10
Green Car Park		7	10	10	10
Common-use self-service (CUSS) T2		4	4	4	4

	2022	2023	2024	2025	2026
Capacity constraints			7	15	15
Airport Transformation		8	8	8	8
<b>Total</b>		<b>24</b>	<b>52</b>	<b>64</b>	<b>64</b>

Source: Dublin Airport consultation response, Figure 18

- Of the 7 FTEs identified for the APOC, Dublin Airport suggested that 3 would manage the Integrated Airport Operation Plan (IAOP), 2 would manage business data gathering and use, and 2 would coordinate airside bussing.
- They also suggest that additional staff are required to manage the bus boarding process for two new bussing operations: a) bussing to and from remote stands on apron 5G, and b) bussing for USCBP flights to and from remote stands.
- They state that additional car park operations staff will be required once the Green Car Park is reopened for customer use in 2023, to support customers in finding spaces etc.
- In relation to the CUSS terminals, which are shared kiosks offering airport check-in to passengers without the need for ground staff, Dublin Airport states that additional staff will be required to troubleshoot for passengers experiencing difficulties, and as these are multi-user machines, airline staff cannot be used for this.
- Dublin Airport considers that as passenger volumes increase, larger queues will develop, requiring more management.
- Finally, Dublin Airport state that an Airport Transformation Team is required, to act as a single representative for all airport functions and stakeholders, and to ensure the outputs of CIP projects meet business needs.

## Airlines

Ryanair stated that it was unclear whether we applied the elasticity of 0.4 with respect to either (i) increased terminal area, or (ii) increased passenger numbers. Ryanair states that, in any case, an elasticity of 0.4 is mistaken. According to Ryanair, if an elasticity is applied with respect to terminal area, it should be reduced pro-rata to the infrastructure investments. And if the elasticity is applied with respect to passenger numbers, Ryanair contends it is unjustified, as it considers that there should be no direct relationship between cleaning costs and passenger growth.

## 8.3. OUR ANALYSIS AND RESPONSE

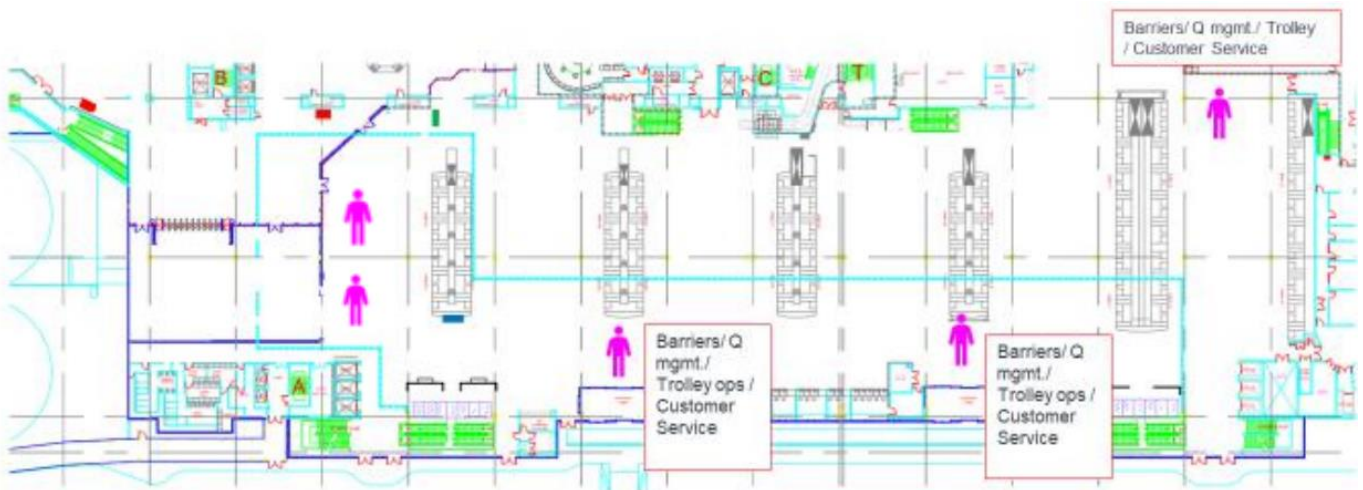
### 2022 staffing levels

The bottom-up staffing estimates provided in Figure 8.1, assume that airport staffing is fixed throughout the year. We disagree with this assumption. The detailed task requirement provided by Dublin Airport estimates the staffing hours required for, what we assume to be, a typical busy day in 2022. Dublin Airport has then multiplied this by 364 to calculate the yearly required hours, and then converted this to FTEs. Our objection to this approach is that it does not take into consideration the seasonality in passenger volumes – Dublin Airport assumes that the number of staff required will be the same throughout the year, whereas we would expect there to be less of a need for certain positions during quieter periods.

We have also reviewed Dublin Airport’s proposed staffing for each task listed in Figure 8.1, and we consider that in many areas the estimates are disproportionate to the task, considering how such tasks are delivered at other airports. This leads to over resourcing. For example, Dublin Airport propose 5 staff for queue management and customer support at peak times in the Terminal 1 Check-In area (see Figure 8.2 below). Queue management elsewhere is undertaken more efficiently, through for example, signage, barrier tapes, etc. We also consider that the flexibility delivered under New Ways of Working creates opportunities to deploy staff flexibly to tasks based on demand, allowing roles to overlap with one another, rather than relying on a series of fixed positions.

We also consider 2022 to be unrepresentative of an efficient level of staffing. Dublin Airport’s response to rapidly increasing passenger numbers from a low baseline was less planned than ideal and responsive rather than proactive. We would expect that planning for future years to be based on learning from this summer and able to build in recent knowledge about passenger mix, demand profiles and presentation times.

Figure 8.2: Terminal 1 Check-In Area proposed staffing



Source: Dublin Airport, DAP Opex workshop

We have used the detailed task breakdown provided by Dublin Airport to revisit our forecast of efficient Facilities staffing in 2022. Firstly, we estimate the number of staffing hours required for a typical busy day; 956 hours, compared with Dublin Airport’s suggestion of 994 hours. The main changes arise from:

- Reducing staffing in areas where the geography of the terminal allows roles to overlap, such that staff members can take on multiple tasks and/or respond depending on the need.
- Assuming a less resource intensive bussing operation to the South Gates remote facility. Dublin Airport do not appear to have considered:
  - Whether simpler boarding and alighting processes and/or the use of technology (in conjunction with the APOC) could reduce the need for additional staff;
  - What other facilities staff could support for the period that the bus operation is in use; and
  - How the driver could play a part in boarding and alighting.

We annualise our adjusted typical busy day requirement, assuming the staffing hours required represents the 95<sup>th</sup> percentile busiest day of the year. We assume the airport is open 364 days a year (in line with Dublin Airport’s assumption), but adjust for seasonality:

- We use 2019 data for our estimate of the daily variation in passenger volumes, as the most recent year of full data not affected by pandemic-related travel restrictions.

- We then account for this daily variation in passenger numbers using an elasticity of 0.2 staffed hours per day to passengers – the elasticity of 0.2 is lower than the 0.4 we use to forecast future staffing requirements, to recognise that rosters cannot be matched exactly to demand.

This results in an estimate for 2022 Facilities staffing of 185 FTEs excluding APOC, and 261 FTEs in total (including the transfer facility staff). This compares with our draft forecast for Facilities staffing of 248 FTEs, though we note that our draft forecasts had mistakenly excluded the 14 FTEs working in the transfer facility.

### **Step-changes in staffing over the period 2023-2026**

We are supportive of the Airport's plans to employ additional FTEs in the Airport Operations Centre (APOC), as it creates the opportunity to develop a more planned and coordinated airport operation. The implementation of the Integrating Airport Operation Plan (IAOP) and better management of business data being received from various IT-related CIP projects will allow APOC to deploy staff where they are most needed and facilitate the automation of tasks currently undertaken by staff. This should in turn deliver efficiency and improve resilience, enabling Dublin Airport to better cope with disrupted operations or periods of high or concentrated demand. Experience from other airports shows that consolidating control centres brings potential to reduce FTEs, or at least do more with the same number of FTEs.

Given the potential benefits we allow the requested increase of 19 FTEs over the control period, in the expectation that this will deliver efficiencies as the airport grows, and negates the need for additional Facilities staff elsewhere (as discussed below).

As regards the other additional roles requested by Dublin Airport, we consider its proposals to be inefficient. Most importantly, Dublin Airport has not effectively made the case that these roles are required in addition to a general increase to be expected as passenger volumes increase (and, therefore, captured within our elasticity driven forecast).

- **Bussing** – We understand the general need for an increase in bussing once movements increase beyond certain levels, such that the apron and stand infrastructure becomes sub-optimal. As such, we recognise that more bussing operations may be required once passenger volumes increase above 2019 levels.

However, Dublin Airport has not explained why an increase in bussing (and an increase in Facilities staff to support bussing operations) are needed before passenger volumes return to 2019 levels. We consider the proposed staffing levels for each bussing operation to be disproportionate – Dublin Airport has failed to consider options for automating key processes and making use of the control centre to flexibly deploy staff to manage bussing operations only when needed, etc.

- **Green Car Park** – We would expect staffing to be passenger driven, but we would also expect increases to be mitigated through, for example, dynamic signage, occupancy sensors and control room monitoring. We note that there are a number of car parking projects within the CIP that would allow such technologies and processes to be deployed.
- **CUSS terminals** – The proposed staffing to support CUSS terminals at the east end of T2 could, for example, overlap with the T2 check-in queue management roles.
- **Capacity constraint** – Given the increased FTEs for the APOC, there should be no need for additional FTEs to manage large queues. These additional FTEs allow for a more planned and efficient operation of the airport. This should enable Dublin Airport to better cope with periods of high demand and reduce the development of long queues.

Finally, we consider that the proposal for an **Airport Transformation Team** has not met the needs test. We understand that, where these roles are required, they are included within Design and Management cost allowances for individual capital projects.

## Elasticities

We believe Ryanair's comment stems from confusion regarding the elasticities we have used:

- For cleaning FTEs, we used an elasticity of 0.4 with respect to increased terminal area.
- For facilities FTEs, we used an elasticity of 0.4 with respect to passenger growth.

## 8.4. REVISED FORECAST

Using the same passenger numbers forecast as the draft forecast, we present our revised forecast in Table 8.3 below. In Section 18, we presented our updated forecasts of efficient expenditure using CAR's latest passenger forecast.

Table 8.3: Our revised forecast of Facilities and expenditure, 2022-2026

	2022	2023	2024	2025	2026
<b>Facilities staffing levels (FTEs) *</b>	<b>261</b>	<b>281</b>	<b>304</b>	<b>311</b>	<b>314</b>
<b>Facilities payroll expenditure (€ million) *</b>	<b>13.5</b>	<b>14.3</b>	<b>15.6</b>	<b>16.1</b>	<b>16.4</b>
<i>Our draft forecast</i>	12.6	14.2	15.5	16.5	16.9

Source: CEPA analysis

Note: CIP staffing levels included within base forecast



	Momentum	Mitie	Mitie - updated
✂	✂	✂	✂
✂	✂	✂	✂
✂	✂	✂	✂
✂	✂	✂	✂

Source: Dublin Airport

They also highlight Cleaning as one of the areas where greater investment is required to ensure resilience, and to ensure staff are in place at the airport in anticipation of passenger growth.

### 9.3. OUR ANALYSIS AND RESPONSE

#### Efficiency of cleaning contract

In our draft report, we formed the view that the costs of the external cleaning contract represented efficient expenditure based on unit costs being materially lower than Dublin Airport’s in-house operation, as well as the fact it was competitively tendered. We also raised a concern regarding cleaning quality given the size of the cost differential between the winning bidder and other benchmarks we reviewed.

We recognise that spending may need to increase from the levels we forecast in our draft report, to ensure Dublin Airport delivers the quality of cleanliness that passengers expect. However, we do not consider it appropriate to base our forecast on Dublin Airport’s recent negotiations with its suppliers, as such negotiations are not (as we understand) subject to any competitive bidding. Given the cleaning quality issues faced by Dublin Airport over the summer of 2022, it is likely to need to spend more on cleaning than would be typical for the remainder of the year to remedy the issues. However, this catch-up spend is not necessarily a reflection of efficient cleaning expenditure, and as such, we question whether it is in the airport user interest to pay for it.

To determine an efficient level of cleaning expenditure for the non-pay contract, we have produced an independent forecast based on the benchmark data referenced in our draft report. The comparator group of airports we have used are of similar size to Dublin Airport in terms of terminal space and passenger numbers, with some also operating under defined service quality regimes.

- As the benchmarks are relatively dated (from 2010 to 2018), we adjust them to account for real wage increases over the period.
- We then take the 75<sup>th</sup> percentile as our efficiency frontier separately for the per passenger benchmark and the per square metre benchmark.<sup>14</sup>
- And then we construct our efficient expenditure assuming costs are one-third driven by passenger volumes and two-thirds by terminal space. Experience shows that the highest driver of cleaning costs is the physical space itself. Whilst the ‘busyness’ of a space can lead to a requirement for more frequent cleaning patterns in particular areas, smart scheduling and task allocation on the day can prevent this having a significant impact on bottom line costs.

<sup>14</sup> Common regulatory practice in the GB water and energy sectors is to take the 75<sup>th</sup> percentile to mark the ‘efficiency frontier’, though we note that Ofgem, [in its most recent RIIO-ED2 determination](#), has proposed moving to an 85<sup>th</sup> percentile benchmark by the end of the price control.



Table 9.3: Benchmark cleaning costs, updated to 2022 input costs (€, Feb 2022 prices)

	€ / passenger	€ / square metre
Benchmark A	0.32	35
Benchmark B	0.39	44
Benchmark C	0.28	35
Benchmark D	0.52	36
Benchmark E	0.25	31
<b>Median</b>	<b>0.32</b>	<b>35</b>
<b>25<sup>th</sup> percentile</b>	<b>0.28</b>	<b>35</b>
Weighting	33%	66%

Source: CEPA analysis

Using the draft passenger forecast, this results in an estimated cost for the cleaning contract of € 35 million. We have tested the sensitivity of this result to the main assumptions we have used and find that our cost estimate of € 35 million is relatively robust to these assumptions.

## Cleaning resilience

We consider that there is little justification for making a separate adjustment to account for the resilience of cleaning operations. As we discuss above, we accept Dublin Airport may need to spend more on their cleaning contract to deliver expected levels of service quality, though we do not consider it necessary to make a *separate* adjustment for resilience purposes.

Our understanding is that the cleaning issues faced by Dublin Airport related specifically to the failure of the new third-party cleaning contract and as such, we consider it a procurement/contract management issue rather than a passenger expectation issue. In support of that view, we revisited evidence submitted by Heathrow airport (as part of our assessment of efficient opex) which showed the priority placed on cleanliness by passengers. It shows that passengers care about cleanliness, but does not present compelling evidence to suggest that expectations around cleanliness had increased or changed, to such a degree that additional resource was required. We understand that CAR is considering increasing one cleanliness target, to a level that broadly matches Dublin Airport's pre-pandemic performance. As such, we conclude that it is unnecessary to make any further cleanliness related adjustment.

Similarly, we do not consider it necessary to allow for a ramp-up in cleaning pay or non-pay expenditure, in anticipation of a recovery in passenger volumes. An element of ramp-up is already built into the forecasts, given year-on-year and season-by-season fluctuations in passenger volumes. And unlike other operational areas such as security, there are unlikely to be special bedding in requirements for new staff (e.g. extensive training) that make it more challenging to resource up quickly in response to a rapid increase in passenger volumes.

## 9.4. REVISED FORECAST

Using the same passenger numbers forecast as the draft forecast, we present our revised forecast in Table 9.4 below. Our estimate of payroll expenditure is higher in 2022 and 2023 to reflect the evidence provided by Dublin Airport in favour of their salary rates (as discussed in Section 4), while our estimate of non-pay costs is higher to reflect the update to the costs of the cleaning contract. In Section 18, we have presented our updated forecasts of efficient expenditure using CAR's latest passenger forecast.

