UK Civil Aviation Authority

Working paper on regulatory models

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Introduction and summary

Purpose and context

1.1 On 29th January 2025, the UK Government announced its support for the development of a third runway and capacity expansion at Heathrow airport.

1.2 In July 2025, we published a Statement on scope and process for the CAA's review of the regulatory approach to capacity expansion at Heathrow airport. We recognise the Government's ambitions, including the public commitments to have:

- planning permission in place by the end of this Parliament; and
- a third runway operational by 2035.

We also recognise the importance of the efficient and effective expansion of capacity at Heathrow airport to the wider economy, airlines and consumers. We are seeking to develop the regulatory framework in a timely way, to further the interests of consumers and to support the Government's timetable for the delivery of expansion.

1.3 In October 2025, the Government launched the review of the Airports National Policy Statement (ANPS). This confirmed that the Government is actively considering two schemes, one from Heathrow Airport Limited ("HAL") and the other from the Arora Group, and that it would announce a decision on a single scheme to inform its ANPS review by the end of November 2025. The statement from the Secretary of State also said that the Government was considering whether to name a statutory undertaker as an appropriate person to carry out the project under the Planning Act of 2008.

1.4 This document is a working paper for consultation on our review of regulatory models and sets out:

- the case for changing the current regulatory framework at Heathrow airport;
- a framework for evaluating whether different regulatory models would be likely to further the interest of consumers; and
- a "long-list" of possible alternative regulatory models and how these models might, in principle, apply to capacity expansion at Heathrow airport.

1.5 We consider all of the different regulatory models in the long-list will be relevant to consider under either of the proposed schemes that the Government is actively considering. At this stage it is not clear that naming a statutory

undertaker as an appropriate person should lead us to remove particular models in the long-list, though we would want to consider carefully any implications for our regulatory models and where there continues to be scope for competition in the provision of some or all of the infrastructure necessary to support expansion.

The case for changing the current regulatory framework

1.6 The current regulatory framework for HAL is based on a price control with incentives to promote efficiency and the appropriate delivery of high quality services to consumers. A regulatory asset base ("RAB") and risk sharing arrangements support HAL in raising cost effective financing to support efficient investment.

1.7 It has been widely acknowledged that well-functioning competition can be more effective than regulation in furthering the interests of consumers. Regulation necessarily involves making assumptions and judgements, largely in advance and without the benefit of being able to respond "in real time" to market developments. The impact of regulatory mechanisms on company behaviour can be difficult to predict and manage. However, in the case of "natural monopolies", it is not possible to use competition in a simple way to fully mitigate the impact of market power. Nonetheless, it may be possible to sculpt and implement regulatory arrangements in such a way as to take advantage of competitive pressures, at least to some extent, and a blend of regulation and competition may be better at protecting consumers than regulation alone.

1.8 The challenges associated with economic regulation are not unique to the regulation of Heathrow airport, although some challenges are more acute in HAL's case. As the operator of the UK's only "hub" airport, the ability to use benchmarking to assess various elements of HAL's business is limited. Furthermore, comparisons to:

- other UK airports are limited by their smaller size and different operational characteristics;
- international hub airports are complicated by different legal and regulatory frameworks, operating environments and charging structures; and
- UK utilities are complicated by their far more limited exposure to demand risk, among other factors.

1.9 While we carry out our activities in a manner we consider best discharges the CAA's statutory duties, particularly to further the interests of "users" of Heathrow airport[1], we have at various points noted limitations in respect of our present

[1] In this consultation, "consumers" refers to present and future "users" of air transport services regarding the

approach to the regulation of HAL. This does not mean that alternatives to the current regulatory framework would necessarily deliver superior outcomes, but it does mean that it is important to challenge ourselves to assess whether our current approach remains fit for purpose.

1.10 The scale and complexity associated with the forthcoming expansion at Heathrow airport means it is a particularly important time to consider whether the current regulatory model is effective in protecting the interests of consumers, and whether amendments to the current regulatory model would result in better consumer outcomes.

1.11 In this context, we note that Heathrow Reimagined[2] has called for "*an urgent and fundamental review of the provision of AOS at Heathrow*"[3] and provided some supporting evidence. HAL has also provided evidence on its current level of charges and has proposed changes to the current regulatory framework in its proposals for expansion to the Government in July 2025.

1.12 In this document, we:

- examine how the current regulatory framework has performed in terms of outcomes that matter to consumers, including airport charges and service quality, both over time and compared with other airports that are subject to a greater degree of competition;
- consider, to the extent it is practical to do so, the drivers of observed outcomes; for example, whether there are factors specific to Heathrow airport that are largely outside the control of HAL's management that could result in higher costs, different levels of service and charges compared with other airports;
- examine the available evidence on the incentives the framework places on HAL to deliver capital projects in a cost-efficient manner and provide the best outcome for consumers; and
- considered whether there are characteristics of major capital projects in general that could limit the effectiveness of the current regulatory framework.

1.13 We are consulting on the finding that there is sufficient evidence to warrant revisiting the current regulatory model to determine whether it can be improved

range availability, continuity, cost and quality of airport operation services. Broadly, "users" are passengers and cargo owners and are defined in s69 of the Civil Aviation Act 2012 ("CAA12").

[2] This call was made jointly by the Heathrow Airport Operators Committee ("AOC"), Arora Group, IAG and Virgin Atlantic. We refer to these parties collectively as "Heathrow Reimagined".

[3] Heathrow Reimagined (2025), "Fundamental Reform of Heathrow: Securing the right long-term model for passengers, airlines and the UK economy", February, paragraph 41.

or whether an alternative model can better serve the interests of consumers. The reasons for this include:

- there are characteristics of major capital projects that may limit the effectiveness of the current regulatory model in protecting the interests of consumers. This alone warrants further consideration of the current regulatory model;
- HAL's charges are high compared to other airports that are subject to a greater degree of competitive pressure. Some of this gap can be attributed to factors beyond HAL's control, although the extent to which this is the case is difficult to determine robustly;
- our initial view, based on the information in this consultation, is that HAL's service quality may have deteriorated since the Covid-19 pandemic (the "pandemic"). Although this is partly due to factors beyond HAL's control, we consider that HAL had some ability to moderate this deterioration. There is also some evidence to suggest that Heathrow has underperformed other airports in this respect; and
- although we have not, to date, found direct evidence of material inefficiency on HAL's part, we have raised concerns in the past regarding the processes under which HAL has historically undertaken large capital projects. This will be an important area to consider further for capacity expansion at Heathrow airport.

Framework for Evaluation

1.14 We said that we would narrow the range of alternatives based on the application of evaluation criteria driven by our duties under CAA12, particularly our "primary" duty to further the interests of consumers. This will include considering how different arrangements would incentivise the timely and efficient delivery of capacity expansion.

1.15 We have set out a draft evaluation framework that includes a set of questions that we intend to use to create a "shortlist" of preferred regulatory models for further development and future consultation. This covers the following areas:

- appropriate support for capacity expansion;
- costs;
- finance;
- practicality;
- promotion of competition; and
- service quality.

1.16 To support an objective assessment of each regulatory model, the preferred approach would be to develop quantitative metrics for each element of the framework and then aggregate these into an overall score. This is unlikely to be practical for at least some elements of the assessment framework. Instead, we propose a more proportionate framework that reflects the inherent degree of judgement that will be involved in undertaking this assessment, supported wherever practical by quantitative and qualitative evidence.

Long-list of credible options for the regulatory model

1.17 We have compiled a long-list of possible regulatory models that could apply at Heathrow airport. We define a "regulatory model" as an intervention that can govern the terms upon which the capacity expansion scheme will be delivered. Some of these regulatory models would represent an evolutionary change to existing arrangements, while others would involve more fundamental change. This includes how, and to what extent, costs will be passed through to consumers through airport charges. It could also extend to interventions with respect to the roles that different parties will play in delivering expansion, for example, whether certain elements of expansion should be open to competition.

1.18 Our long-list has been developed based on:

- precedents that have been highlighted to us by stakeholders;
- our own research of regulatory models and relevant commercial arrangements that have been applied in the context of international airports and other UK regulated sectors; and
- alternative regulatory models we have considered from first principles.

1.19 We consider:

- variations of the current regulatory framework, such as strengthened governance arrangements for capital expenditure ("capex") and bespoke treatment of elements of the expansion project;
- interventions to facilitate competition in the delivery of infrastructure; and
- new frameworks for setting airport charges, such as through price benchmarking.

1.20 At this initial stage, we do not express a firm view as to whether any specific alternative regulatory model or models should be adopted. Nonetheless, we note the advantages of being able to lever more on competitive forces to provide assurance that costs are being incurred efficiently and some of the inherent challenges with alternative models for setting airport charges, such as price benchmarking. It may also be that a combination of models is appropriate, perhaps improving the current approach to regulation and levering more on

competitive forces. We intend to reach more final views in due course, once we have carried out further detailed analysis and considered the views of stakeholders on the matters set out in this working paper.

1.21 Several of the regulatory models we have set out involve bespoke regulatory treatment of particular assets or components of the expansion scheme (such as a terminal, surface access project or car park). We have not, in this document, attempted to specify how each regulatory model would be applied to specific types of asset. Further work is currently underway to better understand the components of the expansion scheme that will inform our assessment of regulatory models and their application to specific types of assets in due course, where this is found to be appropriate.