Table 9.4: Our revised forecast of Cleaning expenditure, 2022-2026

	2022	2023	2024	2025	2026
<b>Cleaning staffing levels (FTEs)</b>	<b>143</b>	<b>143</b>	<b>143</b>	<b>143</b>	<b>143</b>
<b>Cleaning payroll expenditure (€ million)</b>	<b>7.4</b>	<b>7.3</b>	<b>7.3</b>	<b>7.4</b>	<b>7.5</b>
<b>Cleaning non-pay expenditure (€ million)</b>	✂	✂	✂	✂	✂
<b>Our draft forecasts</b>					
<i>Cleaning payroll expenditure (€ million)</i>	7.0	7.2	7.3	7.4	7.5
<i>Cleaning non-pay expenditure (€ million)</i>	✂	✂	✂	✂	✂

Source: CEPA analysis

## 10. INFORMATION TECHNOLOGY

In this section, we outline the comments made in relation to our draft forecasts of efficient Information Technology expenditure and detail our consideration of the issues raised.

Our draft forecasts for IT payroll expenditure adopted Dublin Airport's proposed staffing levels, whereas for non-pay expenditure, we maintained the 2022 forecast developed in our 2019 study. We then uprated our draft forecast to account for additional investments in cyber security over the determination period as well as additional CIP-related expenditure. Our draft forecasts are presented in the table below.

Table 10.1: Our draft forecast of IT expenditure at Dublin Airport, 2022-2026

	2022	2023	2024	2025	2026
<b>Staffing levels (FTEs)</b>					
IT staffing	62	66	70	72	75
<b>Payroll expenditure (€ million, February 2022 prices)</b>					
IT payroll	7.1	7.8	8.5	8.9	9.4
<b>IT non-pay expenditure (€ million, February 2022 prices)</b>					
IT non-pay (excl. CIP)	10.0	10.9	11.1	11.4	11.7
IT non-pay (incl. CIP)	10.1	11.1	11.9	12.5	12.8

Source: CEPA analysis

### 10.1. COMMENTS ON OUR DRAFT FORECASTS

#### Dublin Airport and ACI Europe

As a general comment, Dublin Airport and ACI Europe argued that IT expenses will increase over the interim determination period, due to increased levels of digitalisation. ACI Europe spoke in general terms about the importance of (i) the increased efficiency of operations, (ii) the importance of cybersecurity, and (iii) importance of sustainability, all of which are benefited by increasing digitalisation.

Dublin Airport also highlighted specific initiatives for which they considered the opex impacts were excluded from our forecasts. They listed five projects they regard as incorrectly excluded from our 2022 baseline, and a further four projects they argue were excluded from the 2023-2026 forecasts.

A summary of the projects Dublin Airport consider were excluded from our draft forecasts can be found below.

Table 10.2: Projects Dublin Airport claim we excluded from our initial forecasts (€, million)

Initiative	2022	2023	2024	2025	2026
Baseline increases vs 2019	1.0	1.0	1.0	1.0	1.0
CIP.20.05.006 E-commerce solution	-	0.4	0.4	0.4	0.4
CIP.20.07.014 Integrated Airport Operations Plan	-	0.6	0.6	0.6	0.6
CIP.20.05.003 New data platform	-	0.5	0.5	0.5	0.5
CIP.20.05.005 HRIS and MyTime upgrades/ projects	-	0.5	0.5	0.5	0.5

Source: Dublin Airport response to CAR's draft determination

## Airlines

Ryanair objected to our adoption of Dublin Airport's estimate for increased IT staff. Ryanair suggests that Dublin Airport did not provide an adequate justification for its view that IT staffing levels needed to rise above 2019 levels. Ryanair also argued that IT costs should continue to be based on the historic IT costs / revenues ratio of 2019, which we previously deemed to be efficient.

## 10.2. OUR ANALYSIS AND RESPONSE

### 2022 baseline for non-pay costs

As detailed in Table 10.3, Dublin Airport have requested we uplift our 2022 baseline by €1m.

Table 10.3: Differences between our 2022 baseline and Dublin Airport's proposed baseline

Product	Increase due to	€m
Common use self-service kiosks	Price increase	0.2
Drone detection	New software introduced in 2020/21	0.3
Time and attendance	Kronas (price increase over Softworks)	0.1
Other software / licences / services	Eir/CISCO/Diatec/Targit/CANS and others	0.2
Other systems – growth	ACDM/HP/QMS/BHS	0.2
<b>Total</b>		<b>1.0</b>

Source: Adapted from Figure 30 of Dublin Airport consultation response

We assessed the rationale provided for the cost increases associated with these IT projects individually. As noted in our Draft Report, our assessment of the efficiency of any step change is based on a three-part test:

- **Need test:** Whether there is a need for the additional expenditure, i.e., whether there is an impact outside of Dublin Airport's control that affected its cost base.
- **Additionality test:** Whether the additional expenditure is likely to be genuinely additional to our benchmarks or volume-related adjustments.
- **Efficiency test:** Whether the strength of the evidence supports the scale of additional expenditure.

We previously assessed the benefit associated with the introduction Common Use Self-Service (CUSS) kiosks as part of our 2019 study and accepted that the need and additionality tests for additional opex were met. While we expect CUSS kiosks to provide efficiency benefits, those benefits would accrue to airlines rather than the airport (by reducing pressures on ground staff), and therefore, it would be appropriate to provide an opex allowance to cover operation and maintenance of the kiosks. In our draft forecasts, we assumed this cost item would be introduced from 2023 onwards.<sup>15</sup> Based on the information provided by Dublin Airport, we bring this forward by a year.

Likewise, we recognise the importance of drone detection software to ensure resilient airport operations, given high profile airport closures following the detection of drones near the airfield. On that basis, we consider that the need and additionality tests have been met (as previously there was no spending on drone detection). While we allowed

<sup>15</sup> In our 2019 study, this cost item was assumed to start from 2021 onwards in line with the expected completion of capital project CIP.20.05.010. However, in our draft forecasts, in the absence of further detail from Dublin Airport, we assumed the capital project had been delayed by two years.

€0.2 million per annum (in 2017 prices) to account for these additional costs in our 2019 efficiency study, this allowance had not been included in our draft forecasts. As a result, we now include the €0.2 million per annum (adjusted for inflation).

As the rolling out of the Kronos time and attendance system involves replacing an existing system, we do not consider it necessary to provide an uplift for any operating cost increases. Any additional cost should be met through the new system delivering operational efficiencies elsewhere.

Similarly, Dublin Airport's request for a €0.2m uplift to account for price increases in other software, licenses, and services, also fails the additionality test. Any price increases would be implicitly captured by the inflation assumptions that underpin our efficiency analysis.

Finally, our draft forecasts included an uplift of €0.1m to account for the opex associated with several other CIP projects, covering baggage handling systems (CIP.20.05.004), airfield optimisation software (CIP.20.05.001), growth in servers (CIP.20.05.012) and the number of user devices (CIP.20.05.014). We do not consider it necessary to provide Dublin Airport with an additional allowance for the same cost items.

## 2023-2026 forecast of non-pay costs

Table 10.4 shows four CIP projects for which Dublin Airport suggests our draft forecasts excluded a commensurate opex allowance. Upon investigation, we find that all four projects were recognised in our draft forecasts – but our estimate of the opex impacts were based on the estimates Dublin Airport provided us in support of the 2019 study. We compare Dublin Airport's most recent estimates against the previous estimates in Table 10.4 below.

Table 10.4: Estimates of impact on opex from selected IT capex projects (€ million)

CIP project		2022	2023	2024	2025	2026
<b>Dublin Airport's estimates from response to draft determination</b>						
CIP.20.05.006	Commercial Systems – Ecommerce solution	0.4	0.4	0.4	0.4	0.4
CIP.20.07.014	Terminal Operations Improvement Projects - IAOP	0.6	0.6	0.6	0.6	0.6
CIP.20.05.003	Integrations and Data – Data platform	0.5	0.5	0.5	0.5	0.5
CIP.20.05.005	Business efficiency - HRIS and MyTime upgrades	0.5	0.5	0.5	0.5	0.5
<b>Estimates used in draft forecasts (based on estimates provided by Dublin Airport in 2019)</b>						
CIP.20.05.006	Commercial Systems – Ecommerce solution	0.02	0.03	0.13	0.13	0.13
CIP.20.07.014	Terminal Operations Improvement Projects - IAOP	0.00	0.00	0.00	0.00	0.00
CIP.20.05.003	Integrations and Data – Data platform	0.00	-0.08	-0.08	-0.08	-0.08
CIP.20.05.005	Business efficiency - HRIS and MyTime upgrades	-0.05	-0.13	-0.01	-0.01	-0.01

Source: CEPA analysis of Dublin Airport data

As Table 10.2 table shows, there is a substantial difference in Dublin Airport's two estimates of the opex cost of their various CIP projects. In our engagement with Dublin Airport following the consultation, we have been provided with an explanation of the different between the two sets of estimates, with the most recent figures reflecting an up-to-date understanding of the impact of the various CIP projects:

- **CIP.20.05.006 (E-commerce)** – Dublin Airport, in their most recent correspondence, state that they now consider the incremental opex impact to be €440k over five years (rather than the €2 million assumed in the regulatory submission). This is in line with the estimates provided in 2019. The opex relates to the licencing costs associated with a new e-commerce solution the airport has introduced.

- **CIP.20.07.014 (Integrated Airport Operations Plan, IAOP)** – Dublin Airport state that the opex relates to a capital investment that is only notionally related to CIP.20.07.014, which is primarily a construction project. The incremental opex of €3 million over five years is the opex associated with an additional capex project, IAOP, which is being part-funded by SESAR and required for regulatory compliance reasons. The opex cost has been estimated assuming an annual run rate of 10% of the initial capital investment of €6 million.

We note that the IAOP involves a range of stakeholders from Dublin Airport operations to airlines and their ground handlers to the Irish Aviation Authority and Eurocontrol. It is intended to be a follow-on from Dublin Airport's implementation of Airport Collaborative Decision Making (A-CDM) and is aimed at integrating data from various sources to allow better planning of operations to enhance the passenger experience. We expect that at least some of the benefit will accrue to Dublin Airport by allowing them to better allocate resources depending on where the demand is likely to be, and by allowing certain decisions currently undertaken manually to be automated.

- **CIP.20.05.003 (Data platform)** – Dublin Airport state that cost estimate included within the regulatory submission of €2.5 million over five years is based on the outcome of a procurement exercise, and as such, reflects a more up-to-date understanding of the opex associated with the project. The opex relates to the licencing costs to the software provider. Dublin Airport also state that they are unable to reconcile the figures provided in support of the 2019 study.
- **CIP.20.05.005 – (Business efficiency)** – Finally, Dublin Airport suggest that this CIP projects relate to a broader range of initiatives than just upgrades to the two HR and resource planning software packages referenced (i.e. HRIS and MyTime). The upgrade to the HRIS platform specifically, involved a transition to a cloud-based solution, transferring costs that would have otherwise been capex into opex.

Dublin Airport state that the opex costs outlined in the 2019 submission were solely associated with the ongoing digitalisation of the business through the annual program of small-scale upgrades. They did not allow for the larger system implementations as ongoing costs for those solutions were not known at that time as tenders had not been completed. As such, the opex estimates in the regulatory submission reflect a more up-to-date estimate of the costs involved.

We remain concerned that Dublin Airport's response demonstrates little consideration for the cost savings associated with some of these CIP projects, particularly those that may materialise elsewhere in the business. For example, many of the CIP projects identified are being developed for business and operational efficiency reasons, where we would expect there to be consequential opex savings within Security, Airside Operations, Facilities or Central Functions. The opex impacts assumed within Dublin Airport's regulatory submission focus on the incremental opex to IT only. Given that cost savings should offset at least some of the operating expenditure associated with these projects, we believe that the cost allowances requested by Dublin Airport are overestimated.

The one CIP project where we consider there is a case for allowing the incremental opex is CIP.20.05.005, where we recognise that there has been a general transition away from IT platforms hosted on-site to platforms that are cloud hosted. Cloud-hosted IT platforms often require less upfront capex (for on-site servers and one-off software licences) and higher on-going operational costs, as the full service stack is provided through a subscription licence.

As a result, we propose incorporating Dublin Airport's opex estimates for CIP.20.05.005, maintain our draft estimates for the remaining three CIP projects, as shown in the table below. We consider this approach balances the need to ensure Dublin Airport is provided an appropriate allowance to operate and maintain upgraded IT platforms, while also ensuring the airport retains an incentive to achieve the efficiencies and productivity improvements that these projects are intended to deliver.

Table 10.5: Our revised estimates of impact on opex from selected IT capex projects (€ million)

CIP project	2022	2023	2024	2025	2026
<b>Our revised estimates</b>					
CIP.20.05.006 Commercial Systems – Ecommerce solution	0.02	0.03	0.13	0.13	0.13
CIP.20.07.014 Terminal Operations Improvement Projects - IAOP	0.00	0.00	0.00	0.00	0.00
CIP.20.05.003 Integrations and Data – Data platform	0.00	-0.08	-0.08	-0.08	-0.08
CIP.20.05.005 Business efficiency - HRIS and MyTime upgrades	0.50	0.50	0.50	0.50	0.50

Source: CEPA analysis

## IT staffing levels

In our draft report, we concluded that Dublin Airport’s FTE forecasts were within the bounds of efficiency and used their forecasts as the basis of ours. However, we also recommended that Dublin Airport improve its narrative around why increases in staffing levels were necessary.

In a subsequent clarification, Dublin Airport has suggested that the headcount reduction from 70 FTEs in 2019 to ~55 FTEs in 2020 and 2021 placed the team under substantial pressure, as operational requirements remained unchanged. Dublin Airport expect staffing levels to return to 2019 levels by 2024, before growing to 75 FTEs by 2026. Dublin Airport state that the drivers of this increase are the growth in the core IT portfolio, a greater focus on cyber security, and the impact of the CIP.

While we consider the rationale provided by Dublin Airport explains a return to the staffing levels we had assumed in our 2019 study (at 72 FTEs), we do not consider it explains why further growth is required. Our 2019 study provided an allowance for growth in the IT portfolio and the greater focus on cyber security – as such, we consider this would already be captured within our estimates. Any CIP impacts would be considered separately within our forecasts.

Consequently, we assume staffing levels will increase in line with Dublin Airport’s projections to 72 FTEs in 2025 and will remain constant thereafter.

## Using top-down benchmark to produce IT forecast

Generally, we do not consider it appropriate to base our IT forecasts solely on the ratio of expenditure to revenue, given that:

- there is a degree of cyclicity between revenues (which are based on the building blocks) and IT expenditure, and
- the approach would not recognise specific choices that an efficient airport operator may legitimately choose to make (e.g. investing in IT to drive efficiencies elsewhere, or spending more on IT opex over IT capex).

Nevertheless, it is worthwhile to use the ratio of IT expenditure to revenues as a top-down sense-check of our bottom-up IT forecast. We have looked at our draft forecasts of IT expenditure as a proportion of building block revenues (as per the draft financial model). This shows that over the period 2023 to 2026, IT opex makes up approximately 3.5% of revenue. While this is higher than historic rates (pre-2020), which has averaged 3%, it compares favourably against the 2020 and 2021 benchmarks which were 3.5% and 3.9% respectively.

We continue taking a bottom-up approach to our IT forecast but use the top-down benchmark as a sense-check. We find that using the draft determination revenue figures, our revised IT forecast averages 3.7% of revenues.

### 10.3. REVISED FORECAST

Using the same passenger numbers forecast as the draft forecast, we present our revised forecast in Table 10.6 below. In Section 18, we presented our updated forecasts of efficient expenditure using CAR's latest passenger forecast.