Views invited and next steps

1.22 We are seeking views from stakeholders on this working paper and the following specific questions:

- Do you agree with our assessment of how the regulatory model has performed to date in terms of protecting the interests of consumers?
- Do you agree with our assessment of how the current regulatory model might perform on a forward-looking basis?
- Do you agree with the framework for evaluation we have proposed?
- Are there additional elements we should consider as part of the analytical framework that would better ensure that the options considered will align with consumers' interests?
- Do you agree with our description of the regulatory models we have identified?
- Are there additional variants of the current regulatory model that we should consider?
- Are there additional alternative regulatory models that we should consider?

1.23 We are seeking views on this working paper by 20th January 2026. Responses should be sent to economicregulation@caa.co.uk. We expect to publish the submissions we receive on our website as soon as practicable after this consultation period ends. Any material that is regarded as confidential should be clearly marked as such, with an explanation of why the information is confidential, and included in a separate annex. We have powers and duties with respect to the disclosure of information under Section 59 of CAA12 and the Freedom of Information Act 2000 and it may be necessary to disclose information consistent with these requirements.

1.24 Following this consultation, we expect the next steps to be:

- a consultation on our evaluation of different regulatory models, to identify a short-list of possible regulatory models, and our recommendation for the regulatory model to be applied at Heathrow airport. We expect to publish this in the Spring of 2026; and
- a final report and our conclusions on the regulatory models and the next steps for implementing this model. We expect to publish this in the Summer of 2026.

Chapter 2

The case for change

Introduction

2.1 This chapter considers whether there is a case for changing the regulatory model that we currently apply at Heathrow.

2.2 We carried out a "lessons learned" review of our approach to setting price controls in 2024. The focus of that review was primarily on the H7 and NR23 price control processes, in the context of the H8 price review focusing on the "business-as-usual" operation of a two-runway airport. This was before the UK Government's announcement in respect of capacity expansion at Heathrow airport.

2.3 Given the proposals that have been made in relation to capacity expansion and representations that we have received from stakeholders on the efficacy of the regulatory model for HAL, there is a clear case for a further assessment of these matters.

2.4 This is especially important in informing the case for changing the regulatory framework for capacity expansion, taking account of the scale and complexity of the programme and the benefits of efficient and effective expansion of capacity at Heathrow airport to consumers, the wider economy and airlines.

2.5 In this chapter, we:

- assess stakeholders' views and concerns about the level of airport charges, quality of service and efficiency at Heathrow airport, set out our own initial assessment of these issues and consider the case for modifying and/or changing the current regulatory model at Heathrow;
- consider challenges that the current regulatory model (which was designed in the context of a two-runway airport with a business-as-usual capex programme) might face for capacity expansion and more broadly for future price controls at Heathrow airport; and
- set out initial conclusions on these matters.

Performance of the regulatory model to date

Stakeholders' views

2.6 We have received several representations from stakeholders on the regulatory framework. For example, in a presentation submitted in February 2025,

Heathrow Reimagined stated its view that the current regulatory model is not fit for purpose and requested:

> "*an urgent and fundamental review of the provision of AOS at Heathrow (e.g. a sector review, a market study, or a strategic review akin to the Telecoms Strategic Review undertaken by Ofcom in the early 2000s)*".

2.7 HAL has also provided evidence in support of the current level of airport charges and the changes to the regulatory framework that it considers will best support capacity expansion.

2.8 These views and information are summarised below, with a focus on issues that are likely to be most important to consumers and the discharge of our statutory duties:

- the costs of providing airport operation services and the level of airport charges;
- the quality of airport operation services provided to consumers; and
- the efficiency and economy of major capital investment programmes, which will affect both the level of airport charges and quality of those services.

Heathrow Reimagined – submission in February 2025

The level of airport charges

2.9 Heathrow Reimagined stated that HAL's airport charges are the highest globally, and that the charges are at least twice the level of other major hubs and Gatwick airport, with negative consequences for consumers.[4]

2.10 In support of this view, it referred to data set out in the Review of Airport Charges 2024, published by Jacobs.[5] This data is also published on the Heathrow Reimagined website.[6] This data shows that HAL's charges are the highest among a sample of 50 global airports when expressed in a common currency unit.

2.11 Heathrow Reimagined also noted that HAL's charges have increased significantly in both real and nominal terms since 2003, based on figures presented in CAA price control documents across successive determinations.

[4] Heathrow Reimagined (2025), "Fundamental Reform of Heathrow: Securing the right long-term model for passengers, airlines and the UK economy", February, Paragraph 181.

[5] Jacobs (2024), "Review Of Airport Charges 2024", December. This data is set out in Figure 9 of the submission.

[6] https://www.heathrow-reimagined.com/heathrow-facts-figures/

Service quality

2.12 Heathrow Reimagined said that passenger experiences of HAL's service quality have declined in recent years. It referred to the Skytrax World Airport Awards, which evaluates traveller experiences across different airport service and product key performance indicators. Skytrax aggregates these into an overall rating and ranks airports globally based on this rating. Heathrow Reimagined noted that Heathrow is no longer ranked within the top 20 airports globally.

2.13 It also referred to additional sources that it suggests validate its view, including:

- the ACI Airport Service Quality (ASQ) Barometer. Heathrow Reimagined notes that that Heathrow's overall passenger satisfaction score in Q3 2024 was lower than corresponding scores for global and European averages, and for large airports. It further noted that Heathrow's ASQ score has declined over time[7].
- consumer research commissioned by the CAA in 2016. Heathrow Reimagined referred to an excerpt from this research noting that passengers have reported that Heathrow can be daunting and challenging to navigate for first-time users or inexperienced flyers;
- the Which? Best and worst UK airports, 2024 – Heathrow Reimagined noted that Heathrow received what it considered to be average scores in most categories (e.g. queues at check-in, bag drop, security and passport control), and poorly in other areas (e.g. availability of seats).[8]; and
- certain media articles, which Heathrow Reimagined stated regularly report ongoing service quality issues at Heathrow[9].

Capital efficiency

2.14 Heathrow Reimagined stated that HAL's capex is expensive compared to investments made by its peers. In support of this, it presented a comparison of the cost of Heathrow expansion with other UK infrastructure projects and capex plans at UK and international airports[10]. It suggested that costs at Heathrow airport, when normalised in various ways, compare unfavourably to other projects.

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[7] Heathrow Reimagined (2025), "Fundamental Reform of Heathrow: Securing the right long-term model for passengers, airlines and the UK economy", February, Paragraph 219.

[8] Heathrow Reimagined (2025), "Fundamental Reform of Heathrow: Securing the right long-term model for passengers, airlines and the UK economy", February, Paragraph 222.

[9] Heathrow Reimagined (2025), "Fundamental Reform of Heathrow: Securing the right long-term model for passengers, airlines and the UK economy", February, Paragraph 224.

[10] Heathrow Reimagined (2025), "Fundamental Reform of Heathrow: Securing the right long-term model for passengers, airlines and the UK economy", February, Figure 21.

HAL – submissions with its H8 price control business plan

2.15 As part of its H8 price control business plan HAL has provided two expert reports that have been commissioned by HAL specifically in respect of benchmarking its charges, from KPMG and Jacobs.

KPMG report on aeronautical revenue benchmarking (May 2025)

2.16 The KPMG report examined whether there are factors that are beyond HAL's control that can account for its higher charges relative to other airports. It based this analysis on an examination of charges and explanatory variables at seven comparator airports. KPMG considered that these airports provide a reasonable degree of variation in terms of the scale of operations, types of business model and geography.

2.17 It identified the following drivers that it considered can help explain differences in aeronautical revenue per passenger. These are:

- differences in construction costs internationally, based on an index published by Arcadis. The 2024 publication suggests that London exhibits the highest construction costs within a sample of 50 cities internationally;
- differences in fixed asset requirements between hub and non-hub airports;
- the expenditure HAL incurs in respect of rail access (which KPMG assumes is not incurred by other airports);
- differences in taxation policies, including social security, property tax and VAT free shopping;
- more stringent restrictions on operating hours at Heathrow compared with other airports;
- differences in wider revenues;
- differences in the load factors and seat configurations of flights at Heathrow (which result in lower passenger numbers than would otherwise be the case); and
- differences in passenger mix, resulting in a greater proportion of terminal space being used for lounges, partially offset by higher retail spend per passenger.

2.18 KPMG found that when adjusted for these drivers of aeronautical charges, the average charge for the seven comparator airports is 6% higher than HAL's 2023 observed revenues per passenger and 24% higher than HAL's 2024 allowed revenue per passenger, when compared on a like-for-like basis.

2.19 KPMG also examined the impact of four additional factors:

- HAL's exposure to non-Schengen costs;

- an alternative assumption regarding the relationship between passenger number and per passenger costs;
- HAL's constrained site; and
- the absence of land costs incurred by comparator airports.

2.20 KPMG found that adjusting for these factors individually could result in average charges across the seven comparator airports being between 8%-20% higher than HAL's 2023 observed revenues per passenger when compared on a like-for-like basis.

Jacobs report – on sensitivity of airport charges to mix of aircraft (May 2025)

2.21 The Jacobs report presented an alternative comparison of airport charges across the 50 airports considered in its 2024 Review of Airport charges. This is based on a different assumption regarding the sample of aircraft on which the charge comparison is based. It stated that the updated assumption aligns more closely with the actual fleet mix at Heathrow than that used in the 2024 publication. The changes to the assumed fleet mix were proposed by HAL[11].

2.22 The result of the calculation is that Heathrow's average charge per passenger falls by 17.3%, and that the gap between Heathrow and 10 large international comparator airports narrows due to a reduction in HAL's charge and marginal increases in charges for the other top 10 airports. As a result, for this sensitivity, Heathrow's ranking falls from first highest charges to second within the airport charges index for 2024.

Heathrow Reimagined – response to HAL's H8 Business Plan (August 2025)

2.23 Heathrow Reimagined shared a presentation with us in August 2025[12], in response to the KPMG and Jacobs reports submitted alongside HAL's H8 Business Plan.

Response to KPMG report

2.24 Heathrow Reimagined said that:

- KPMG's analysis was based on a limited selection of airports that excludes important comparators such as JFK, LAX, Zurich and Copenhagen; and
- irrespective of the above, HAL's charges (before introducing adjustments) are high relative to the comparator airports in KPMG's sample.

[11] Jacobs (2025), "Airport Charges bespoke analysis", May, p5.

[12] Heathrow Reimagined (2025), "Fundamental reform of Heathrow: Case for change: Presentation of why HAL's claims, arguments and commissioned reports should be disregarded", August.

2.25 Heathrow Reimagined also commented on four specific adjustments applied by KPMG which it suggested were not appropriate:

- **Operating hours** – Heathrow Reimagined indicated that there is no cost disadvantage due to lower asset utilisation relative to comparators, noting that HAL's infrastructure is comparatively highly utilised. Further, it indicated that HAL should benefit from greater economies of scale, so its charges should be lower than those of its comparators.

- **Business model** – Heathrow Reimagined disagreed with KPMG's assumption that the business model adopted by airlines at Heathrow airport artificially constrains passenger numbers relative to other airports. It noted that long-haul flights deliver more passengers than short-haul flights, so airlines' operating models at Heathrow should result in higher, not lower, passenger volumes. It also considered the adjustment in KPMG's analysis to be flawed because it is based on Average Seat Kilometres rather than passenger numbers, as the flight distance is not relevant to the reduction in passenger volumes due to less densely configured aircraft.

- **Operating model** – Heathrow Reimagined said that KPMG overstated the extent to which hub operations and wide-body aircraft result in higher costs, as: (i) there are offsetting benefits associated with both long-haul/wide-body flights and/or transfer passengers; (ii) analysis shows there is no statistical relationship between airport charges and wide-body aircraft; and (iii) KPMG's adjustment is flawed as it is based on a comparison of a small number of observations and Dublin airport should be considered to be a hub.

- **Construction costs** – while London has relatively high construction costs, Heathrow Reimagined found that there is an imperfect relationship between international construction costs and airport charges. It also identified alternative construction cost indices,[13] which would reduce the cost adjustment compared with the index used by KPMG (which comes from a report by Arcadis).

2.26 Heathrow Reimagined concluded that after removing these adjustments, HAL's charges are higher than those of its comparators by an average of 54%.

Response to Jacobs report

2.27 Heathrow Reimagined made the following observations about the Jacobs report:

- the Jacobs report does not supersede the method underpinning the Jacobs Review of Airport Charges 2024 publication, which remains valid and will form the basis for future publications;

[13] These include indices produced by Turner & Townsend, Rider Levett Bucknall and the International Air Transport Association (IATA).

- the Jacobs report still showed that HAL's charges are high relative to other airports, with only one airport (Auckland) exhibiting higher charges. Heathrow Reimagined also said that Auckland airport is currently subject to a competition investigation; and

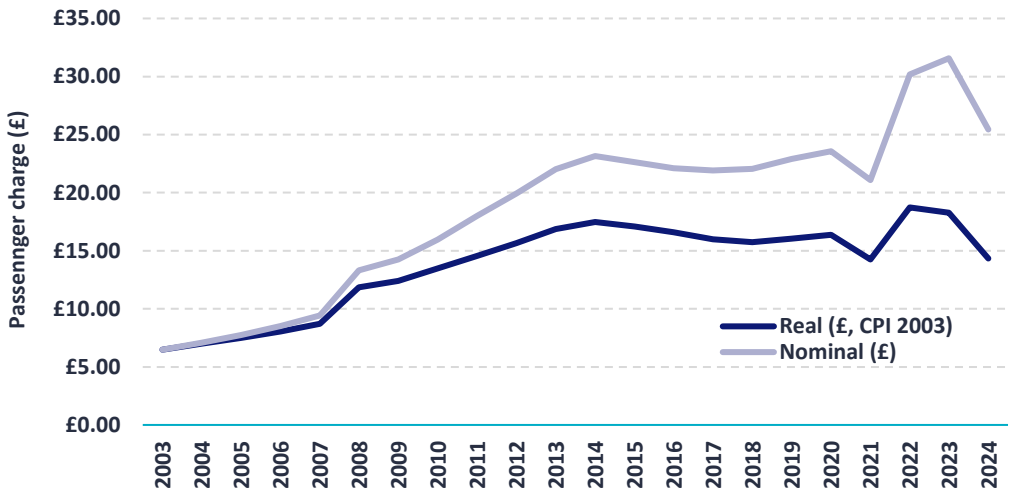
- it noted that the adjusted index produced by Jacobs shows different rankings than those evident from a comparison of aeronautical revenues per passenger. For example, it noted that HAL's total and aeronautical revenues per passenger are materially higher than for Auckland airport.

Our assessment

The level of airport charges

2.28 As shown in Figure 1, HAL's charges have increased significantly over the last four price control periods.

Figure 1: Maximum allowed airport charges over time

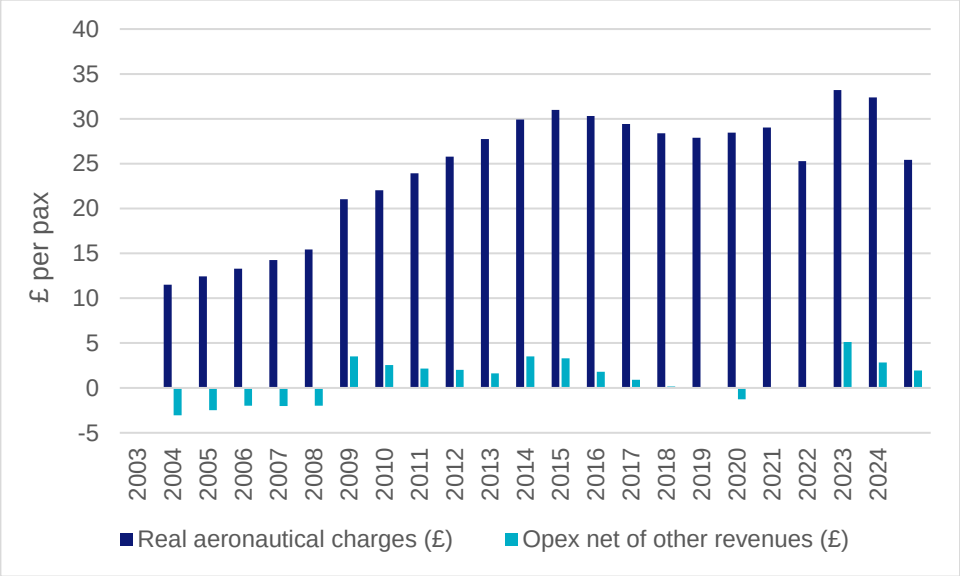


Source: ONS, CAA price control decision documents for Q4, Q5, Q6, Q6+1, iH7 and H7.

2.29 The drivers of this increase ultimately lie in the assumptions and judgements embedded in our previous price control decisions. However, certain high-level observations can be made.

- The principal driver of the increase in HAL's charges has been increasing capital costs, which have resulted in higher allowances for the return of capital (regulatory depreciation) and the return on capital (the allowed return). Increases in capital costs account for around 70% of the increases in charges between 2003 and 2024. At the same time, operating costs and commercial revenues have largely offset each other over this period, as shown in Figure 2;

Figure 2: HAL's aeronautical charges and net opex over time (CPI[14] 2024 prices)



Source: ONS, CAA price control decision documents for Q4, Q5, Q6, Q6+1, iH7 and H7.

- Much of the observed increase took place in the period during which Terminal 5 and Terminal 2 were built (i.e., prior to 2015), which is consistent with the observation that capital costs have been the main driver of increases in HAL's charges; and

- HAL's charges have fallen in CPI-real terms since the completion of Terminal 2 in 2014. This is consistent with the absence of major projects on the scale of Terminal 5 and Terminal 2 since then, though much of the reduction can be attributed to reductions in the allowed return in that period.

Cross-sectional comparisons

2.30 It can be informative to assess HAL's charges against other airports, including airports subject to greater competitive pressures. Where HAL's charges are higher, and this cannot be explained by factors outside of HAL's control, this would constitute relevant evidence when considering whether a change to the current regulatory framework is warranted.

2.31 In this context, it is important to note that it is not straightforward to compare charges robustly across airports. Stakeholders have presented us with two sources of evidence in respect of airport charges, each of which has limitations:

- analysis conducted by Jacobs in its Review of Airport Charges, which estimates charges at each airport based on its schedule of charges, together with a representative mix of aircraft and passengers; and

[14] CPI refers to the Consumer Price Index, which is the official measure of inflation in consumer prices in the United Kingdom.

- aeronautical revenues per passenger, based on reported data for each airport.

2.32 On airport charges, the different charging schedules between airports means that to make comparisons it is necessary to make assumptions regarding:

- the composition of air traffic movements, including the proportion of different types of aircraft that arrive and depart from the airport; and
- the composition of passenger traffic, including the split between:
  - direct and transit passengers;
  - long-haul and short-haul routes; and
  - domestic and international traffic.

2.33 The sensitivity of the comparisons to different assumptions is illustrated by the Jacobs report commissioned by HAL, which produces markedly different results from its 2024 Review of Airport Charges.

2.34 On aeronautical revenues per passenger, top-down estimates based on reported data are constrained by data availability and comparability across airports. Data on aeronautical revenues at individual airports is not always reported and, where it is, it is not always clear what services and activities are included within these revenues.