Table 10.6: Our revised forecast of IT expenditure at Dublin Airport, 2022-2026 (€ million, February 2022 prices)

	2022	2023	2024	2025	2026
<b>Staffing levels (FTEs)</b>					
IT staffing	62	66	70	72	72
<b>Payroll expenditure (€ million, February 2022 prices)</b>					
IT payroll	7.1	7.5	8.1	8.4	8.6
<b>IT non-pay expenditure (€ million, February 2022 prices)</b>					
IT non-pay (excl. CIP)	10.3	11.2	11.4	11.7	12.0
IT non-pay (incl. CIP)	11.1	12.0	12.7	13.3	13.6
<b>Our draft forecasts (€ million, February 2022 prices)</b>					
IT payroll	7.1	7.8	8.5	8.9	9.4
IT non-pay (excl. CIP)	10.0	10.9	11.1	11.4	11.7
IT non-pay (incl. CIP)	10.1	11.1	11.9	12.5	12.8

Source: CEPA analysis



## 11. RETAIL

In this section, we discuss the comments made in relation to our draft forecasts of efficient Retail expenditure and detail our consideration of the issues raised.

### 11.1. OUR APPROACH TO PRODUCING DRAFT FORECASTS

Our draft forecast, as detailed in Table 11.1 below, was estimated with the expectation that retail staffing levels would recover to pre-pandemic levels in line with the passenger recovery but would grow more slowly afterwards. We also allowed for additional staffing to reflect envisaged store growth, in line with estimates provided to us by Dublin Airport.

Table 11.1: Our draft forecast of efficient Retail expenditure and associated headcount, 2022-2026

	2022	2023	2024	2025	2026
Retail staffing levels (FTEs)	296	324	336	364	366
Retail payroll expenditure (€ million)	16.7	18.9	20.2	22.2	22.6

Source: CEPA analysis

### 11.2. COMMENTS ON OUR DRAFT FORECASTS

#### Dublin Airport

Dublin Airport disagreed with our use of an elasticity of 0.2 with respect to passenger volumes to forecast growth in staffing once passenger volumes recover to pre-pandemic levels. They offered historical evidence from 2014-2019 showing that both passenger numbers and retail staff had increased by approximately 52% during this five-year period, implying an elasticity of 1. They contended that we had incorrectly assumed their historical elasticity is 80% inefficient, and requested that we adopt an elasticity of 0.5 for the full determination period in line with our implied elasticity during the recovery period.

### 11.3. OUR ANALYSIS AND RESPONSE

Our 'business as usual' elasticity of 0.2 was used for the 2019 study and reflected our view that there is not a strong link between retail staff numbers and passenger volumes, particularly when an airport is operating at close to capacity. Once a retail outlet has maximised its operating hours, the marginal benefit of increasing staffing levels reduces substantially.

In its calculation of the implied elasticity over the period 2014-2019, Dublin Airport did not consider the impact of retail floor space also increasing over this period. This biased the results as both passenger volumes and retail space increased during the time period analysed. From 2014 to 2019, passenger volumes increased from approximately 22 to 33 million, while total retail space grew from 2,781 m<sup>2</sup> to 3,194 m<sup>2</sup>.

To assess the implied elasticity of retail FTEs with respect to passenger volumes after accounting for changes in retail space, we explore the relationship between FTEs per square metre of retail space and passenger volumes. We also explore how this relationship changes during period where Dublin Airport is less constrained, and during period when the airport is more constrained. We show the results in Table below.

Table 11.2: Increases in full-time equivalents per square metre and passenger volumes, between selected time periods

Time period	Passenger volume increase (%)	FTEs / m <sup>2</sup> increase (%)	Implied Elasticity
2014-2019	52%	32%	0.6
2014-2017	36%	29%	0.8
2017-2019	11%	3%	0.3

Source: Dublin Airport, CEPA analysis

As the table shows, over the whole time period considered, the percentage increases to each respective metric imply an elasticity of 0.6. However, if we consider two horizons within this time period, it is evident that this is driven by a much higher implied elasticity over the period 2014 to 2017 when compared with the period 2017 to 2019. We consider this is due to there being diminishing marginal returns from employing more retail staff – in other words fewer opportunities to increase retail revenue by hiring more staff, once store hours have been maximised.

We consider that once passenger volumes return to 2019 levels, the use of a lower elasticity remains appropriate given that we separately provide an allowance of 24 FTEs for Dublin Airport’s proposed increases in retail space (CIP.20.08.001 – Retail Refurbishments, Upgrades and New Developments). However, Table 11.2 does suggest that our ‘business as usual’ elasticity of 0.2 is too low, and that an elasticity of 0.3 better reflected conditions in the years prior to the pandemic.

#### 11.4. REVISED FORECAST

Using the same passenger numbers forecast as the draft forecast, we present our revised forecast in Table 11.3 below. In Section 18, we presented our updated forecasts of efficient expenditure using CAR’s latest passenger forecast.

Table 11.3: Our revised forecast of efficient Retail expenditure and associated headcount, 2022-2026

	2022	2023	2024	2025	2026
<b>Retail staffing levels (FTEs)</b>	<b>308</b>	<b>333</b>	<b>344</b>	<b>374</b>	<b>377</b>
<b>Retail payroll expenditure (€ million)</b>	<b>17.4</b>	<b>18.7</b>	<b>19.7</b>	<b>21.7</b>	<b>22.3</b>
<i>Our draft forecasts (€ million)</i>	<i>16.7</i>	<i>18.9</i>	<i>20.2</i>	<i>22.2</i>	<i>22.6</i>

Source: CEPA analysis

## 12. RENT AND RATES

In this section, we outline the comments made in relation to our draft forecasts of efficient Rent and Rates expenditure and detail our consideration of the issues raised.

### 12.1. OUR APPROACH TO PRODUCING DRAFT FORECASTS

In our draft report, we concluded that as Dublin Airport has limited control over Rates costs, and as the airport had taken concrete steps to minimise its future rates liability, historical expenditure on Rates was efficient overall. For Rental costs, we noted a sharp increase in expenditure during the pandemic, mostly due to Dublin Airport vacating existing office premises in favour of office space owned by Dublin Airport Central, which is an entity outside the regulated business. We concluded that this increase could not be considered efficient unless it was being offset by an equivalent increase in revenues from leasing the vacated premises or offset through productivity improvements elsewhere.

When forecasting Rates expenditure over the period 2022 to 2026, we noted that there remained significant uncertainty around the size of Dublin Airport's future business rates liability, with the outcome of a legal appeal pending with respect to the rateable valuation of the airport campus. We projected rates costs using a range that reflected this uncertainty as well as reflecting the increase in the Annual Rate on Valuation and in the proportion of rates costs recovered from tenants. For Rent, we assumed expenditure remained at 2019 levels in real terms.

Our draft forecasts are presented in Table 12.1 below.

*Table 12.1: Our draft forecast of efficient Rent and Rates costs at Dublin Airport, 2022-2026 (€ million, February 2022 prices)*

	2022	2023	2024	2025	2026
<b>Rent and rates (excl. CIP)</b>					
Rent	1.8	1.8	1.8	1.8	1.8
Rates – no revaluation	15.7	14.3	13.4	12.8	12.1
Rates – revaluation	24.4	22.1	20.7	19.8	18.7
<b>Rent and rates (incl. CIP)</b>					
Rent (incl. CIP) *	1.8	1.8	1.8	1.8	1.8
Rates – no revaluation (incl. CIP)	15.7	14.3	13.4	12.4	11.5
Rates – revaluation (incl. CIP)	24.4	22.1	20.7	19.4	18.2

Source: CEPA analysis

### 12.2. COMMENTS ON OUR DRAFT FORECASTS

#### Ryanair

Ryanair supported our draft decision to disallow the increase in rent that Dublin Airport incurred in 2020 and 2021 through the relocation from Dublin Airport-owned offices to offices where rents are payable in Airport City.

#### Dublin Airport

We received one representation from Dublin Airport in relation to our Rent and Rates forecast, where they stated that we had not allowed additional rental expenditure related to certain new facilities, as well as higher rental costs for existing facilities.

Dublin Airport are seeking an allowance to cover the following cost areas they consider were not captured within our draft forecasts:

- Approximately €300k per annum to cover the rental costs for a **head office within Dublin Airport Central**, an office facility, Dublin Airport Central (DAC), owned by the non-regulated part of daa. In our draft forecasts, we concluded that Dublin Airport had not adequately explained why rationalising office space into a head office that was outside the regulated business, was in the airport user’s best interest.
- An increase of approximately €300k per annum over the period 2022-2024 to bring the rental costs associated with **Cloghran House** (owned by the non-regulated part of daa) in line with market rates.
- An increase of approximately €400k per annum to bring the rental costs associated with various **car parks** (which are situated on land owned by the non-regulated part of daa) in line with market rates.
- A further €400k annually for rental costs associated with a **new training facility**.

**Dublin Airport Head Office**

Dublin Airport stated that their non-frontline staff are currently located in 10 office buildings across the campus and, therefore, bringing its staff together into DAC and levels 4 and 5 in Terminal 1 will allow for more efficient working practices. Dublin Airport also claimed that rationalising office space in this way will deliver a net benefit to airport users through reducing opex costs elsewhere (towards the end of the determination period) and increasing opportunities for commercial revenue generation.

Table 12.2: Dublin Airport’s estimated net benefit to airport users as a result of the staff convergence strategy (€ thousands)

	2019	2022	2023	2024	2025	2026
€300k	€300k	€300k	€300k	€300k	€300k	€300k
€300k	€300k	€300k	€300k	€300k	€300k	€300k
€300k	€300k	€300k	€300k	€300k	€300k	€300k
€300k	€300k	€300k	€300k	€300k	€300k	€300k
€300k	€300k	€300k	€300k	€300k	€300k	€300k
€300k	€300k	€300k	€300k	€300k	€300k	€300k

Source: Dublin Airport

**Cloghran House and Dublin Airport car parks**

Dublin Airport also separately requested an additional allowance to bring the rent they pay for certain facilities (owned by the non-regulated part of daa) in line with what they consider to be market rates:

- They requested an allowance for the renting of Cloghran House over the period 2022 to 2025, after which the building will be vacated. They stated that a review in 2019 found that the rental rate per square metre should increase from €300k to €400k.





command a premium – we would broadly estimate the size of such a premium to be at most 30%, suggesting that an appropriate benchmark would be €275 per square metre.<sup>19</sup>

## New training facility

Dublin Airport’s narrative around the training facility provides a relatively compelling argument around the need for the facility. However, it raises several questions that make it challenging to conclude that its proposed cost allowance is genuinely additional:

- While Dublin Airport state that they “engage with hotels around the Campus where [they] rent rooms to accommodate the various regulatory, induction, and continuous training”, no detail is provided around the cost savings associated with no longer having to rent rooms from hotels. As far as we are aware, these cost savings have not been captured within their opex forecast.
- Similarly, Dublin Airport has not acknowledged the potential for cost savings associated with no longer having to run or maintain its existing training facilities.

We also question Dublin Airport’s view that its cost estimate is an efficient reflection of the cost associated with renting a new training facility. The assumed rental cost ~~€275~~ is higher than our benchmark of €275 per square metre.

## 12.4. REVISED FORECAST

We make the following changes to our forecast of efficient rent expenditure:

- **DAC Head Office** – We allow the incremental cost associated with the DAC Head, on the basis that the associated (and offsetting) revenues are also included within CAR’s revenue forecasts.
- **Cloghran House** – We allow the additional expenditure for the renting of Cloghran House, but at a rate of €275 per square metre as opposed to Dublin Airport’s proposed ~~€275~~. We also adjust our estimate of the savings from vacating Cloghran House to be consistent with this rate.
- **Dublin Airport car parks** – We do not adjust our forecasts for additional rental costs associated with the car parks situated on land owned by DAC. Dublin Airport’s evidence that its proposed turnover rent is the market rate is insufficiently compelling and, therefore, making this change is unlikely to be in the airport user interest.
- **New training facility** – We allow the rental cost associated with the new training facility, assuming a rate of €275 per square metre. However, we do not allow for the associated ongoing upkeep costs, as we consider this expenditure can be met through savings from no longer having to rent hotel facilities or maintain older training facilities.

Using the same passenger numbers forecast as the draft forecast, we present our revised forecast in Table 12.5 below. In Section 18, we presented our updated forecasts of efficient expenditure using CAR’s latest passenger forecast.

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<sup>19</sup> Since the pandemic there has been substantial appetite for industrial space in and around airports across Europe and North America, due to increased demand from logistics companies. We use this information to estimate the upper bound of the “airport proximity” premium, finding that industrial space next to airports currently commands a 30% premium to industrial space: <https://www.cbre.com/insights/briefs/industrial-facilities-near-airports-command-rent-premiums>. While this data refers to North America, we consider that it provides a reasonable for trends in Western Europe also.

Table 12.5: Our revised forecast of efficient Rent and Rates costs at Dublin Airport, 2022-2026 (€ million, February 2022 prices)

	2022	2023	2024	2025	2026
<b>Rent and rates (excl. CIP)</b>					
Rent	2.0	2.3	2.3	2.3	2.3
Rates – no revaluation	15.4	13.7	12.6	12.1	11.4
Rates – revaluation	23.9	21.1	19.5	18.7	17.7
<b>Rent and rates (incl. CIP)</b>					
Rent (incl. CIP) *	3.0	3.3	3.3	3.0	3.0
Rates – no revaluation (incl. CIP)	15.4	13.7	12.6	12.1	11.4
Rates – revaluation (incl. CIP)	23.9	21.1	19.5	18.7	17.7
<b>Our draft forecasts (incl. CIP)</b>					
Rent (incl. CIP) *	1.8	1.8	1.8	1.8	1.8
Rates – no revaluation (incl. CIP)	15.7	14.3	13.4	12.4	11.5
Rates – revaluation (incl. CIP)	24.4	22.1	20.7	19.4	18.2

Source: CEPA analysis

Note: Impact of CIP projects have been allocated in their entirety to rent costs. In practice, some of the incremental impacts may relate to rates cost.



## 13. CONSULTANCY SERVICES

In this section, we outline the comments made in relation to our draft forecasts of efficient expenditure on Consultancy Services and detail our consideration of the issues raised.

### 13.1. OUR APPROACH TO PRODUCING DRAFT FORECASTS

Our draft forecasts were calculated using a historical average of consultancy services expenditure from 2010 to 2021, as shown in the table below. We used an average after noting that Consultancy spending fluctuated significantly year-on-year. Our forecast of expenditure was higher than Dublin Airport's proposals for the years 2022 to 2025, though marginally lower in 2026.

*Table 13.1: Our forecast of efficient expenditure on consulting services, 2022-2026 (€ million, February 2022 prices)*

	2022	2023	2024	2025	2026
Consultancy services	7.1	7.1	7.1	7.1	7.1

Source: CEPA analysis

### 13.2. COMMENTS ON OUR DRAFT FORECASTS

#### Airlines

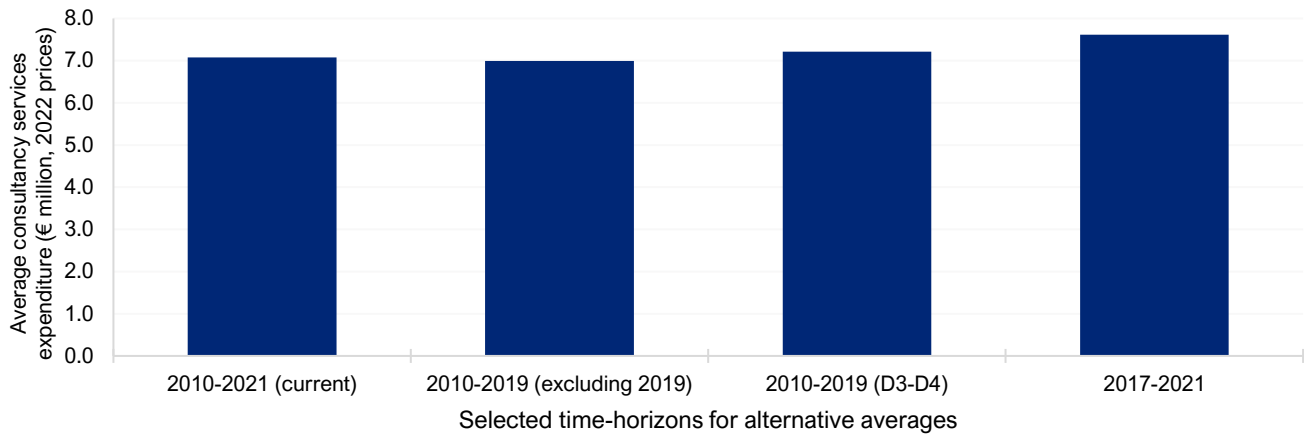
Ryanair asserted that we failed to analyse an efficient level of consultancy service operating expenditure, as we have forecast spend that is higher than Dublin Airport's own estimate.