2.35 Therefore, any such comparisons must be interpreted with caution. Nonetheless, the evidence we have seen consistently suggests that HAL's charges in 2024 appear to be higher than those at a broad selection of other airports.

2.36 We note that KPMG, on behalf of HAL, has suggested that there are factors outside of HAL's control that explain the apparent differences in charges between HAL and other airports (we refer to this as the "charge gap"). To the extent that this is the case, the existence of a charge gap would not, by itself, indicate that the regulatory model has not sufficiently protected the interests of consumers.

2.37 To determine the proportion of the charge gap that can be explained by factors beyond HAL's control, we have amended KPMG's analysis to retain only the factors we consider can plausibly justify a significant difference in charges: namely, construction costs, taxation policies and wider revenues. Our initial view is that Heathrow Reimagined are broadly correct in saying that Heathrow's asset utilisation is relatively high and that adjustments for factors such as operating hours, its business and operating model cannot reasonably explain significant differences in its charges when compared to comparator airports.

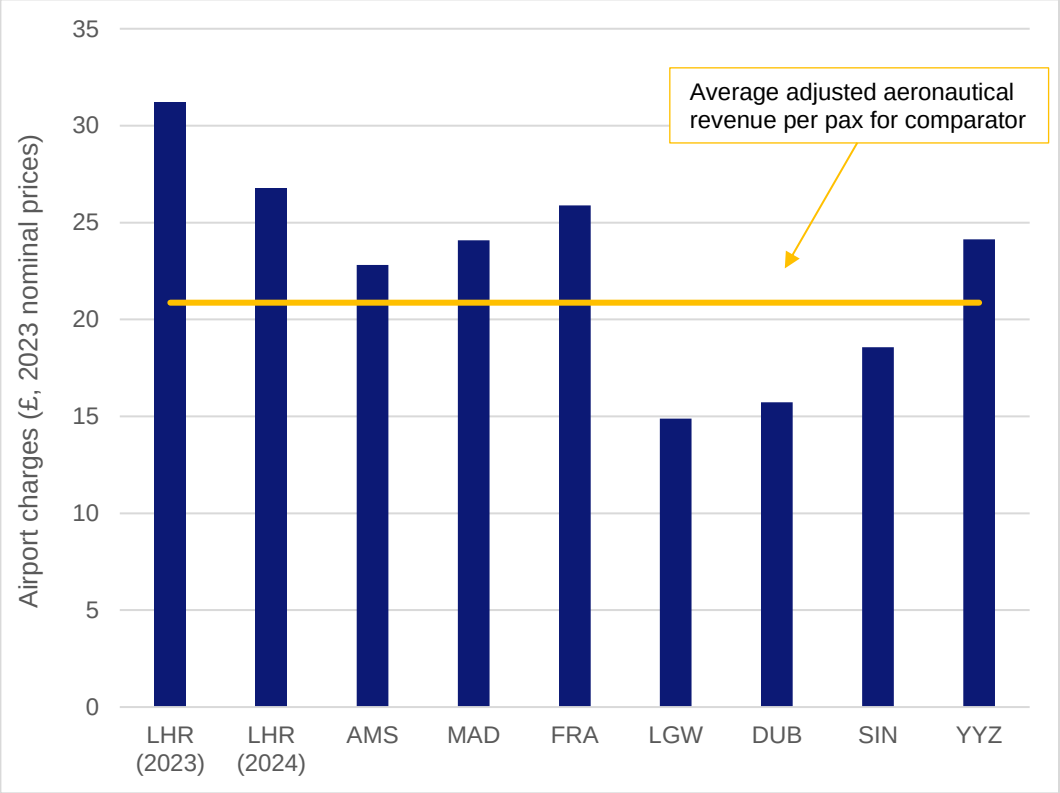
2.38 This is an indicative view only, and we also have some concerns around the transparency and robustness of KPMG's analysis. In particular, we have not been able to replicate KPMG's estimates based on the source data provided. We

also have concerns regarding the small number of airports considered and the omission of relevant comparators such as Zurich and New York JFK. We present further details of our assessment in Appendix B.

Overall findings in respect of difference in charges between HAL and other airports

2.39 Our overall findings are summarised in Figure 3 below.

Figure 3: Adjusted airport charges for KPMG comparator set



Source: CAA analysis based on KPMG (2025), "Aeronautical Revenue Benchmarking Study", June, p24-32.

2.40 Our estimates show that HAL's 2024 charges (£26.77) are above the average level (£20.87) for the seven comparator airports, after adjustments have been applied. The charge gap is significantly smaller (£5.90) than if no adjustments are made (£14.78), so the factors presented by KPMG explain more than half the charge gap, all else being equal.

2.41 Overall, this suggests that HAL's charges are high relative to other airports, even once factors that are outside of HAL's control are taken into account.

Service quality

2.42 We have considered evidence on HAL's service quality, including examining data put forward by Heathrow Reimagined.

2.43 As with airport charges, we would highlight that comparing service quality across airports is not straightforward as:

- service quality has a number of elements and comparisons between airports will rely on assumptions and judgements about which service quality metrics are relevant;
- we need to be cautious about relying on anecdotal observations, as they do not provide a well-rounded and evidence-based assessment of relative performance; and
- airport-specific data on aggregate measures of service quality is not publicly available on a comparable basis,[15] meaning that we are unable to carry out quantitative assessments of the drivers of differences in service quality between airports.

2.44 We note that Heathrow Reimagined referred to the CAA's 2016 consumer research. This research supported a finding that HAL had generally acceptable performance:

> "*Heathrow was generally perceived to be well managed in terms of passenger processing. It was also judged to have generally acceptable performance specifically in terms of the level of disruption it experiences and how it handles this*"[16].

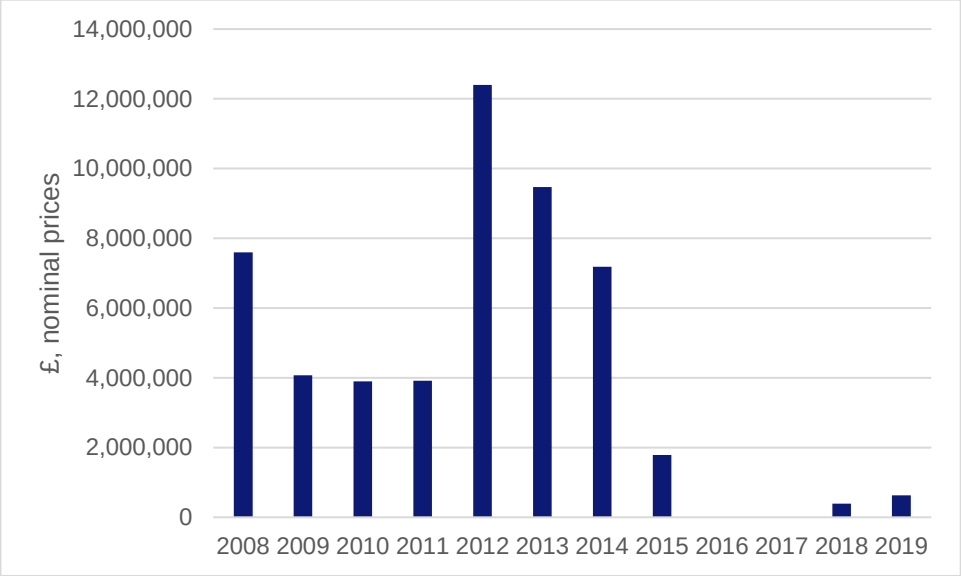
2.45 At a headline level, Skytrax data indicates that between 2014 and 2021, HAL performed favourably relative to comparator airports in terms of service quality.

2.46 As a cross-check, we have examined the level of rebates paid by HAL to airlines under the service quality incentive framework we have historically applied to HAL under the price control framework. This framework considers HAL's performance against a variety of service quality metrics, including passenger experience, queue times, and availability of key equipment and infrastructure. HAL is required to pay rebates through lower passenger charges where it underperforms against targets set for these metrics. The level of rebates paid provides a useful way of measuring HAL's relative performance over time. We note that there was a substantial improvement in service quality between 2008 and 2019 which was reflected in the reductions in the amounts of the rebates paid by HAL to airlines over this period. For example, HAL paid no rebates to airlines between June 2015 (coinciding with the closure of Terminal 1) and November 2018.

[15] Skytrax provides a ranking of airports based on a "star" rating that it makes publicly available. However, the rating for individual airports is not provided. Aggregate ratings are only provided at a regional level, which is insufficient to provide a robust basis for carrying out quantitative analysis.

[16] Collaborate Research for the CAA, Consumer attitudes to journey disruption, 2016, Section 7.