### 13.3. OUR ANALYSIS AND RESPONSE

In our draft forecasts, we consciously avoided cherry picking the lowest value between our view of 2022 efficient expenditure and Dublin Airport's estimates of efficient expenditure. Inevitably, this meant that for some cost categories, our estimates of efficient expenditure were higher than Dublin Airport's.

Following Ryanair's comments, we engaged in further analysis on average consultancy spending, to see if changing the time horizon by which the average is calculated significantly affects average consultancy services spending and thus our results. Figure 13.1 illustrates the alternative time-horizons we considered when calculating an average annual Consultancy services spending measure to forecast future spending.

Figure 13.1: Average annual Consultancy services spending across different time-horizons



Source: Dublin Airport, CEPA analysis

As shown by the figure, average spending on Consultancy services has stayed relatively constant over the last twelve years. We also note that our estimate of efficient Consulting expenditure is significantly lower than Heathrow Airport’s expenditure, both in absolute terms and when normalised on a per passenger basis.<sup>20</sup>

Nevertheless, we note that Dublin Airport’s forecasts for 2023-2026 remain lower than our forecasts. Dublin Airport’s rationale for this lower Consultancy figure is that they are hoping to manage the cost.

Ultimately, the often ad-hoc nature of Consultancy services spending across Dublin Airport’s operations means that year-on-year expenditure within this cost category is impossible to precisely forecast. Because of this, in our draft report we allowed Dublin Airport a level of flexibility in our year-to-year forecasts from 2022-2026.

We maintain this rationale. While Dublin Airport may be hoping to spend less within this cost category, we are mindful of the need to take a balanced approach to producing our forecasts. For example, our forecasts imply a significant efficiency adjustment in Central Functions spending, which may be partially offset by lower spending on Consultancy services. As such, it would not be appropriate to assume the most conservative outcome for both cost categories.

### 13.4. REVISED FORECAST

We have opted to maintain the Consultancy Services forecast outlined in our draft efficiency assessment, as shown in the table below.

Table 13.2: Our forecast of efficient expenditure on consulting services, 2022-2026 (€ million, February 2022 prices)

	2022	2023	2024	2025	2026
Consultancy services	7.1	7.1	7.1	7.1	7.1

Source: CEPA analysis

<sup>20</sup> We use data from our report on the efficiency of Heathrow Airport’s operations to estimate its spending on consultancy and marketing, which we compare against our estimate of efficient consulting and marketing expenditure. See <http://publicapps.caa.co.uk/docs/33/CAP23661.pdf>.

## 14. UTILITIES

In this section, we discuss the comments made in relation to our draft forecasts of efficient expenditure on Utilities and detail our consideration of the issues raised.

### 14.1. OUR APPROACH TO PRODUCING DRAFT FORECASTS

Our draft forecast of Utilities expenditure was constructed as follows:

- For spending on electricity, we used Dublin Airport’s forecasts, concluding that its estimates of the electricity price and consumption were reasonable after benchmarking the estimates with data from the Sustainable Energy Authority of Ireland (SEAI) on commercial firms with similar annual consumption.
- For spending on gas, we assumed consumption would stay constant over the interim determination period, while the price would follow a similar trajectory to the electricity price (from 2023 onwards).
- For spending on fuel oil, we assumed expenditure stays constant in real terms.
- For water, we relied on Dublin Airport’s estimates of expenditure as we concluded that Dublin Airport had little control over water rates and that Dublin Airport had historically shown efficient levels of water consumption.

As with some of the other categories of expenditure, it was not always clear the extent to which Dublin Airport’s forecasts were inclusive or exclusive of CIP projects. In our draft report, we formed a judgement based on whether the CIP projects were referenced within Dublin Airport’s regulatory submission, and separately included an allowance for any CIP projects not referenced. The draft forecast is detailed in the table below.

*Table 14.1: Our draft forecast of efficient utilities expenditure, 2022-2026 (€ million February 2022 prices)*

	2022	2023	2024	2025	2026
Electricity	8.1	8.2	8.3	8.4	8.4
Gas	3.5	2.8	2.8	2.8	2.8
Fuel Oil	0.1	0.1	0.1	0.1	0.1
Water	1.3	1.5	1.6	1.6	1.6
<b>Total Utilities expenditure (excl. CIP)</b>	<b>13.0</b>	<b>12.7</b>	<b>12.9</b>	<b>13.0</b>	<b>13.0</b>
CIP	-0.1	-0.2	-0.2	-1.0	-1.6
<b>Total Utilities expenditure (incl. CIP)</b>	<b>13.0</b>	<b>12.4</b>	<b>12.7</b>	<b>12.0</b>	<b>11.3</b>

*Source: CEPA analysis*

### 14.2. COMMENTS ON OUR DRAFT FORECASTS

#### Dublin Airport

Dublin Airport made two specific comments in relation to our draft forecasts:

- They suggested that the €3.9 million difference between our draft forecast and their forecast was due to a double count of the efficiency savings associated with CIP.20.02.013 and CIP.20.07.030. They argue that these CIP projects were included within Dublin Airport’s base forecast and, therefore, did not need to be accounted for separately.

- They also propose that energy prices be included within the uncertainty mechanism for the upcoming price control. They illustrate the impact of current elevated electricity and gas prices continuing through to 2026, showing that this would increase their annual Utilities expenditure by approximately €17 million per annum.

### Airlines

While Aer Lingus and IATA did not respond specifically in relation to our Utilities forecasts, we consider their comment about exercising caution in relation to accepting Dublin Airport forecasts to be relevant to this cost category. Ryanair indicated that they expected energy consumption to reduce as a result of the Dublin Airport solar project and other sustainability CIP projects and Dublin Airport’s sustainability initiatives.

## 14.3. OUR ANALYSIS AND RESPONSE

### Electricity consumption

Dublin Airport have since provided a more detailed breakdown of their proposed electricity consumption and the impact of various capital and non-capital initiatives (shown below):

Table 14.2: Dublin Airport proposed electricity consumption

	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂
✂	✂	✂	✂	✂	✂

✂ ✂ ✂ ✂ ✂ There are several aspects of the information provided that raise further questions or create cause for concern:

- Certain additions to electricity consumption are assumed to be permanent additions, despite being temporary activities (e.g. demolition work). We also question why many of these costs are not capitalised, despite being components of capital projects. We have engaged with CAR in relation to capex allowances

and understand that any electricity or fuel costs that are required to power the relevant technologies and machinery involved in demolition works will be included in the allowed rates for the works themselves.

- There is a large step increase in consumption in 2025, which Dublin Airport attributes to a large projected growth in their built environment during that year. This step change in consumption almost fully negates the benefit of CIP.20.02.030 (the large solar farm).
- It is not clear why terminal and office refurbishments ought to lead to increases in electricity consumption, if the refurbishment creates opportunities to implement energy saving measures. It is also inconsistent with Dublin Airport's narrative around rental expenditure, where the airport is aiming to rationalise office space into a single location within Dublin Airport Central (which should lead to consumption savings). And we also note that Dublin Airport's position is inconsistent with figures previously provided to us as part of the 2019 study (which assumed net savings).
- Other than the two CIP projects highlighted above, Dublin Airport did not provide a breakdown of the consumption impact of other relevant CIP projects such as 20.07.010 (Office Consolidation & Refurbishment),
- Dublin Airport's analysis also excludes any generation from CIP 20.09.006 (Photovoltaic Solar Farm Phase 2), which upon completion, will add up to 12 MW of solar PV capacity across various locations and generate approximately 11,000 KWh per year.

More generally, we note that Table 14.2 suggests that Dublin Airport is expecting energy consumption (net of self-generated electricity) to increase over the period to 2026. This does not align with the sustainability narrative included within Dublin Airport's regulatory submission. We also note Dublin Airport is legally mandated requirement to reduce its CO<sub>2</sub> emissions. In the shorter term, there is an expectation that public companies take steps to reduce consumption by, for example, reducing building temperatures.

As a result, we updated our draft forecast as follows:

- We account for the increase in consumption resulting from the transition of Dublin Airport's light fleet to EVs, but phase in consumption based on Dublin Airport's proposed fleet replacement plan.
- We also account for the reduction in consumption associated with the two CIP projects provided in Dublin Airport's breakdown – CIP.20.02.030 (Large Solar PV) and CIP.20.07.013 (Small Energy Projects).
- Finally, we account for the reduction in consumption associated with CIP 20.09.006 (Photovoltaic Solar Farm Phase 2), which was not included in Dublin Airport's breakdown. We conservatively assume that of the 12 MW Dublin Airport propose to install, 2 MW will be installed contemporaneously with CIP.20.02.030, and a further 2MW will be installed in 2026. We assume that CIP.20.02.030 is a single 8.5MW facility delivered in 2025 and add a further 2MW facility in 2026 under CIP.20.09.006. We assume capacity factor of 10% to forecast the kWh consumption.
- We assume that all other CIP projects and initiatives are net consumption neutral. In other words, the consumption impact of new infrastructure and new equipment is mitigated by office consolidation and the use of more energy efficient equipment. This approach would align with the estimates provided to us by Dublin Airport in support of our 2019 study, where the only major electricity consumption increases were due to the North and South Apron major capacity expansions. Since 2019, these expansions have been postponed to beyond 2026, and Dublin Airport has proposed additional solar PV capacity and an accelerated transition to EVs.

Table 14.3: CEPA revised consumption forecasts

	2022	2023	2024	2025	2026
<b>Electricity net consumption (kWh)</b>					
<b>Net base consumption</b>	50,153,622	50,153,622	50,153,622	50,153,622	50,153,622
<b>Additional consumption</b>					
Light Fleet Replacements EV		288,540	490,519	530,914	600,164
<b>Total</b>		<b>288,540</b>	<b>490,519</b>	<b>530,914</b>	<b>600,164</b>
<b>Non-CIP initiatives</b>					
	-				
CIP.20.02.030 (Large Solar PV)	-	-	-	(7,450,000)	(7,450,000)
CIP.20.07.013 (Small Energy Projects)	-	-	-	(1,500,000)	(1,500,000)
CIP.20.09.006 (Solar PV Phase 2)	-	-	-	-	(1,750,000)
<b>Total CIP Projects</b>	-	-	-	<b>(8,950,000)</b>	<b>(10,700,000)</b>
<b>Total (KWh)</b>	<b>50,153,622</b>	<b>50,442,162</b>	<b>50,644,141</b>	<b>41,734,536</b>	<b>40,053,786</b>

Source: CEPA analysis

## Energy prices (electricity, gas and fuel oil)

The inclusion of energy prices in any uncertainty mechanism is a matter for CAR to consider. However, it is necessary for us to review whether expectations of energy prices over the period 2023 to 2026 have changed sufficiently to warrant a change to our forecasts.

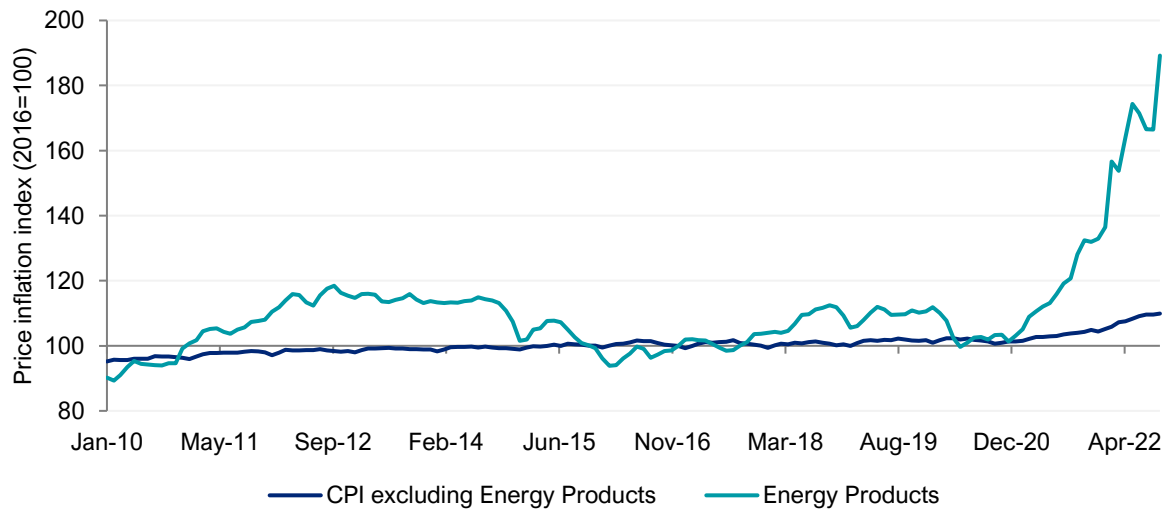
Care is needed when adjusting our forecasts to account for real energy price increases as, such increases are already implicitly captured within CAR's inflation indexation of the price cap. As the price cap is indexed to consumer price inflation, of which energy is a component, there is already an automatic adjustment to account for energy price increases.

The key questions we have considered when deciding whether to make any adjustment (and the size of any adjustment is):

- **Whether energy prices indices can be expected to be materially different to the consumer price index – in other words, is the price of gas and electricity expected to change at very different rates to the prices of other goods in the economy?**

The chart below shows that over the past decade, energy prices have been significantly more volatile than the prices of other goods and services in the economy. Over the past two years, energy prices have grown by orders of magnitude greater than other prices. As such, it is reasonable to assume that the price of energy will continue to be more volatile than general consumer price inflation.

Figure 14.1: Price indices of Energy Products and consumer products in Ireland more generally



Source: CEPA analysis of CSI data

- **Whether Dublin Airport is more exposed to energy price inflation than a typical consumer – in other words, do energy costs make up a higher proportion of Dublin Airport’s cost base than a typical consumer?**<sup>21</sup>

Energy costs make up 4.7% of the basket of goods and services within the consumer price index.<sup>22</sup> This compares with energy prices making 4.3% of our draft forecast for efficient airport expenditure in 2022. This suggests that there is not strong argument for making a separate adjustment for energy price inflation given it should already be captured within CAR’s inflation indexation.

- **Whether, as a non-domestic consumer of energy, Dublin Airport will be exposed to a different rate of energy price inflation than domestic consumers – in other words, will prices for gas and electricity grow at a different rate for Dublin Airport than for other consumers?**<sup>23</sup>

The Government has not proposed any policy measures that would influence energy price growth for domestic or non-domestic consumers, in a way that would influence the consumer price index (and make it no longer reflective of the price pressures faced by non-domestic consumers like Dublin Airport). Consequently, we consider that indexing the price cap to CPI should adequately account for Dublin Airport’s exposure to energy price increases.

Given the above, we conclude that it is unnecessary to adjust our forecast for expectations of higher energy prices beyond 2022. We also consider it necessary to revisit the approach we took to indexing energy prices at draft forecasts, where we followed Dublin Airport’s approach of assuming prices would reduce in 2023 – the most neutral approach would be to assume energy prices as they were in February 2022 (i.e. the price base for our opex forecasts), with any further movement in energy prices accounted for through the price indexation mechanism.

<sup>21</sup> In this context, a typical consumer means the weighting of energy consumption within the consumer price index.

<sup>22</sup> Central Statistics Office (2022), Table 7: COICOP Division 04 Housing, Water, Electricity, Gas and Other Fuels, April 2022. Available at: <https://www.cso.ie/en/releasesandpublications/er/cpi/consumerpriceindexapril2022/>

<sup>23</sup> This is relevant in a context where Government may intervene to limit energy prices for domestic consumers, but not for non-domestic consumers.

More recent data from SEAI suggests that large energy users have been less exposed to energy price increases in 2021 than domestic consumers, which means that our estimate for 2022 energy prices may have been overestimated.<sup>24</sup>

The combined effect of reflecting these two changes in our forecast, is a lower energy price forecast for 2022 and a marginally higher forecast from 2023 onwards.

## Water

With regards to water expenditure, our 2019 study concluded that Dublin Airport's water usage patterns were efficient with consumption lower in 2018 than 2014 despite the growth in passenger volumes. In our draft report, we noted that Dublin Airport has continued to manage low levels of water consumption (although some of this was due to the reduction in passenger volumes). As such, we concluded that Dublin Airport's proposals for 2022 consumption were a reasonable starting point for our forecasts. We also concluded that Dublin Airport's forecast consumption over the period 2023 to 2026 were reasonable, given expenditure will be lower than 2018 despite higher passenger numbers. And as Dublin Airport has limited control over water rates, which are regulated by the Commission for the Regulation of Utilities, we consider it continues to be appropriate to base our forecast on Dublin Airport's proposed expenditure.

### 14.4. REVISED FORECAST

Using the same passenger numbers forecast as the draft forecast, we present our revised forecast in Table 14.4 below. In Section 18, we presented our updated forecasts of efficient expenditure using CAR's latest passenger forecast.

Table 14.4: Our revised forecast of efficient utilities expenditure, 2022-2026 (€ million February 2022 prices)

	2022	2023	2024	2025	2026
Electricity	8.3	8.3	8.4	8.4	8.4
Gas	2.8	2.8	2.8	2.8	2.8
Fuel Oil	0.1	0.1	0.1	0.1	0.1
Water	1.3	1.5	1.6	1.6	1.6
<b>Total Utilities expenditure (excl. CIP)</b>	<b>12.5</b>	<b>12.8</b>	<b>12.9</b>	<b>12.9</b>	<b>12.9</b>
CIP	0.0	0.0	0.0	-1.6	-2.5
<b>Total Utilities expenditure (incl. CIP)</b>	<b>12.5</b>	<b>12.8</b>	<b>12.9</b>	<b>11.3</b>	<b>10.4</b>
<b>Our draft forecasts</b>					
- excl. CIP	13.0	12.7	12.9	13.0	13.0
- incl. CIP	13.0	12.4	12.7	12.0	11.3

Source: CEPA analysis

<sup>24</sup> For draft forecasts, we used SEAI data up to 2021 and then used news articles to estimate price growth between 2021 and 2022. We can now use SEAI data directly to estimate efficient energy costs in 2022.



## 15. OTHER NON-STAFF COSTS

In this section, we outline the comments made in relation to our draft forecasts of efficient expenditure associated with the Other Non-Staff Costs category and detail our consideration of the issues raised. This cost category covers miscellaneous areas of expenditure such as Regulatory, Bank, and Credit Card costs, as well as new cost lines that have not yet been allocated to other categories.

### 15.1. OUR APPROACH TO PRODUCING DRAFT FORECASTS

In our draft report, our approach to determining the baseline differed by cost subcategory as follows:

- If sub-category costs were unaffected by passenger numbers and costs fluctuate, we took the average of 2019-2021.
- If sub-category costs were unaffected by passenger numbers and costs did not fluctuate, we took 2021 as the baseline.
- If sub-category costs were affected by passenger numbers, we took 2019 or 2018 as the baseline, depending on whether the 2019 costs were efficient or not.
- We accounted separately for one-off costs.

There were two exceptions to the approach outlined above:

- Credit card commissions, where we assumed spending will increase as a result of changing payment habits (i.e. an increased tendency for consumers to make payments by card)
- Cash handling costs, where we assumed spending would reduce for the same reason as above.

Dublin Airport also performed a detailed bottom-up analysis of some sub-categories of expenditure. We incorporated its analysis where we determined it to be appropriate, such as hold baggage screening (HBS) contractor costs. The resultant forecast is detailed in Table 15.1 below.

*Table 15.1: Our draft forecast of efficient other non-staff costs, 2022-2026 (€ million, February 2022 prices)*

	2022	2023	2024	2025	2026
Regulatory Costs	4.9	4.9	4.9	4.9	4.9
Credit Card Commission	1.0	1.2	1.3	1.4	1.5
Security Regulatory Charge	0.7	0.7	0.8	0.9	0.9
US CBP	2.7	2.7	2.7	3.3	3.7
HBS Screening	2.0	2.5	2.5	2.5	2.5
Airside Bussing	1.8	1.8	2.9	3.0	3.0
Lounge Costs	3.6	4.0	4.1	4.2	4.3
Telephone Print and Stationery	0.8	0.8	0.8	0.8	0.8
Foreign Exchange Costs	0.0	0.0	0.0	0.0	0.0
Contingency	0.0	0.0	0.0	0.0	0.0
Corporate Trade Subscriptions	0.3	0.3	0.3	0.3	0.3
Other Overheads	5.1	5.2	5.2	5.2	5.2

	2022	2023	2024	2025	2026
<b>Total other staff costs (excl. CIP)</b>	<b>22.8</b>	<b>24.1</b>	<b>25.5</b>	<b>26.5</b>	<b>27.0</b>
CIP	0.1	0.2	0.5	0.6	0.6
<b>Total other staff costs (incl. CIP)</b>	<b>22.9</b>	<b>24.3</b>	<b>26.0</b>	<b>27.1</b>	<b>27.6</b>

Source: CEPA analysis

## 15.2. COMMENTS ON OUR DRAFT FORECASTS

Dublin Airport noted that our draft forecasts for other non-staff costs were €18.4 million lower than their own over the entire determination period. They suggested that four cost areas drive this difference. These are:

- **Prebooking and credit card commission** – Dublin Airport argued that both prebooking and credit card commission costs should move in line with revenues:
  - Prebooking costs should move in line with car parking, lounge, and fast track revenues.
  - Credit card commission costs should move in line with car parking, lounge, fast track, and retail revenues.
- **Airside bussing costs** – Dublin Airport also stated that our forecast omitted € of airside bussing costs, which they considered were down to two factors:
  - We did not take into account the increased bussing Dublin Airport proposed, which grows from 19 buses in 2021 to 34 buses in 2026. Dublin Airport states these are required for bussing passengers to and from various remote facilities.
  - From 2024, daa will be obliged to procure zero emissions vehicles under the Clean Vehicle Directive.<sup>25</sup> Dublin Airport estimates this will involve a cost increase of € , based on its experience tendering landside bus services.
- **Lounge costs** – Dublin Airport stated that its lounges are operated under contracts signed six years ago, with the existing operators indicating that costs will increase when the contracts are retendered. Dublin Airport did not provide any forecasts from the lounge operators, and instead have provided their own forecasts based on an 80%/20% weighting of wage inflation and CPI for 2015-2021. This leads to an anticipated increase in costs per passengers by 18% from Q2 2022.
- **Other overheads:**
  - Dublin Airport noted that costs for the MetroLink project were not included. This project is the development of an electric urban railway service, connecting, amongst other destinations, Dublin Airport and Dublin city centre. Dublin Airport stated that resource fees and specialist consultants are required, to ensure adequate coordination between Dublin Airport and the MetroLink project. Dublin Airport estimated these costs to be €300k per annum.
  - Dublin Airport noted that their VIP Handling Costs were higher than our draft forecasts. This is due to the CIP project 20.04.016, named “Platinum Services Upgrade Works”. Costs are set to increase in 2024.

<sup>25</sup> European Union (2019), DIRECTIVE (EU) 2019/1161 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 June 2019 amending Directive 2009/33/EC on the promotion of clean and energy-efficient road transport Vehicles, July. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019L1161&from=EN>

### 15.3. OUR ANALYSIS AND RESPONSE

#### Prebooking and credit card commission

As credit card commission is levied on credit card transactions, we agree with Dublin Airport that this ought to move in line with car parking, lounge, fast track, and retail revenues. We therefore adjust our forecasting approach. We maintain our 2022 baseline but project future expenditure using an elasticity of 1 with respect to the sum of car parking, lounge, fast track, and retail revenues, using CAR's final revenue forecasts.

We also agree with Dublin Airport that prebooking commission should move in line with car parking, lounge, and fast track revenues. We adopt the same approach as for credit card commission, maintaining our 2022 baseline and projecting using an elasticity of 1 with respect to the sum of car parking, lounge, and fast track revenues, using CAR's forecasts.

#### Airside bussing costs

We recognise that once movements and passenger volumes increase beyond a certain level, terminal, apron and stand infrastructure can become suboptimal. As a result, there arises a greater need for airside bussing to transport passengers to and from various facilities. We accept that in most instances, there is unlikely to be an alternative to bussing operations.

However, we would expect the need for additional bussing to only be realised once movements exceed the levels seen in 2019 and before additional contact stand capacity is added. Given the passenger forecasts assumed by CAR, we are comfortable that a step-change in bussing provision is required from 2024 onwards and as such, we propose reflecting Dublin Airport's proposed increase within our forecasts.

We also understand that Dublin Airport will have to procure Zero Emissions Vehicles under the Clean Vehicle Directive. We agree with Dublin Airport that this will result in increased costs. The Clean Vehicle Directive requires Ireland to ensure that by December 2025, 45% of buses procured by public bodies or state-owned entities to be electric. Within our forecasts, we have assumed that 45% of the airside busses will be electric from 2024. Our forecasts also incorporate evidence that there is an approximate 30% premium for the cost of running electric over diesel buses, which we used in our estimate of landside bussing costs.<sup>26</sup>

#### Lounge costs

Dublin Airport suggested that lounge costs per passenger would increase by  $\times \times$  from 2022 to 2023, due to the retendering of its lounge operations contracts. They use an 80%/20% ratio of wage inflation and CPI, to calculate the price increase from 2015, the year the last contracts were tendered, to 2021.

Firstly, we note that the price cap is indexed by CPI and as such, lounge costs do not separately need to be adjusted by general CPI inflation.

Secondly, we note that lounge costs per airport passenger already increased significantly over the period 2015-2019 (by 375% in real terms). There are two potential explanations for this increase:

- The increase in the number of passengers using lounges over this period was higher than the increase in the overall number of airport passengers. In other words, a higher proportion of airport passengers were using lounges over this period. This meant that costs increased, as did the cost per *airport passenger*, even though the costs per *lounge user* was broadly the same.

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<sup>26</sup> Aivars Rubenis, Igors Graus, Aigars Laizans, George Utehin (2016), *Economic Viability of Electric Public Buses: Regional Perspective*, December. Table 2.

- The cost per lounge user increased over 2015-2019.

While we consider it possible that the proportion of passengers using lounges increased over this period, we do not consider it adequately explains a 375% increase in per passenger costs.

- We would expect some inflation-adjustments to be incorporated into lounge contracts which run over 6 years. Therefore, at least some of the wage inflation is likely already incorporated in current lounge operating costs.
- The required increase in lounge users for costs per user to stay the same is too high to be plausible. If lounge cost per user stayed the same since 2015, the required increase in lounge users must be 524% over 2015-2019. We do not think a 5-fold increase in lounge users is plausible, especially compared to an increase in passenger numbers of 31.4% over the same time-period.
- Lounge revenues per passenger does not increase in the same manner as lounge costs per passenger. If the increase in lounge costs per passengers is explained by an increase in lounge users, we would expect lounge revenues to increase by a similar amount or more. But lounge revenues per passenger increased by 120% in the 2015-2019 period. Thus, lounge costs per passenger increased by three times more than lounge revenues per passenger.

Therefore, we believe that the increase in lounge costs per passenger in the 2015-2019 period can only be explained by an increase in the lounge costs per user in that period. Since we assumed the 2019 costs per passenger to be efficient, we have already incorporated this increase in our forecast. Therefore, we do not adjust for wage inflation as this would be double counting. We only allow CPI increases from 2019 onwards (through the price cap indexation mechanism).

## **Other overheads**

### **Metrolink**

We consider it reasonable that Dublin Airport incurs costs related to the MetroLink project given the scale of the project and the need to ensure a coordinated approach to its development between Dublin Airport and Transport Infrastructure Ireland (TII). Dublin Airport has provided a breakdown of the €300k estimate of expenditure, and the activities they are expecting to undertake to support the development of Metrolink. We consider the activities proposed to be reasonable.

We also note that TII intends to spend between €11 million and €15 million (nominal) per annum on project support works related to Metrolink. Given the scale of the project, and the scale of TII's intended spend, we consider €300k to be a proportionate quantum of expenditure.

### **VIP handling costs**

We understand that the CIP project "Platinum Services Upgrade Works" involves upgrades to the general décor, furniture, and kitchen facilities, as well as a capacity expansion. We have reviewed the business case and accept that the incremental opex is proportionate to the incremental revenues generated from the project.

## **15.4. REVISED FORECAST**

Using the same passenger numbers forecast as the draft forecast, we present our revised forecast in Table 15.2 below. In Section 18, we presented our updated forecasts of efficient expenditure using CAR's latest passenger forecast.

Table 15.2: Our revised forecast of efficient other non-staff costs, 2022-2026 (€ million, February 2022 prices)

	2022	2023	2024	2025	2026
Regulatory Costs	4.9	4.9	4.9	4.9	4.9
Credit Card Commission	1.7	1.8	1.9	2.0	2.1
Security Regulatory Charge	0.7	0.7	0.8	0.9	0.9
US CBP	2.7	2.7	2.7	3.3	3.7
HBS Screening	2.0	2.5	2.5	2.5	2.5
Airside Bussing	✂	✂	✂	✂	✂
Lounge Costs	✂	✂	✂	✂	✂
Telephone Print and Stationery	0.8	0.8	0.8	0.8	0.8
Foreign Exchange Costs	0.0	0.0	0.0	0.0	0.0
Contingency	0.0	0.0	0.0	0.0	0.0
Corporate Trade Subscriptions	0.3	0.3	0.3	0.3	0.3
Other Overheads	5.4	5.5	5.5	5.5	5.5
<b>Total other staff costs (excl. CIP)</b>	<b>23.8</b>	<b>25.0</b>	<b>26.2</b>	<b>28.2</b>	<b>28.8</b>
CIP	0.1	0.2	0.5	0.6	0.6
<b>Total other staff costs (incl. CIP)</b>	<b>23.9</b>	<b>25.2</b>	<b>26.7</b>	<b>28.8</b>	<b>29.4</b>
<b>Our draft forecasts</b>					
- excl. CIP	22.8	24.1	25.5	26.5	27.0
- incl. CIP	22.9	24.3	26.0	27.1	27.6

Source: CEPA analysis

## 16. OTHER STAFF COST CATEGORIES

In this section, we cover representations on our draft forecasts made in relation to other staff-related cost categories. These are:

- Campus Services
- Airside Operations
- Capital Projects

### 16.1. OUR APPROACH TO PRODUCING DRAFT FORECASTS

**Campus Services:** We used 2019 staff numbers and applied adjustments to account for structural changes and efficiencies realised by the airport over the last two years to project future payroll forecasts, which are presented in the below table.

Table 16.1: Our draft forecast of efficient Campus Services expenditure, 2022-2026

Forecast	2022	2023	2024	2025	2026
Campus Services staffing levels (FTEs)	228	233	236	237	238
Campus Services expenditure (€ million)	19.1	20.1	20.7	21.1	21.4

Source: Taylor Airey / CEPA analysis

**Airside Operations:** Our forecasts were projected forward from a 2022 baseline using 2019 staff numbers and applying adjustments to account for structural changes and efficiencies realised by the airport over the last two years. This draft forecast is detailed in the table below.