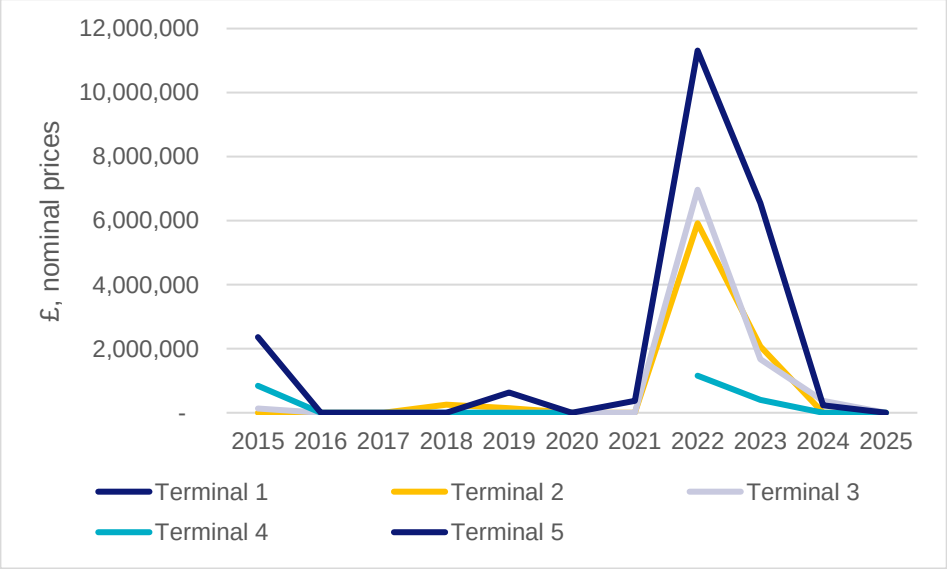
Figure 4: HAL's annual total rebates from 2008 to 2019



Source: Heathrow Measures, Targets and Incentives.

2.47 The Skytrax data shows a marked decline in HAL's service quality compared with other airports following the pandemic. This is consistent with a higher observed level of rebates payable to airlines between 2021 and 2023, as shown in Figure 5. While the rebates have declined to their pre-pandemic level in 2024 and 2025, we have not seen a similar improvement in HAL's Skytrax rankings.

Figure 5: HAL's annual total rebates from 2015 to 2025



Source: Heathrow Measures, Targets and Incentives.

2.48 In its H8 Business Plan, HAL has acknowledged that it has faced service quality issues, which it attributes to increases in passenger numbers causing congestion

and placing pressure on existing assets.[17] It also recognises that the recent rate of asset renewal has been slower than the rate at which assets age.[18] HAL notes that decisions made in Q6 and H7 to reduce investment, firstly in anticipation of expansion prior to 2019, and then due to the pandemic, have contributed to this situation.[19]

2.49 We acknowledge that HAL has faced challenges, for example during the difficult circumstances of the pandemic, and that these led to a reduction in investment and so affected HAL's ability to renew its assets. Even so, we consider that HAL retained some discretion in how capex was spent and how best to manage its service quality over time. We are also concerned that the Skytrax data suggests that, more recently, HAL's service quality has not recovered to the same extent as other airports.

2.50 HAL has set out proposals for significant investment during H8 that it expects will improve service quality. However, it also forecasts that this will result in a significant increase in airport charges to £33.26 (in 2014 CPI-real prices)[20], which would be likely to further increase charges compared to other airports. We comment further on these forecasts below.

Efficiency and economy

2.51 At an overall level, we have not, to date, identified material inefficiency associated with HAL's capex. This includes our reviews of HAL's capital efficiency undertaken as part of the previous price control arrangements in Q5 (2008-2013)[21], Q6 (2014-2018)[22] and H7 (2022-2026)[23].

2.52 However, we have previously raised concerns in the context of Terminal 5 regarding the escalation in cost forecasts prior to construction.[24] The advisors to the Competition Commission during the Q4 price control also raised concerns regarding HAL's benchmarking and cost control processes.[25] We also note our

[17] Heathrow Airport Limited, "Heathrow's H8 Business Plan 2027-2031", Page 165.

[18] Heathrow Airport Limited, "Heathrow's H8 Business Plan 2027-2031", Page 8.

[19] Heathrow Airport Limited, "Heathrow's H8 Business Plan 2027-2031", Page 127.

[20] Heathrow Airport Limited, "Heathrow's H8 Business Plan 2027-2031", Page 267

[21] See Chapter 9 of CAA (2008), "Economic Regulation of Heathrow and Gatwick Airports 2008-2013: CAA Decision", March.

[22] See Chapter 9 of CAP1103. Q6 was later extended by one year to include 2019. We also allowed for an interim price control period (iH7) in 2020 and 2021, to reflect the delay to H7 due to the onset of the pandemic. We did not carry out separate assessments of capital efficiency for these periods.

[23] See Appendix D of CAP2524E3.

[24] CAA (2002), "Heathrow, Gatwick and Stansted Airports Price Caps, 2003-2008: CAA recommendations to the Competition Commission", paragraph 10.49-10.51.

[25] Competition Commission (2002), "BAA plc: a report on the economic regulation of the London airports

previous assessment that capital costs have been the principal driver of increasing airport charges at Heathrow. Together with our assessment that HAL's airport charges are high by comparison with a broad selection of other airports, this could indicate that some capital inefficiency has occurred, but has not been captured in our previous assessments.

2.53 Heathrow Reimagined has presented analysis of the costs associated with the previous two major terminal projects at Heathrow (Terminals 5 and 2), which sets out that the cost of these projects appears high relative to comparable projects based on the metrics considered (investment per passenger and investment per m^2 in 2024 prices).

2.54 We note some limitations in respect of this assessment. For example, it is based on a relatively small sample of airport projects, that omits potential examples of higher cost projects at other airports. We note that a report by Steer commissioned by HAL presents examples of airport projects at JFK, Manchester and Newark airports that appear to be more expensive on a "pounds per square metre" basis[26].

2.55 Further, as noted above in respect of HAL's charges, there are factors that we consider could explain a proportion of HAL's higher costs: for example, differences in local construction costs and taxation policies.

2.56 We have considered the extent to which these factors can explain differences in cost per passenger and per square metre between the projects presented by Heathrow Reimagined and Terminal 5 and Terminal 2 respectively.

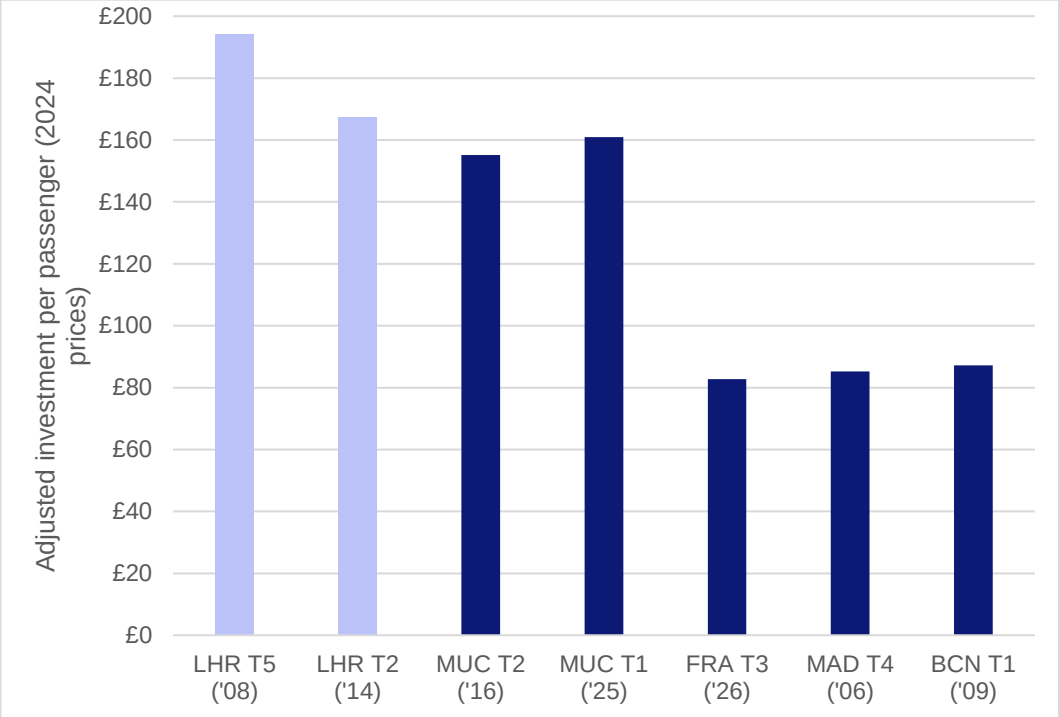
2.57 We have adjusted the metrics set out in Figure 21 of Heathrow Reimagined's February report to reflect factors that we consider are beyond HAL's control and explain a proportion of the differences in charges between HAL and other airports. The assessment we carried out above and summarised in Figure 3 suggests that when we adjust for these factors, other airports' costs would be 74% higher than their unadjusted values. We have, therefore, adjusted the costs for comparable airport terminal projects upwards by this amount.

2.58 We find that these factors explain 38% of the difference in cost per passenger and 22% of the difference in cost per square metre between Terminal 5 and the comparator airports presented by Heathrow Reimagined. The corresponding values for Terminal 2 are 48% and 28% respectively.

companies (Heathrow Airport Ltd, Gatwick Airport Ltd and Stansted Airport Ltd)", Chapter 9, paragraphs 9.66-9.74.