Table 16.2: Our draft forecast of efficient Airside Operations expenditure, 2022-2026 (€ million)

	2022	2023	2024	2025	2026
Airside Operations expenditure	6.3	6.6	6.8	6.9	7.0

Source: Taylor Airey / CEPA analysis

**Capital Projects:** Our estimated 2022 baseline allows for an increase in headcount, in line with the increase we allowed between 2018 and 2020 in the lead up to the original CIP. Our forecasts assume Capital Projects staffing levels will stay the same over the determination period, and are detailed in Table 16.3.

Table 16.3: Our draft forecast of Capital Projects staffing levels and payroll costs at Dublin Airport, 2022-2026

	2022	2023	2024	2025	2026
Capital Projects staffing levels (FTEs)	33	33	33	33	33
Capital Projects payroll (€ million, Feb 2022 prices)	3.3	3.4	3.5	3.6	3.7

Source: CEPA analysis

### 16.2. COMMENTS ON OUR DRAFT FORECASTS

#### Airlines

We received three comments from Ryanair in relation to our draft forecasts for these cost categories:

- **Campus Services:** They were unclear as to why the number of fire service employees would grow by an elasticity to passenger growth, as assumed in our draft forecasts and in our 2019 study. They suggested that the number of fire service employees required by an airport is related to the size of the airfield and to

the maximum size of aircraft regularly operated. They argued that we separately provided an allowance for the former, while the latter was not expected to change and, therefore, did not need an elasticity-based adjustment.

- **Airside Operations:** They suggested that our approach to producing a 2022 efficient baseline was inconsistent across cost categories, as exemplified by our Airside Operations forecast. For this cost category, we adopted our independently derived forecast which was higher than Dublin Airport's but for other cost categories, they argued that we uncritically adopted Dublin Airport's assumptions.
- **Capital Projects:** They considered the €2.9bn CIP to be excessive, arguing that it should be curtailed to ensure affordability for users. Consequently, Ryanair argued that the opex costs associated with the CIP should be proportionally reduced.

### 16.3. OUR ANALYSIS AND RESPONSE

#### Campus Services

We have considered the comments made by Ryanair in relation to fire service staff and accept staffing levels are not driven by passenger volumes either directly or indirectly. The fire service needs to be able to maintain minimum response times to an incident at the most remote point of the airfield. The vehicles they use, in conjunction with the crewing levels they operate determine the categorisation of the airfield from a fire and rescue perspective. This categorisation is related to aircraft of a particular size.

Consequently, the only factors we consider would be expected to drive a change in fire service staffing levels would be a significant change in the physical layout or overall size of the airfield, a change in categorisation, or a significant change in the hours of operation of the airfield. As we separately accounted for the introduction of the new runway in our draft forecasts, we do not consider it necessary to apply a passenger-driven elasticity on top.

#### Airside Operations

We have also considered Ryanair's arguments in relation to Airside Operations but consider it appropriate to maintain the approach we took at draft forecasts. While our forecasts for Airside Operations are higher than Dublin Airport's for 2022 and 2023, they are lower than Dublin Airport's forecasts from 2024 onwards. Taking the lower of the two forecasts for each year would be inconsistent with the approach we have taken in other cost categories, where we have continued to use our independent forecast despite there being a significant gap to Dublin Airport's expected spending levels.

#### Capital Projects

Finally, we are not convinced of a direct link between annual capex and Capital Projects staffing levels, such that Capital Projects expenditure would need to be reduced if the CIP is also reduced in size.

- We considered this in 2019 and did not find a statistically significant link between the level of annual capex and the number of Capital Projects staff. We considered this was most likely due to different capex projects having different lead-in times and the level of capex spend not being completely reflective of the amount of planning effort required.
- We repeated the analysis for our draft forecasts using a longer data series, where we did find a statistically significant link (p-value of 1%) between the log of annual capex and the log of Capital Projects staff. This statistical link had a coefficient of 0.31, which can be interpreted as an elasticity: For each 1% change in annual capex, there is a 0.31% change in Capital Projects staff. However, we found that this result had low internal validity, tending to over-estimate staffing levels:
  - In the 2011-2020 period, the regression-predicted FTEs were higher than actual FTEs for 7 of the 10 years.

- In sample forecasting resulted in an over-estimation of actual FTEs by 20% for the 2019-2020 period. For the in-sample forecasting, we took 2018 actual FTEs as the 2018 baseline. We then forecast up to 2020 using historic annual capex and the coefficient of 0.31. We found that our in-sample forecasted FTEs were 61 FTEs, compared to the actual 51 FTEs, an overestimation by 20%.
- Given these results, we concluded that proportionally adjusting our forecast of Capital Projects staffing levels based on the size of the capex plan was not a reliable approach. Instead, we made a much smaller adjustment (of 3 FTEs) to reflect an expectation that delivering an ambitious CIP would require additional staff within the Capital Projects function, but not necessarily a linear increase.

The implication of the approach we took at draft determination, however, is that it would be inappropriate to proportionally reduce our forecast of Capital Projects staffing levels with the size of the CIP, unless CAR propose to disallow a significant proportion of the CIP.

## 16.4. REVISED FORECAST

Using the same passenger numbers forecast as the draft forecast, we present our revised forecasts in the tables below. In Section 18, we presented our updated forecasts of efficient expenditure using CAR's latest passenger forecast.

### Campus Services

Table 16.4: Our revised forecast of efficient Campus Services expenditure, 2022-2026

Forecast	2022	2023	2024	2025	2026
<b>Campus Services staffing levels (FTEs)</b>	<b>230</b>	<b>231</b>	<b>232</b>	<b>233</b>	<b>234</b>
<b>Campus Services expenditure (€ million)</b>	<b>19.3</b>	<b>19.3</b>	<b>19.6</b>	<b>19.9</b>	<b>20.2</b>
<i>Our draft forecasts (€ million)</i>	<i>19.1</i>	<i>20.1</i>	<i>20.7</i>	<i>21.1</i>	<i>21.4</i>

Source: Taylor Airey / CEPA analysis

### Airside Operations

Table 16.5: Our revised forecast of efficient Airside Operations expenditure, 2022-2026 (€ million)

	2022	2023	2024	2025	2026
<b>Airside Operations staffing levels (FTEs)</b>	<b>78</b>	<b>79</b>	<b>80</b>	<b>80</b>	<b>80</b>
<b>Airside Operations expenditure (€ million)</b>	<b>6.2</b>	<b>6.3</b>	<b>6.5</b>	<b>6.6</b>	<b>6.7</b>
<i>Our draft forecasts (€ million)</i>	<i>6.3</i>	<i>6.6</i>	<i>6.8</i>	<i>6.9</i>	<i>7.0</i>

Source: Taylor Airey / CEPA analysis

### Capital Projects

Table 16.6: Our revised forecast of Capital Projects staffing levels and payroll costs at Dublin Airport, 2022-2026

	2022	2023	2024	2025	2026
<b>Capital Projects staffing levels (FTEs)</b>	<b>33</b>	<b>33</b>	<b>33</b>	<b>33</b>	<b>33</b>
<b>Capital Projects payroll (€ million)</b>	<b>3.3</b>	<b>3.3</b>	<b>3.4</b>	<b>3.4</b>	<b>3.5</b>
<i>Our draft forecasts (€ million)</i>	<i>3.3</i>	<i>3.4</i>	<i>3.5</i>	<i>3.6</i>	<i>3.7</i>

Source: CEPA analysis



## 17. OTHER NON-PAY COST CATEGORIES

In this section, we cover representations made in relation to other non-pay cost categories. These are:

- Insurance
- Services for passengers with reduced mobility (PRM)
- Employee-related overheads
- Marketing and related costs
- Car parking

### 17.1. OUR APPROACH TO PRODUCING DRAFT FORECASTS

**Insurance:** Our 2022 baseline applied an industry-estimated growth rate for insurance premiums from 2018-2022 to Dublin Airports 2018 insurance costs. Projections from this 2022 baseline utilise industry projections, our own analysis of longer-term trends in insurance costs, and forecast passenger volumes. This approach resulted in the draft forecasts outlined in Table 17.1.

Table 17.1: Our draft forecast of efficient insurance expenditure, 2022-2026 (€ million, February 2022 prices)

	2022	2023	2024	2025	2026
Insurance non-pay costs	4.4	4.9	5.2	5.5	5.8

Source: CEPA analysis

**PRM services:** Our 2022 baseline and forecasts use CAR's passenger projections, expected growth in propensity to use PRM services, and wage forecasts, and are detailed in Table 17.2 below.

Table 17.2: Our draft forecast of efficient PRM expenditure, 2022-2026

Forecast	2022	2023	2024	2025	2026
Passengers (# million)	25.3	30.1	32.3	34.2	35.2
Propensity to use PRM services (%)	1.10	1.10	1.10	1.10	1.10
Cost per PRM passenger (€)	✕	✕	✕	✕	✕
PRM Costs (€ million)	✕	✕	✕	✕	✕

Source: CEPA analysis

**Employee-related overheads:** This cost category consists of employee-related overheads such as recruitment costs, training and development expenditure, and travel and subsistence costs. Our approach to determining the 2022 baseline involved using our estimate of headcount in 2022 and the per FTE costs established in our 2019 study. We then project from this baseline using our forecast of headcount. Our forecasts for these other non-pay staff costs are detailed below in Figure 17.3.

Figure 17.3: Our draft forecast of efficient FTEs and other non-pay staff costs, 2022-2026

	2022	2023	2024	2025	2026
Dublin Airport staff (FTEs)	2,516	2,559	2,656	2,736	2,762
Other non-pay staff costs (€ million, Feb 2022 prices)	6.4	6.5	6.7	6.9	6.9

Source: CEPA analysis

**Marketing:** Our draft forecasts of efficient expenditure differentiated between marketing and promotional costs, and aviation customer support. For the former, we forecast using an elasticity of 0.4 with respect to passenger

numbers. For the latter, we assume that spend will return to the long-term average (2010-2019) by 2026 as aviation customer support will be needed for new routes and additional airport capacity. This draft forecast is detailed in the table below.

*Table 17.4: Our draft forecast of efficient marketing expenditure, 2022-2026 (€ million, February 2022 prices)*

	2022	2023	2024	2025	2026
Marketing and Promotional Costs	4.6	4.9	5.1	5.2	5.3
Aviation Customer Support	0.7	0.9	1.2	1.4	1.7
<b>Total</b>	<b>5.3</b>	<b>5.9</b>	<b>6.3</b>	<b>6.6</b>	<b>7.0</b>

Source: CEPA analysis

**Car Parking:** Payroll forecasts for Car Parking are now included within Facilities and Cleaning. Our non-pay forecasts allow for expenditure increases as passenger volumes recover, as well as factoring in the transition to electric vehicles. This draft forecast is detailed in the table below.

*Table 17.5: Our draft forecast of efficient Car Parking expenditure, 2022-2026 (€ million, February 2022 prices)*

	2022	2023	2024	2025	2026
Car Parking non-pay costs	✂	✂	✂	✂	✂

Source: CEPA analysis

## 17.2. COMMENTS ON OUR DRAFT FORECASTS

### Dublin Airport

Dublin Airport made representations on two areas of our draft forecasts, Insurance and Employee-related overheads.

On **Insurance**, they argued that the assumed growth rates assumed within our draft forecast were not reflective of the cost pressures faced, arguing that the evidence we relied on was not relevant to their business. They also provided a detailed breakdown of their insurance cost forecasts, shown below, which are based on advice from their brokers, and which they argue is more accurate than the approach we took for our draft forecasts.



- **Insurance:** They were concerned that the growth rate in insurance costs assumed in our forecasts were more reflective of increases seen in 2019 and 2020, rather than the forward indications of trends received from Swiss Re. Furthermore, they stated that they expected costs to reduce as a result of the Government's review of the insurance sector.
- **PRM services:** They also argued that Dublin Airport's proposed PRM costs were inefficient, stating that the costs per passenger in 2022 (quoted as €0.69) were higher than Stockholm Arlanda (€0.49) and Helsinki (€0.36) airports. Ryanair claimed that these airports are comparable to Dublin Airport, since the countries in which these airports are located have similar wage costs and airport operations are of a similar scale.

Ryanair also objected to our assumption that the propensity to use PRM services over the interim determination period would be 1.1% of all passengers. Ryanair noted that historically Dublin Airport has never reached that level of usage. Ryanair further stated that, irrespective of a long-term trend, a 1.1% PRM usage assumption is unreasonable for the period 2023-2026.

- **Marketing:** Ryanair sought further clarification on why we adopted an elasticity of 0.4 with respect to passenger numbers for Marketing and Promotional costs. It suggests that marketing costs should decrease as passenger volumes increase so the elasticity should be negative. Ryanair also argues that it is the responsibility of airlines to market their services, not Dublin Airport.
- **Car parking:** Finally, Ryanair highlighted concern at the proposed increase in car parking costs related to the transition to EVs, which they considered were out of alignment with CAR's assumptions around the scope for growth in car parking income.

IATA asked for a better understanding what "marketing and promotional costs" consists of, and how these services benefit users of Dublin Airport. They also asked for further clarification on the difference between "airline support" and the incentive schemes offered by Dublin Airport.

### **17.3. OUR ANALYSIS AND RESPONSE**

#### **Insurance**

##### **Growth in insurance premiums**

Generally, we do not find the arguments made by Dublin Airport about its exposure to price increases to be compelling. The airport has not recognised the cyclical nature of the insurance market and has instead assumed that premiums will increase at the same elevated rates for the full interim determination period.<sup>27</sup>

While we recognise that Dublin Airport will be exposed to cost pressures for certain premium categories – for example, in property, due to increases in construction and rebuild costs – it is inappropriate to assume these cost pressures will remain for the duration of the interim determination period.

It is also not clear whether the airport's figures are real increases or nominal. Dublin Airport's figures assume price growth of 30% over the period 2023 to 2026. If these are intended to be real increases, it would imply nominal price growth of almost 45% over four years. We have not found any evidence within industry literature to suggest growth rates as high as this over a sustained period.

As such, while Dublin Airport's detailed bottom-up approach may be more granular, we do not consider it leads to a more accurate forecast.

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<sup>27</sup> The CSO does not publish a specific series of insurance cost inflation. However, UK inflation statistics show that insurance costs have historically been subject to significant cyclicity. See <https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/d7hf/mm23>.

We see more merit in Ryanair's arguments. While our forecast up to 2023 was based on the Swiss Re report,<sup>28</sup> our forecast from 2024 onwards was based on the compound annual growth rate in insurance costs over a five-year period (at 3.7% real growth per annum). However, data from the UK Office for National Statistics suggests that insurance costs operate in longer cycles ranging from 6 years to 9 years.<sup>29</sup> As such, we consider it appropriate to use a longer time horizon for our forecast.

Swiss Re reports that annual growth in premiums averaged 2.7% in annual terms over the period 2011-2020, which would suggest that 2.7% is an appropriate basis for our assumption from 2024 onwards. By 2026, this reduces our insurance forecast by €0.1 million.

### **New insurance costs**

**Cyber insurance** – We accept Dublin Airport's general point about increased risks associated with cyber security. We note that the cost of cyber insurance has increased significantly over the past year, and insurers have moved to excluding certain types of cybersecurity risks from the cover they provide.<sup>30</sup>

We have been unable to find any relevant benchmark for cyber insurance costs – as such, we are unable to definitively conclude that Dublin Airport's estimate of  $\text{€} 1.5 \text{ million}$  is efficient, though the value is similar to other insurance line items presented in the table above.

Nevertheless, we also note that our 2019 study, allowed for an increase in expenditure to strengthen Dublin Airport's cyber security defences. While this does not necessarily replace the need for insurance cover, we would expect Dublin Airport to take mitigation actions and negotiate strongly to reduce the cost of the cover as a result. Dublin Airport, in their response to the CAR consultation, has suggested that they have taken such actions, with the  $\text{€} 1.5 \text{ million}$  estimate the resultant quote they have been provided.