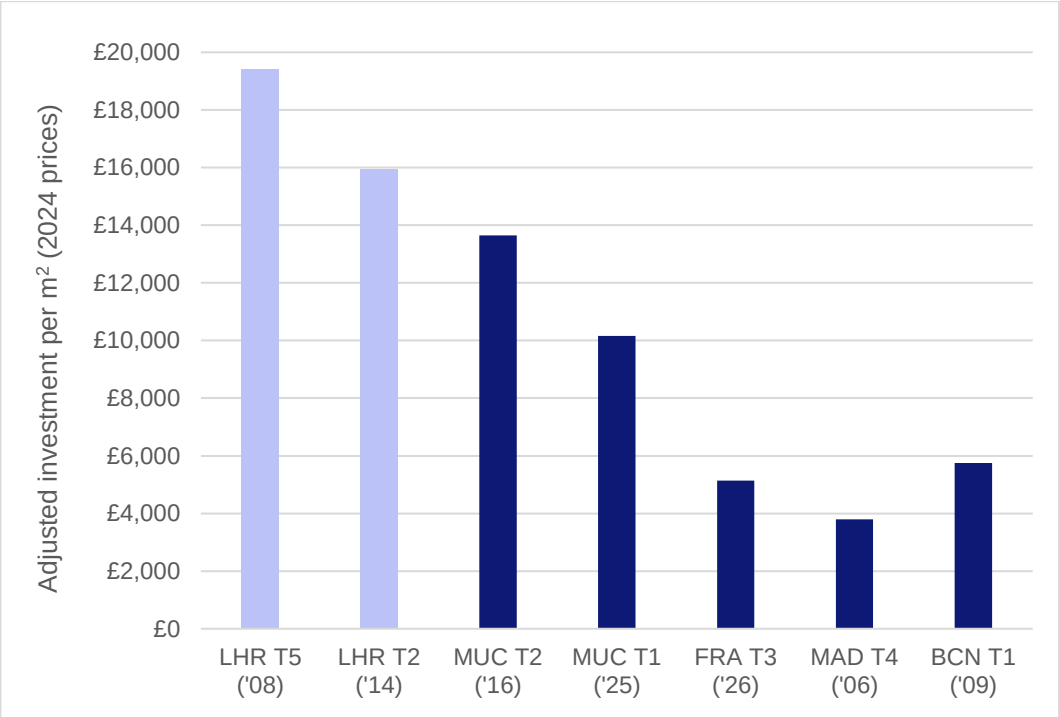
[26] Steer (2024), "Capex benchmark: Benchmark of Terminal Building projects", October.

Figure 6: adjusted costs per passenger of comparable terminal projects



Note: LHR, MUC, FRA, MAD and BCN refer to Heathrow, Munich, Frankfurt, Madrid and Barcelona Airports, respectively. The dates in parentheses represent the completion dates of each terminal.
Source: CAA analysis based on Heathrow Reimagined data.

Figure 7: adjusted costs per m^2 of comparable terminal projects



Note: LHR, MUC, FRA, MAD and BCN refer to Heathrow, Munich, Frankfurt, Madrid and Barcelona Airports, respectively. The dates in parentheses represent the completion dates of each terminal.
Source: CAA analysis based on Heathrow Reimagined data.

2.59 We note that Terminal 5 and Terminal 2 were undertaken one and two decades ago respectively, and in the context of a different regulatory model based on an *ex post* assessment of capex. We are currently in the process of carrying out an *ex post* review of capex incurred by HAL during Q6 and the early part of H7. Since this work is ongoing, we are unable to comment on whether HAL's more recent capex has been incurred efficiently. We intend to do so in due course.

2.60 We also note that HAL has indicated in its H8 Business Plan that it proposes to undertake a significant expansion of Terminal 2 in the context of the Modernising Heathrow programme. It has estimated that the cost of this expansion will be £6.8 billion, of which £1.7 billion will be incurred in the H8 period.[27] This work on Terminal 2 will provide capacity for 22 million passengers, giving a total cost per passenger of about £310. We will review this investment and the associated cost estimates as part of our wider work on capacity expansion at Heathrow.

Interpretation of findings in respect of the current regulatory model

2.61 We are consulting on the finding that there is sufficient evidence to warrant revisiting the current regulatory model to determine whether it can be improved or whether an alternative model can better serve the interests of consumers. In summary, we have found that:

- HAL's charges appear high compared to other airports that are subject to a greater degree of competition. There are factors over which HAL has relatively little control that partly, but do not fully, explain the charge gap between HAL and other airports;
- our initial view, based on the information in this consultation, is that HAL's service quality may have deteriorated since the pandemic. In its H8 business plan, HAL highlighted the impact of capacity constraints on quality of service. We acknowledge that HAL has faced significant challenges that have limited its ability to invest to maintain service quality. At the same time, the Skytrax rankings suggest that HAL has underperformed other airports in respect of trends in quality of service; and
- there is evidence to suggest that the costs of developing Terminal 5 and Terminal 2 were relatively high, although we did not find clear evidence of cost inefficiency in our previous reviews of HAL's capital efficiency. We will undertake further work on the estimates HAL has provided in relation to the future expansion of Terminal 2.

[27] Heathrow Airport Limited, "Heathrow's H8 Business Plan 2027-2031", Page 222.

2.62 Some of these findings relate to performance in historical price control periods and there have been important changes to the regulatory framework since then. For example:

- our current statutory duties that were introduced under the Civil Aviation Act 2012 sharpened the focus of our activities on the consumer and placed a greater emphasis on economy and efficiency; and

- until the Q6 price control (2014-2018), airport price control determinations were subject to mandatory references to the Competition Commission. A possible unintended consequence of the mandatory references was that the respective roles and responsibilities of the CAA and Competition Commission in determining the price control parameters and scrutinising major investments were not always clear in practice. This lack of clarity may have led to a lesser degree of scrutiny over capex efficiency than was warranted given the significant scale of the investments in new terminals.

2.63 For the current price control (H7), we also introduced various changes to the regulatory model to improve the focus on improvements in capital efficiency and service quality.

2.64 In respect of capital efficiency, until H7, we assessed HAL's capex based on an *ex post* review which focussed on whether there were specific instances of demonstrable inefficiency and wasteful expenditure. We highlighted in the H7 price control determination that this approach led to a:

> "*high bar being set for costs to be excluded on the basis of inefficiency, even where out-turn costs are much higher than the expected budget" and that "it does not offer any incentive to find efficiencies in the delivery of a project to outperform budget expectations.*"[28]

2.65 In H7, we transitioned to a system of *ex ante* incentives, together with a capital governance framework that ensured that projects are subject to stakeholder approval and the setting of Delivery Obligations. This new framework has the potential to improve the effectiveness with which the current regulatory model protects the interests of consumers significantly, although it has only been in place for a limited period and only a small number of projects have been undertaken on this basis. Stakeholders have identified that this is an area that could usefully be enhanced in future price control determinations.

2.66 On service quality, for H7 we sought to set improved service quality incentives for HAL through the new Outcome Based Regulation ("OBR"). This included a suite of measures, targets and incentives underpinned by six outcomes that are intended to capture the main aspects of Airport Operation Services that are

[28] CAP2365, Paragraph 7.16.

important to consumers. This has only been in place for a limited period, and we are considering improvements through the "mid-term" review of the OBR[29] and as part of the H8 price control review. As such, in a similar manner to the *ex ante* capex incentives framework, it is not yet practical to determine the longer-term effect of this framework on consumer outcomes.

Future challenges

2.67 In this section, we consider how the current regulatory model might perform on a prospective basis, particularly in the context of future major capital projects.

2.68 The forthcoming price control periods are likely to be characterised by significant amounts of new investment, including several major capital programmes and the potential for significantly higher airport charges. HAL has said that airport charges[30] are likely to increase from £24.28 at the end of H7 to an average level of £33.26 per passenger during H8 under a two-runway configuration.[31] Furthermore, airport charges could increase significantly beyond this level in the context of major capacity expansion at Heathrow. An increase in charges of this magnitude (either under the two-runway configuration or with expansion) are likely to result in HAL's charges significantly exceeding current charges at other airports even after controlling for other relevant factors.[32]

2.69 In assessing and incentivising the efficiency of HAL's capex, we have considered the characteristics of major capital programmes and whether these may limit the effectiveness of the current regulatory model and, specifically, the framework of *ex ante* capital incentives introduced in H7. These characteristics include:

- **Cost volatility:** large infrastructure projects may be at greater risk of significant cost overruns and schedule delays.[33]

[29] CAP3108, July 2025

[30] CPI-real, 2024 prices.

[31] Heathrow Airport Limited, "Heathrow's H8 Business Plan 2027-2031", Page 267.

[32] We do not have information on changes in other airport charges over these same timeframes, though it seems unlikely that many of these comparator airports would be carrying out a similar scale of investment programme and so see the same drivers of increasing charges.

[33] See, for example, BCG (2021), International Major Infrastructure Projects Benchmarking Review, IMF (2019), Costing of Infrastructure Projects and Institution of civil engineers (2019), Reducing the gap between cost estimates and outturns for major infrastructure projects and programmes.

- **Complexity and cost benchmarking:** it is often the case that major capital projects cannot be easily benchmarked at an aggregated level. They can comprise a very large number of interdependent components, each of which require their own assessment. This can require a significant level of technical expertise and such an assessment can require time to undertake, which may delay the delivery of the projects.

- **Bespoke / first of a kind nature:** major projects, or their constituent components, may lack obvious benchmarks to a greater extent than business-as-usual expenditure, which may be more standardised.

- **Duration:** the timescales over which major programmes are delivered can involve significant lead times between the design phase and completion. As such, forecasts of costs estimated early in the project are more likely to prove inaccurate than smaller projects undertaken over a shorter timescale.

- **Potential impact:** major programmes have the potential to have a significant impact on airport charges, airport capacity and quality of service.

- **Additional uncertainty:** major programmes, particularly those aimed at increasing airport capacity, are more likely to require planning permission and so the implementation of these programmes will tend to face greater risks and uncertainties.

2.70 Taken together, these factors reduce our ability to accurately estimate efficient costs ahead of the detailed development of a major programme and significant expenditure on planning and development. This makes it more difficult to establish the cost and benefits case for the expenditure and set strong incentives for cost efficiency, because of the risks of:

- setting allowances that are too high, creating greater risks of inefficiency and/or windfall gains; or

- setting allowances too low, hence endangering the viability of the programme and/or the financial robustness of the airport/promoter.