On that basis we allow the full  $\text{€} 1.5 \text{ million}$  of proposed additional expenditure.

**Environmental insurance** – We do not consider the narrative provided by Dublin Airport gives sufficient justification for the need and additionality of environmental insurance costs. While it may be prudent for Dublin Airport to purchase environmental insurance cover, it has not adequately made the case that it is exposed to greater environmental risks than it was in 2019, to warrant higher environmental insurance expenditure. In particular, Dublin Airport has not provided any compelling evidence that environmental regulations in relation to pollution incidents have been strengthened, such that Dublin Airport's risk exposure has increased.

### **PRM services**

We have been unable to replicate the figure quoted by Ryanair as Dublin Airport's PRM cost per passenger. Based on the figures provided to us by Dublin Airport, we have calculated the PRM cost per passenger in 2022 as  $\text{€} 1.50$ , which is in between the benchmarks provided to us by Ryanair. We note that Ryanair's calculation may have used outdated traffic forecasts. More broadly, the benchmark analysis of PRM costs from our draft report showed that the growth in PRM costs at Dublin Airport over a three-year and five-year horizon, has been broadly in line with a range of other airports. Given this, we conclude that it would be inappropriate to make an efficiency adjustment to Dublin Airport's forecasts of PRM costs.

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<sup>28</sup> Swiss Re Institute (2021), sigma - turbulence after lift-off: global economic and insurance market outlook 2022/23, October. Available at: <https://www.swissre.com/dam/jcr:f0561771-6248-4cab-a21e-57adf78ce378/swiss-re-institute-sigma-5-2021-en.pdf>

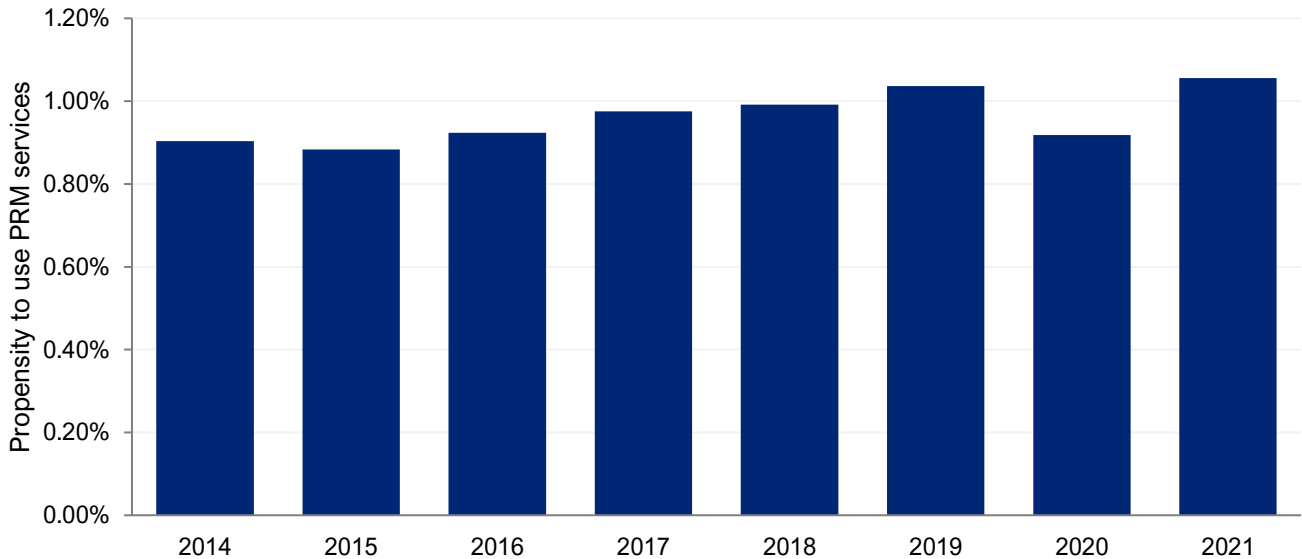
<sup>29</sup> Office for National Statistics (2022), CPI ANNUAL RATE 12.5: INSURANCE 2015=100, November. Available at: <https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/d7hf/mm23>

<sup>30</sup> Cybersecurity Dive (2022), Signs of stability emerge in turbulent cyber insurance market, October. Available at: <https://www.cybersecuritydive.com/news/marsh-cyber-insurance-rates/634059/> and

Financial Times (2022), Rising cost of cyber attacks sends insurance policy charges soaring, November. Available at: <https://www.ft.com/content/753e76db-e9cc-4c90-985a-f354dbc5c9a4>

On Ryanair’s arguments in relation to our assumption on the propensity to use PRM services, we acknowledge that a 1.1% PRM usage has not occurred yet. Nevertheless, historical PRM usage shows a clear increase over time, as shown in Figure 17.1 below.

Figure 17.1: Propensity to use PRM services, 2014-2021 (%)



Source: CEPA analysis of Dublin Airport data

Dublin Airport has presented clear evidence of drivers of this increase and provided a coherent logic for why this trend can be expected to continue, namely an ageing population and higher traffic between Dublin and the United States. These leads us to maintain that a 1.1% assumption is reasonable.

### Employee-related overheads

We understand the importance of staffing availability to Dublin Airport’s ability to run its operation, and the difficulties that staff absences due to COVID-19 impose on this. We note that coronavirus-related staff absences also led to significant operational issues at other airports, and has in general been cited as a reason for recent disruption.<sup>31 32</sup> Therefore, we agree with Dublin Airport that allowances should be made to account for increased risk of absence due to COVID-19, at least in the shorter term. What is less clear, is whether allowances should continue into 2023 and beyond, when COVID-19 is expected to become endemic.

We have not found evidence that supports ongoing staff testing for COVID-19. We are aware of UK National Health Service trials at Heathrow Airport in 2021,<sup>33</sup> but have since had confirmation that the airport no longer tests its staff. Ryanair told us that they do not test and are unaware of others that do.

We also note that Dublin Airport separately assumes an increase in the rate of absence of security staff, of 4% due to COVID-19-related absence. If Dublin Airport believes mass testing to be effective, this should result in fewer

<sup>31</sup> BBC News (2022), Covid: Heathrow Airport passenger numbers highest since pandemic began, April. Available at: <https://www.bbc.co.uk/news/uk-england-london-61041920>

<sup>32</sup> The Times (2022), Cancellations, queues and lost luggage: the week that pushed our airports to the brink, April. Available at: <https://www.thetimes.co.uk/article/cancellations-queues-and-lost-luggage-the-week-that-pushed-our-airports-to-the-brink-wf95j5dzt>

<sup>33</sup> For example, in Heathrow: <https://www.passengerterminaltoday.com/news/covid-19/london-heathrow-to-run-staff-covid-19-testing-trial.html>

absences. We do not consider it necessary to include two separate allowances for increased COVID-19 related absences as well as mass staff testing.

Another area of uncertainty is whether the risk of COVID-19 on the level of staff absence will continue into 2023 and beyond. It is challenging to predict the future trajectory of COVID-19 infections and the impact that may have on staff absence levels. Long-term, the expectation is that COVID-19 will become an endemic disease with a burden of disease similar to influenza, for which precautions can gradually be removed.<sup>34</sup> But the ultimate timing of the removal of precautions is unclear and could be significantly changed by the emergence of new variants.<sup>35</sup> Nonetheless, many companies and countries have relaxed precautions relating to COVID-19 already, and Ireland currently has no COVID-19 related restrictions.<sup>36</sup> Given that COVID-19 is expected to become endemic long-term, we think it is therefore reasonable to take the mid-point of the determination, i.e. 2024, to drop Covid-related precautions, assuming no new variants emerge

Dublin Airport forecast a cost of €300k per year related to staff testing. We produced our own estimates, assuming bi-weekly testing of security, maintenance, facilities and cleaning, campus services, and airside operations staff, at a cost of €2 per test. This led to a cost of €380k per year. We therefore conclude that Dublin Airport's forecast cost is reasonable.

Based on the above, we conclude that mass staff testing is unlikely to be an effective response to managing COVID-19 related absences beyond 2023. As such, we do not allow the expenditure associated with such testing from 2024 onwards.

## Marketing

### Marketing and promotional costs

Dublin Airport have clarified that 'marketing and promotional costs' relates to the advertisement of their own products, which includes car parking, lounges, and platinum services. It also encompasses their passenger insights programme, which involves primary research undertaken to benefit their airline planning measures.

As per our 2019 efficiency study, we adopted a 'business as usual' elasticity of 0.4 with respect to passenger numbers based on historic usage patterns at Dublin Airport. Ryanair suggested that a negative elasticity would be more appropriate but did not present evidence to substantiate this view. We recognise the logic proposed in Ryanair's argument that as passenger volumes recover, there is less need for Dublin Airport to spend on marketing. However, do not entirely agree with it – as passenger volumes increase, there is greater scope for Dublin Airport's marketing to drive demand for its direct-to-passenger services and, by extension, drive revenue growth. If Dublin Airport is to achieve revenue growth in its products and services, decreasing marketing expenditure simultaneously could be counterproductive.

Nevertheless, we recognise that marketing spend may be less elastic to passenger volumes than we had previously envisaged, as it relates more to direct-to-passenger airport services than route promotion. We expect there to be significant economies of scale to marketing these products and services given the channels involved. As such, we now use an elasticity of 0.2 with respect to passenger volumes.

### Aviation customer support

Dublin Airport has also clarified that 'aviation customer support' relates to Dublin Airport's share of joint advertising campaigns with airlines for new routes, and does not relate to discounts on any charges. While airlines have a

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<sup>34</sup> The Lancet (2022), The Lancet Commission on lessons for the future from the COVID-19 pandemic, September. Available at: [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(22\)01585-9/fulltext#seccestitle390](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(22)01585-9/fulltext#seccestitle390)

<sup>35</sup> McKinsey & Company (2022), When will the COVID-19 pandemic end?, July. Available at: <https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/when-will-the-covid-19-pandemic-end>

<sup>36</sup> Citizens Information (2022), COVID-19 restrictions in Ireland, October. Available at: [https://www.citizensinformation.ie/en/covid19/living\\_with\\_covid19\\_plan.html](https://www.citizensinformation.ie/en/covid19/living_with_covid19_plan.html)

responsibility to market their services, a joint marketing campaign that includes both Dublin Airport and the airlines presents an opportunity to drive passenger growth over and above what airlines can achieve in isolation. Dublin Airport may also be able to more effectively market new routes for airlines with less experience operating to and from Ireland. We maintain our draft position of projecting expenditure using a passenger elasticity of 0.4, considering it essential that Dublin Airport is allowed adequate marketing expenditure to achieve its desired passenger growth over the determination period.

## Car Parking

We acknowledge Ryanair's argument that given the limited scope for growth in Car Parking income, the level of car parking expenditure is significant. Despite this, we also recognise that the spending related to the transition to EVs is necessary for Dublin Airport to meet its CO<sub>2</sub> emission reduction obligations. We therefore maintain our draft forecast for Car Parking expenditure as a result.

## 17.4. REVISED FORECASTS

Using the same passenger numbers forecast as the draft forecast, we present our revised forecasts in the tables below. In Section 18, we presented our updated forecasts of efficient expenditure using CAR's latest passenger forecast.

### Insurance

Table 17.7: Our revised forecast of efficient insurance expenditure, 2022-2026 (€ million, February 2022 prices)

	2022	2023	2024	2025	2026
<b>Insurance non-pay costs</b>	<b>4.5</b>	<b>5.4</b>	<b>5.7</b>	<b>6.0</b>	<b>6.3</b>
<i>Our draft forecasts</i>	4.4	4.9	5.2	5.5	5.8

Source: CEPA analysis

### PRM services

Table 17.8: Our revised forecast of efficient PRM expenditure, 2022-2026

Forecast	2022	2023	2024	2025	2026
Passengers (# million)	25.29	30.10	32.28	34.16	35.22
Propensity to use PRM services (%)	1.10%	1.10%	1.10%	1.10%	1.10%
Cost per PRM passenger (€)	∞	∞	∞	∞	∞
<b>PRM Costs (€ million)</b>	<b>∞</b>	<b>∞</b>	<b>∞</b>	<b>∞</b>	<b>∞</b>
<i>Our draft forecasts</i>	∞	∞	∞	∞	∞

Source: CEPA analysis

### Employee-related overheads

Table 17.9: Our revised forecast of efficient FTEs and other non-pay staff costs, 2022-2026

	2022	2023	2024	2025	2026
<b>Other non-pay staff costs (€ million)</b>	<b>6.8</b>	<b>6.7</b>	<b>6.8</b>	<b>6.8</b>	<b>6.8</b>
<i>Our draft forecasts</i>	6.4	6.5	6.7	6.9	6.9

Source: CEPA analysis



## Marketing

Table 17.10: Our revised forecast of efficient marketing expenditure, 2022-2026 (€ million, February 2022 prices)

	2022	2023	2024	2025	2026
Marketing and Promotional Costs	4.8	5.0	5.1	5.1	5.2
Aviation Customer Support	0.7	0.9	1.2	1.4	1.7
<b>Total</b>	<b>5.5</b>	<b>6.0</b>	<b>6.3</b>	<b>6.6</b>	<b>6.9</b>
<i>Our draft forecasts</i>	5.3	5.9	6.3	6.6	7.0

Source: CEPA analysis

## Car Parking

Table 17.11: Our revised forecast of efficient Car Parking expenditure, 2022-2026 (€ million, February 2022 prices)

	2022	2023	2024	2025	2026
<b>Car Parking non-pay costs</b>	✂	✂	✂	✂	✂
<i>Our draft forecasts</i>	✂	✂	✂	✂	✂

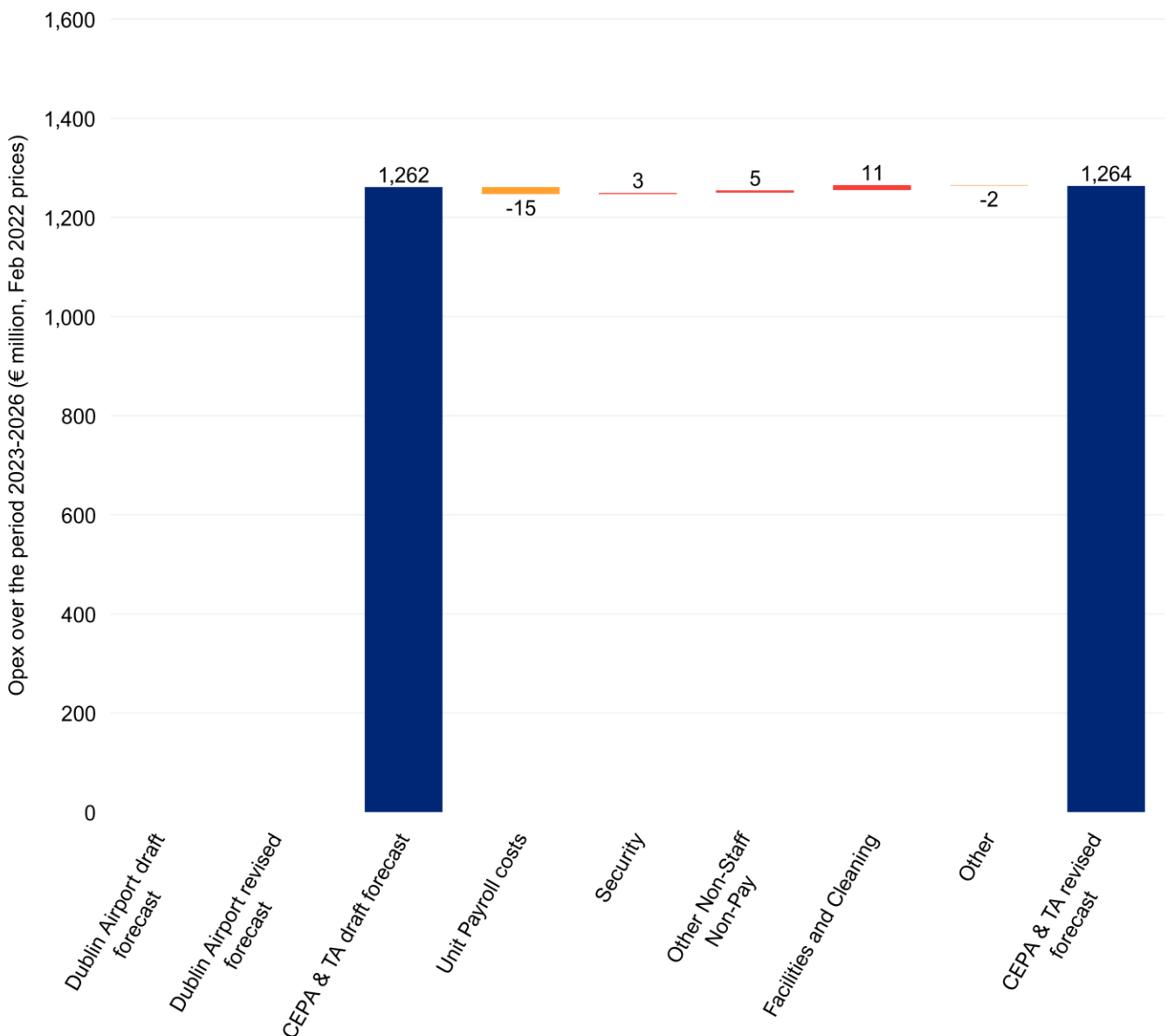
Source: CEPA analysis

## 18. UPDATED FORECAST SUMMARY

### 18.1. REVISED FORECAST COMPARED TO OUR DRAFT REPORT

Throughout the previous sections of this report we have presented a comprehensive assessment of the consultation submissions provided in response to our draft report and our response to them. In each section we have outlined areas where, following detailed review further analysis, these comments have prompted a revision to our draft forecasts. The differences between our draft and revised forecast, and Dublin Airport’s forecast are illustrated in the figure below.