2.71 As noted in the section above, the present focus of the capex incentives on HAL is on a project-by-project basis (with budgets and deliverables agreed at a relatively advanced stage of project development). It may not be practicable to adopt this approach for a major capital programme such as a new terminal, at least at the initial stages of development. Collectively, these observations suggest that we should consider the most appropriate regulatory model as it applies in the context of major capex programmes.

Conclusions in respect of the case for change

2.72 We have highlighted various factors that, collectively, warrant revisiting the current regulatory model to determine whether it can be improved or whether an alternative model can better serve the interests of consumers.

2.73 Although we have already introduced important changes to the regulatory model, most notably a system of *ex ante* capex incentives and OBR framework, insufficient time has elapsed to robustly assess the longer-term impact of these new mechanisms.

2.74 Nonetheless, the characteristics of major projects generally mean that the current regulatory framework may be less effective in delivering outcomes that further the interests of consumers compared with business-as-usual expenditure. Regardless of the performance of the regulatory model to date, this means that our view is that there is a case for examination of amendments or alternatives to the current regulatory model on a prospective basis.

Key questions for consultation

2.75 Do you agree with our assessment of how the regulatory model has performed to date in terms of protecting the interests of consumers?

2.76 Do you agree with our assessment of how the current regulatory model might perform on a forward-looking basis?

Chapter 3

Our approach to assessing regulatory models

Introduction

3.1 This chapter sets out for consultation the framework that we propose to use to assess the long-list of regulatory models set out in Chapter 4, together with any additional models that stakeholders may suggest in response to this working paper.

3.2 We intend to develop this framework (including by considering the views and suggestions of respondents to this consultation) and then use it to create a "shortlist" of our preferred regulatory models and recommendations for future consultation and development.

3.3 The key issues for consultation are summarised at the end of this chapter.

Our starting point: the CAA's statutory duties

3.4 Our starting point for developing any evaluation of potential regulatory models for Heathrow airport is the CAA's statutory duties governing the economic regulation of airport operation services set out in CAA12. These statutory duties cover all our work on the economic regulation of airports, including expansion. Our primary duty is to further the interests of consumers, where appropriate by promoting competition. A summary of our duties is set out at Appendix C.

3.5 Consideration of these matters is not necessarily straightforward and may involve varying outcomes for different groups of consumers, or elements of the interests of consumers. Where we consider that there is a conflict between either the interests of different classes of consumer (for example present and future consumers) or the interests of consumers in different matters (for example cost and quality of service), we must carry out our functions in a way that best furthers the interests of consumers, which can often mean considering the interests of consumers "in the round".

Overview of our approach

3.6 To assess what approaches or models could best improve the current regulatory arrangements at Heathrow airport, we propose to apply the relatively "high-level" framework set out below. This framework is aimed at enabling us to assess the potential for each model to further the interests of consumers in a manner consistent with CAA12. Our assessment may need to vary depending on the model being evaluated, but the themes set out below should be relevant to the assessment of all the models.

3.7 We consider that this approach will enable us to assess each model through consideration of each of our "secondary" duties, meaning those set out in paragraph 5 of Appendix C, including:

- secure the ability of the licensee to finance its activities;
- secure that the reasonable demands of users are met; and
- promote economy and efficiency.

The assessment of these matters may also reveal issues relevant to the interests of consumers in relation to, for example, the cost, quality and availability of airport operation services.

3.8 We have incorporated other elements of our secondary duties within this framework. For example, our consideration of whether a model might enable a licensee to take reasonable measures to mitigate the environmental effects of the airport. In this respect, our assessment will focus on whether the model in question is capable of supporting the capital expenditure required for expansion, including environmental mitigations.

3.9 We will use the outcome of our evaluation to develop a shortlist of models, that we consider pursuing could be in the interests of consumers, for further consideration.

3.10 The Government has also set out a number of objectives for capacity expansion at Heathrow airport, including a clear timetable, and to meet the Government's key tests on climate change, noise, air quality and contributing to economic growth. The Government has also been clear that expansion must be financed entirely by the private sector, at no cost to taxpayers, while also meeting rigorous and effective cost controls.

3.11 We recognise the Government's objectives and consider that our statutory duties and the evaluation framework set out later in this chapter aligns with the objectives of the efficient and timely delivery of capacity expansion. This evaluation framework is based on our statutory duties, including furthering the interests of consumers, and we will seek to reflect Government's objectives in our assessment. In our wider work on capacity expansion we will also take into account the costs of meeting the Government's targets on climate change, noise and air quality, as we support the efficient and timely delivery of new capacity at Heathrow airport.

Information provided by stakeholders

3.12 We are setting out our draft assessment framework for the first time in this consultation paper. Nonetheless, stakeholders have provided certain information in their submissions to date which provides an indication of their views on the assessment criteria for regulatory models at Heathrow airport.

3.13 In its expansion plan, Freshfields and Santander, on behalf of HAL, set out the following evaluation criteria for a range of shortlisted financing/ funding models[34]:

- timely delivery for economic growth;
- financeable for lenders;
- value for money for customers;
- investable for equity investors;
- financially independent from government; and
- ensuring efficient delivery of project and integration of operations.

3.14 These criteria included those relating to timely delivery, financeability, efficiency and value for money and the ability to integrate with existing operations, and so in broad terms appear to be consistent with the approach set out later in this chapter.

3.15 Heathrow Reimagined set out a range of objectives that the regulatory model should seek to achieve, including:

- driving significant efficiency improvements and promoting greater transparency and accountability;
- delivering infrastructure that is aligned with user needs;
- ensuring as much exposure as possible to competition;
- supporting the UK's broader economic ambitions by making Heathrow a world-class hub airport;
- ensuring accountability for the delivery of the benefits associated with capital spend over the lifetime of the investment;
- using expansion to close the gap between Heathrow's charges and those of its peers; and
- ensuring that growth and investment are not achieved at the expense of affordability, resilience or efficiency.

3.16 In broad terms these objectives also appear consistent with the approach we discuss below: in relation to efficiency, competition, and delivering benefits for consumers.

[34] Freshfields and Santander, "Funding an Expanded Heathrow", Page 5.

Our proposed framework for evaluating regulatory models

3.17 We note the proposed analytical approaches put forward by stakeholders and observe that some elements of them can be seen to reflect our duties under CAA12. We do not, however, consider that either of them fully reflects the scheme of the legislative framework under which the CAA is required to operate in carrying out its functions in relation to the economic regulation of airports under CAA12.

3.18 This section sets out the six elements of the analytical framework that we propose to use to assess the regulatory models. These are:

- Appropriate support for capacity expansion: the model is suitable to appropriately support the delivery of expansion and to avoid any undue delay and disruption;
- Costs: the model promotes efficiency and control of the costs of expansion, while delivering the benefits of expansion for consumers;
- Finance: the model supports the raising of sufficient finance to enable the delivery of expansion (including the costs of environmental mitigations) at an efficient price;
- Practicality: it is likely to be practical to implement the model in a timely way;
- Promotion of effective competition: the model promotes competition in the provision of airport operation services where appropriate and to deliver benefits to consumers; and
- Service quality: the model promotes an appropriate level of service quality, including improvements where appropriate.

3.19 This framework is explored in more detail below.

A. Appropriate support for capacity expansion: the model is suitable to appropriately support the delivery of expansion and to avoid delay and disruption

3.20 Expansion will require the delivery of very considerable new assets, including a new runway, taxiing and other facilities for aircraft, as well as new terminal capacity and ancillary and surface access infrastructure. Delivery of expansion will also require capex to mitigate the adverse environmental effects of expansion. Taken together, expansion would be a project of unusual scale and complexity.

3.21 We will seek to evaluate whether each model could be fit for purpose for the delivery of the scale, type and complexity of the expansion programme. We could assess the following questions, among others:

- Would the model support the delivery of the very significant capex required for the expansion of Heathrow airport and the associated benefits for consumers?
- Would development and implementation of the regulatory model have a significant negative impact on the timeliness of the physical delivery of capacity expansion?
- Would the regulatory model create a material risk to the operation of either the existing airport during construction, or the operation of the airport after completion of expansion, which does not appear to be capable of being mitigated?

B. Costs: the model promotes efficiency and control of the costs of expansion, while delivering the benefits of expansion for consumers

3.22 We will need to consider how capacity expansion affects the costs of airport operation services paid by consumers under different regulatory models.

3.23 This will require an assessment of the incremental operating and capital costs associated with expansion, including:

- design and preparatory activities;
- construction (including environmental mitigations); and
- ongoing operations.

3.24 Forecasting the impact of capacity expansion on the ongoing costs of operating the airport may be challenging given the uncertainties and the long forecast horizon. Therefore, we may not have the necessary information with which to distinguish between different regulatory models based on the impact on long-term operating costs.

3.25 We may also need to consider the mechanism by which costs incurred are passed through to consumers, although, for the evaluation, the appropriate practical approach may be to assume that all efficiently incurred costs would be passed through to consumers.

3.26 The assessment will also need to consider how a regulatory model could affect the likelihood of unexpected increases in costs, how these are managed and mitigated and the extent to which cost increases are passed on to consumers. For example, where parties are subject to weak cost incentives, or where there is limited ability to benchmark costs robustly, this could increase the likelihood of significant cost escalation.

3.27 We will seek to evaluate whether each model could be used to ensure that the capital costs of expansion are kept to an efficient level from the outset and that the risk of costs escalations is appropriately managed. We could assess the following questions, among others:

- Could the regulatory model be used effectively to identify an efficient baseline level of capital and other costs required to deliver expansion?
- Could the regulatory model provide incentives and, to the extent that is practical, protection against undue escalation in those costs during the course of delivery of expansion?
- Would the regulatory model be expected to have an impact on ongoing operating costs?