Figure 18.1: Summary of differences between our draft and revised forecasts



Source: CEPA analysis

As shown in Throughout the previous sections of this report we have presented a comprehensive assessment of the consultation submissions provided in response to our draft report and our response to them. In each section we have outlined areas where, following detailed review further analysis, these comments have prompted a revision to

our draft forecasts. The differences between our draft and revised forecast, and Dublin Airport’s forecast are illustrated in the figure below.

Figure 18.1, our revised aggregate forecast is some €2 million above our draft forecast. Within this €2 million addition there are cost categories where our revised forecasts are materially lower or higher than our draft forecasts.

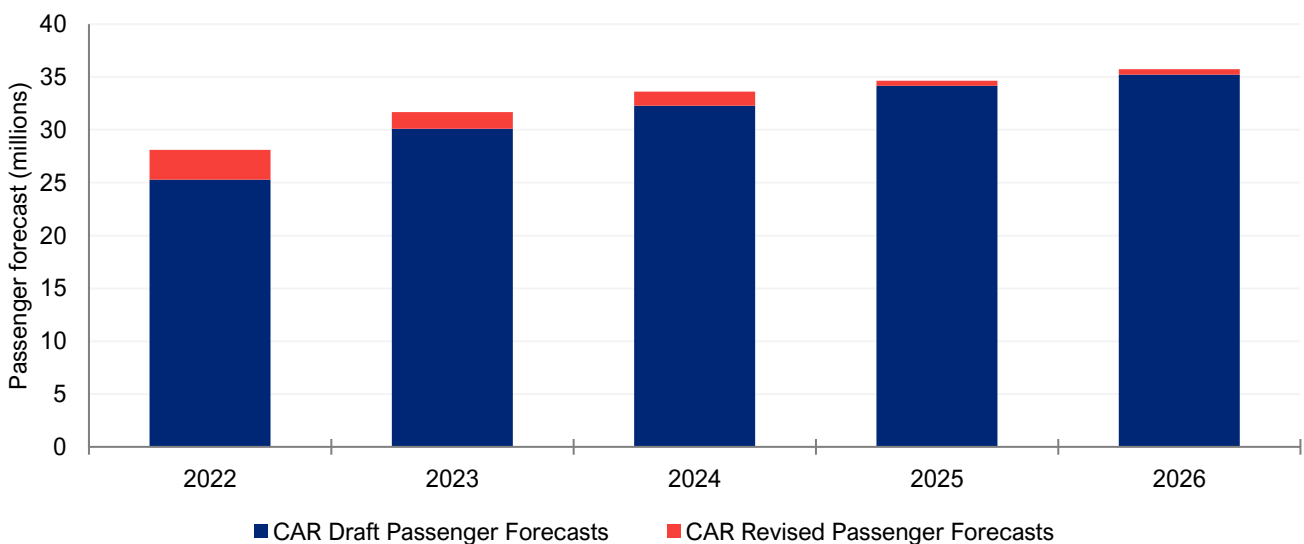
- Our payroll forecasts reduce significantly, driven by adjustments to Security, as does the Campus Services forecast where we remove the link between fire service staff and passenger volumes.
- Several non-payroll categories have increased. This includes an increase in: Other Non-Staff Non-Pay to reflect changes in our forecasting approach for that category; increases in non-pay Cleaning costs to account for the appointment of a new supplier; and changes made to our Insurance projections.

Our revised forecast remains significantly below Dublin Airport’s. Much of this disparity can be attributed to payroll, with approximately half of the difference between Dublin Airport’s draft payroll forecast and our revised payroll forecast driven by differences in approaches to forecasting efficient Security payroll costs. Dublin Airport’s forecasts of Central functions and Facilities and Cleaning payroll costs also contribute to the difference. Their forecast for non-payroll categories was also higher than our revised forecast, with the Maintenance, Information Technology, and Other Non-Staff Non-Pay categories driving much of the difference.

## 18.2. CEPA FINAL FORECAST: UPDATING OUR REVISED FORECAST WITH CAR’S FINAL PASSENGER PROJECTIONS

CAR have updated their passenger forecast since our draft report was published. This updated forecast reflects the fact that passenger numbers have grown at a higher rate than previously projected, and is summarised in Figure 18.2. Passenger numbers have been uplifted by 2.82 million in 2022, and approximately 6.75 million from 2022 to 2026.

Figure 18.2: Comparison of CAR Passenger Number forecasts



Source: CAR

Accounting for these updated passenger forecasts, our **final** forecasts of staffing levels and opex by cost category are summarised in Table 18.1 and Table 18.2.

Table 18.1: Summary of final forecast staffing levels at Dublin Airport, 2022-2026 (FTEs)

	2022	2023	2024	2025	2026
Security	934	866	887	896	910
Maintenance	212	220	226	229	232
Central Functions	324	325	327	328	328
Facilities and Cleaning	413	428	451	455	458
Campus Services	231	232	233	234	234
Retail	323	342	348	375	379
IT	62	66	70	72	75
Airside operations	78	79	80	80	80
Capital Projects	33	33	33	33	33
<b>Total (excluding CIP)</b>	<b>2,610</b>	<b>2,591</b>	<b>2,654</b>	<b>2,701</b>	<b>2,730</b>
CIP (including new runway and HBS3)	10	20	26	-3	-9
<b>Total (including CIP)</b>	<b>2,620</b>	<b>2,611</b>	<b>2,680</b>	<b>2,699</b>	<b>2,720</b>

Source: CEPA and Taylor Airey analysis

Table 18.2: Summary of final forecast opex at Dublin Airport, 2022-2026 (€ million, February 2022 prices)

	2022	2023	2024	2025	2026
<b>Payroll</b>					
Security	48.3	44.8	46.7	47.8	49.2
Maintenance	16.5	17.0	17.7	18.1	18.6
Central Functions	32.2	32.1	33.0	33.6	34.1
Facilities and Cleaning	21.4	21.8	23.1	23.6	24.0
Campus Services	19.4	19.3	19.7	20.0	20.2
Retail	18.2	19.2	19.9	21.8	22.4
IT	7.1	7.5	8.1	8.4	8.6
Airside operations	6.3	6.3	6.5	6.6	6.7
Capital Projects	3.3	3.3	3.4	3.4	3.5
<b>Non-pay</b>					
Maintenance	14.3	15.2	15.7	16.0	16.3
Facilities and Cleaning	7.0	7.2	7.4	7.6	7.8
IT	10.3	11.2	11.4	11.7	12.0
Car Parking	5.2	5.7	6.0	6.3	6.5
Employee-related overheads	7.0	6.8	6.9	6.8	6.9
Rent and rates	17.4	15.9	14.9	14.3	13.7
Consultancy services	7.1	7.1	7.1	7.1	7.1
Marketing	5.6	6.0	6.3	6.6	6.9
Insurance	4.8	5.5	5.8	6.1	6.4
PRM	8.7	9.9	10.8	11.4	12.0
Other overheads	24.3	25.3	27.2	28.9	29.4
Utilities	12.5	12.8	12.9	12.9	12.9
<b>Totals</b>					
Pay	172.6	171.3	178.1	183.3	187.2
Non-pay	124.0	128.6	132.4	135.6	137.7
<b>Total opex (excluding CIP)</b>	<b>296.6</b>	<b>299.9</b>	<b>310.4</b>	<b>319.0</b>	<b>324.9</b>
CIP	2.2	4.7	7.3	4.5	3.3
<b>Total (including CIP)</b>	<b>298.9</b>	<b>304.6</b>	<b>317.7</b>	<b>323.5</b>	<b>328.3</b>
Opex per passenger, excl. CIP (€)	10.55	9.47	9.24	9.20	9.09
Opex per passenger, incl. CIP (€)	10.63	9.61	9.45	9.33	9.18

Source: CEPA and Taylor Airey analysis

## Appendix A **COMPARISON OF FORECAST WITH DUBLIN AIRPORT**

In this appendix, we compare our forecasts with Dublin Airport's revised forecasts. To make the comparisons as like-for-like as possible, we present our forecasts using Dublin Airport's most recent passenger projections rather than using CAR's passenger projections as elsewhere in this report.

*Table 18.3: Summary of CEPA forecast staffing levels at Dublin Airport using Dublin Airport's revised passenger projections, 2022-2026 (FTEs)*

	2022	2023	2024	2025	2026
Security	919	835	849	874	890
Maintenance	202	207	211	217	220
Central Functions	321	321	322	324	325
Facilities and Cleaning	409	421	442	450	454
Campus Services	230	231	232	233	234
Retail	316	329	336	368	371
IT	62	66	70	72	75
Airside operations	78	79	79	80	80
Capital Projects	33	33	33	33	33
<b>Total (excluding CIP)</b>	<b>2,570</b>	<b>2,521</b>	<b>2,574</b>	<b>2,651</b>	<b>2,681</b>
CIP (including new runway and HBS3)	10	20	26	-1	-8
<b>Total (including CIP)</b>	<b>2,580</b>	<b>2,541</b>	<b>2,600</b>	<b>2,649</b>	<b>2,673</b>

Source: CEPA and Taylor Airey analysis

*Table 18.4: Summary of Dublin Airport's forecast staffing levels, 2022-2026 (FTEs)*

	2022	2023	2024	2025	2026
Security	✗	✗	✗	✗	✗
Maintenance	✗	✗	✗	✗	✗
Central Functions	✗	✗	✗	✗	✗
Facilities and Cleaning	✗	✗	✗	✗	✗
Campus Services	✗	✗	✗	✗	✗
Retail	✗	✗	✗	✗	✗
IT	✗	✗	✗	✗	✗
Airside operations	✗	✗	✗	✗	✗
Capital Projects	✗	✗	✗	✗	✗
<b>Total</b>	✗	✗	✗	✗	✗
<b>Total (as per reg submission)</b>	✗	✗	✗	✗	✗

Source: Dublin Airport analysis

Note: The totals in each column do not exactly match the totals provided within the regulatory submission

Table 18.5: Summary of CEPA forecast opex at Dublin Airport using Dublin Airport's passenger projections, 2022-2026 (€ million, February 2022 prices)

	2022	2023	2024	2025	2026
<b>Payroll</b>					
Security	47.6	43.3	44.8	46.7	48.1
Maintenance	15.7	16.0	16.5	17.2	17.7
Central Functions	31.9	31.7	32.5	33.2	33.8
Facilities and Cleaning	21.2	21.4	22.7	23.3	23.7
Campus Services	19.4	19.3	19.6	19.9	20.2
Retail	17.8	18.5	19.3	21.4	21.9
IT	7.1	7.5	8.1	8.4	8.6
Airside operations	6.3	6.3	6.4	6.5	6.6
Capital Projects	3.3	3.3	3.4	3.4	3.5
<b>Non-pay</b>					
Maintenance	13.7	14.4	14.8	15.3	15.6
Facilities and Cleaning	6.9	7.0	7.3	7.5	7.7
IT	10.3	11.2	11.4	11.7	12.0
Car Parking	✂	✂	✂	✂	✂
Employee-related overheads	6.9	6.7	6.7	6.7	6.7
Rent and rates	17.4	15.9	14.9	14.3	13.7
Consultancy services	7.1	7.1	7.1	7.1	7.1
Marketing	5.6	5.9	6.2	6.5	6.8
Insurance	4.6	5.3	5.6	5.9	6.2
PRM	✂	✂	✂	✂	✂
Other overheads	24.1	25.0	26.1	28.4	29.0
Utilities	12.5	12.8	12.9	12.9	12.9
<b>Totals</b>					
Pay	170.1	167.3	173.4	180.2	184.1
Non-pay	122.7	125.8	128.4	133.2	135.3
<b>Total opex (excluding CIP)</b>	<b>292.8</b>	<b>293.0</b>	<b>301.8</b>	<b>313.4</b>	<b>319.5</b>
CIP	2.2	4.7	7.3	4.6	3.4
<b>Total (including CIP)</b>	<b>295.1</b>	<b>297.8</b>	<b>309.1</b>	<b>317.9</b>	<b>322.9</b>
Opex per passenger, excl. CIP (€)	✂	✂	✂	✂	✂
Opex per passenger, incl. CIP (€)	✂	✂	✂	✂	✂

Source: CEPA and Taylor Airey analysis

Table 18.6: Summary of Dublin Airport's forecast opex, 2022-2026 (€ million, February 2022 prices)

	2022	2023	2024	2025	2026
<b>Payroll</b>					
Security	✂	✂	✂	✂	✂
Maintenance	✂	✂	✂	✂	✂
Central Functions	✂	✂	✂	✂	✂
Facilities and Cleaning	✂	✂	✂	✂	✂
Campus Services	✂	✂	✂	✂	✂
Retail	✂	✂	✂	✂	✂
IT	✂	✂	✂	✂	✂
Airside operations	✂	✂	✂	✂	✂
Capital Projects	✂	✂	✂	✂	✂
<b>Non-pay</b>					
Maintenance	✂	✂	✂	✂	✂
Facilities and Cleaning	✂	✂	✂	✂	✂
IT	✂	✂	✂	✂	✂
Car Parking	✂	✂	✂	✂	✂
Employee-related overheads	✂	✂	✂	✂	✂
Rent and rates	✂	✂	✂	✂	✂
Consultancy services	✂	✂	✂	✂	✂
Marketing	✂	✂	✂	✂	✂
Insurance	✂	✂	✂	✂	✂
PRM	✂	✂	✂	✂	✂
Other overheads	✂	✂	✂	✂	✂
Utilities	✂	✂	✂	✂	✂
<b>Totals</b>					
Pay	✂	✂	✂	✂	✂
Non-pay	✂	✂	✂	✂	✂
<b>Total opex</b>	✂	✂	✂	✂	✂
Opex per passenger (€)	✂	✂	✂	✂	✂
<b>Total opex (as per reg submission)</b>	✂	✂	✂	✂	✂

Source: Dublin Airport analysis

Note: The totals in each column do not exactly match the totals provided within the regulatory submission





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