C. Finance: the model supports the raising of sufficient finance to enable the delivery of expansion at an efficient price

3.28 Supporting cost efficient access to capital markets is critical to ensuring that capacity expansion at Heathrow is successful. The very large investment programme will need to be funded by debt and equity investors that operate in globally competitive markets.

3.29 HAL will also need to ensure ongoing provision of airport operation services, and it seems unlikely to be in the consumer interest for the regulatory model to drive higher financing costs than necessary.

3.30 We will seek to evaluate whether each model would support the very considerable level of finance needed to deliver expansion (including environmental mitigations) at an efficient price so that financing costs are no higher than necessary. We could assess the following questions, among others:

- Would the regulatory model enable a notionally efficient airport operator and/or alternative providers access to sufficient debt and equity finance?
- Would the regulatory model allow for the allocation of different types of risk, including who would be best placed to manage these risks?
- Would the regulatory model enable the level of the risks to be borne by each party to be quantified with a reasonable degree of accuracy?
- Would the regulatory model enable the debt and equity finance required to be raised at an efficient cost that is no higher than necessary by supporting an efficient return, commensurate with the risks faced by the party raising the finance?

D. Practicality: it is likely to be practical to implement the model in a timely way

3.31 In order for a regulatory model to further the interests of consumers, it must be effective and practical to develop and apply the required interventions in a timely manner. A regulatory model that is unduly complicated, difficult to design or which would require a significant amount of time to implement could delay the realisation of the benefits of expansion for consumers.

3.32 For example, we would need to consider whether it is realistic to develop mechanisms for effectively monitoring and enforcing compliance with obligations placed on parties.

3.33 We will seek to evaluate whether each model is capable of being implemented in a timely and effective manner. We could assess the following questions, among others:

- Could the regulatory model be implemented by the CAA using its regulatory powers without causing undue delay to the delivery of expansion or a disproportionate level of disruption to HAL's business activities?
- Would implementation of the model be likely to require primary legislation and is the additional time likely to be proportionate to the additional benefits to consumers?

E. Promotion of effective competition: the model promotes competition in the provision of airport operation services where appropriate

3.34 Regulatory models which promote effective competition, where appropriate, could allow consumers to benefit from the effects of competition such as lower costs, more innovation and better quality and/or performance in the provision of airport operation services.

3.35 We will seek to evaluate whether each model is capable of being used to promote competition and how this would provide better outcomes for consumers. We could assess the following questions, among others:

- Could the regulatory model be used to promote competition in the provision of airport operation services?
- In doing so, could using the model lead to furthering the interests of consumers in relation to the range, availability, continuity, cost and quality of airport operation services?

F. Service quality: the model promotes an appropriate level of service quality including improvements where appropriate

3.36 Capacity expansion also needs to be delivered in a manner that will support the provision of an appropriate standard of service in the provision of airport operation services on an ongoing basis once the new capacity has been delivered. It will be necessary to consider how alternative regulatory models are likely to affect the passenger experience overall: for example, whether competing proposals for the design of a new terminal could reasonably be expected to result in improved outcomes in respect of metrics that consumers value.

3.37 We already have in place a set of incentives applied to measures of service quality that may be relevant in assessing the impact of alternative regulatory

models on the passenger experience. We will consider these incentives as part of this assessment. These include measures that are specified at a terminal level, which could be applied in the context of project-specific models applied to the development and operation of new terminal capacity.

3.38 We will seek to evaluate whether each model is capable of being used to promote an appropriate level of service quality both during and after the delivery of expansion. We could assess the following questions, among others:

- Could the regulatory model have a negative impact on the quality of service experienced by consumers at the airport during construction of new capacity?
- Could the regulatory model be used to promote appropriate service quality levels once new capacity has been delivered?

Approach to assessing the regulatory models

3.39 Our objective is to assess whether an alternative regulatory model is preferable, from the perspective of furthering the interests of consumers, to the existing model. Based on this assessment, we intend to identify a shortlist of regulatory models and recommendations for further consideration and consultation.

Using qualitative and quantitative assessments

3.40 To support an objective assessment of each regulatory model, the preferred approach would be to develop quantitative metrics for each element of the framework and then aggregate these into an overall score.

3.41 This is unlikely to be practicable for elements of the framework set out above where:

- the nature of the assessment required is based largely or wholly on judgement. For example, several of the questions on the practicality of regulatory models will require a qualitative assessment;
- data to assess a quantitative metric are not available or are highly uncertain. For example, the cost savings associated with the introduction of competition are not known and may be difficult to estimate ahead of implementation. For example, the benefits of a process of competitive bidding may not be fully clear until the bidding process has been undertaken and bids evaluated);
- metrics can be quantified but do not translate directly into an impact on the benefits for consumers. For example, it is not necessarily straightforward to assign a monetary value to the extent to which a regulatory model enables HAL to finance its functions; and
- the complexity means it would be disproportionate to assess a quantitative metric. For example, it is impractical to list all possible scenarios that would give rise to airport disruption and quantify their probability and impact.

3.42 Therefore, we will seek to use a combination of quantitative metrics and judgements supported by the available evidence to reach our overall assessment of the regulatory models using this framework.

Summarising our assessment

3.43 In Figure 8, we provide an illustration of a possible approach to summarising our assessment of each regulatory model.

Figure 8: Illustrative assessment

Source: CAA

Consideration of regulatory principles

3.44 Once we have assessed each of the models in the manner described above, it will be necessary to consider how each of the models performs against the principles of transparency, accountability, proportionality and consistency as well as that regulatory activities should be targeted only at cases where action is needed. We are required to consider these principles by CAA12 and we refer to these as the "principles".

3.45 The consideration of the principles logically follows the assessment of each model against the framework set out above. For example, whether action is needed and whether a particular intervention would be "proportionate" can only be considered once we know whether a particular model would have a significant

benefit: the bigger the benefit, the more likely that action is needed and that the required action would be proportionate.

3.46 This should allow us to establish a short-list of models and offer an initial view on whether there would be advantages in a single model or combination of models to best deliver the criteria and principles discussed above.

Questions for consultation

3.47 We welcome stakeholders' views on the proposed approach set out in this chapter and, in particular, on the evaluation framework and approach to assessment against it that we have identified. Specific areas on which we would welcome views are:

- our broad approach of using the framework set out above to assess alternative regulatory models;
- whether the proposed framework is complete and appropriately reflects our statutory duties; and
- our proposed use of qualitative assessment supported where practicable by quantitative analysis.

Chapter 4

Development of a long-list of regulatory models

Introduction

4.1 In this chapter, we set out a long-list of regulatory models that could be applied to Heathrow airport to ensure that the interests of consumers are appropriately protected. Our aim is to capture a broad set of models and avoid unduly excluding options that may be relevant. At this stage, we have not fully tested the legal or operational feasibility of all these models, which will follow as part of our evaluation of the options later in the process.

4.2 We define a regulatory model as an intervention that can govern the terms upon which airport operation services are provided at Heathrow, including (but not limited to) the delivery of capacity expansion. This includes how, and to what extent, costs will be passed through to consumers through airport charges. This could also extend to interventions with respect to the roles that different parties will play in delivering and operating infrastructure assets, for example, whether certain parts of the airport should be open to competition.

4.3 Our long-list has been developed based on:

- regulatory model precedents that have been highlighted to us by stakeholders;
- our own research of such models and relevant commercial arrangements that have been applied in the context of international airports and other UK regulated sectors; and
- alternative regulatory models we have considered from first principles.

4.4 In principle, some regulatory models may be mutually compatible and could be applied simultaneously. For example, a third party could be selected to design, build, own and operate a new asset, while we could also make changes to the capex governance framework applied to HAL's other activities. Some of the models would involve evolutionary changes to the existing regulatory arrangements, while others would involve more fundamental change.

4.5 The next section describes regulatory models that have been put forward by stakeholders to date. We then consider:

- variations of the current regulatory model, such as strengthened governance arrangements for capex and bespoke treatment of specific projects;
- interventions to facilitate competition in the delivery of infrastructure; and
- new frameworks for setting airport charges, such as through benchmarking.

4.6 A summary of the long-list of regulatory models that we are considering is provided in Figure 10.

Stakeholder views

Heathrow Reimagined

February 2025 submission[35]

4.7 Heathrow Reimagined called for an urgent and fundamental review of how HAL is regulated. It stated that:

- the current RAB-based model is not delivering the best outcomes for passengers and the wider economy, and that the CAA should consider whether the framework can be made more effective;
- HAL's plans for very high levels of capex in H8 risk embedding inefficiency and higher charges for decades; and
- the CAA's review should be broad in scope, completed quickly, and implemented ahead of HAL embarking on major new expenditure, and should consider:
  - whether and how the existing RAB model could be reformed;
  - alternative approaches used in other sectors and international airports (such as Changi Airport);
  - lessons from other regulated industries; and
  - greater use of competition to constrain costs and incentivise innovation.

June 2025 submission[36]

4.8 Heathrow Reimagined identified examples of options that CAA should consider as part of its review. It stated that any new framework should:

- unlock the benefits of competition to the fullest possible extent, by exposing as much of Heathrow's value chain as possible to competitive forces. This, it argued, would better align operator incentives with efficiency, innovation, and value for money, while also helping the CAA and stakeholders constrain HAL's residual market power; and

[35] Heathrow Reimagined (2025), "Fundamental Reform of Heathrow: Securing the right long-term model for passengers, airlines and the UK economy", February.

[36] Heathrow Reimagined (2025), "To comprehensively address the failings with the current model of economic regulation at Heathrow", June.

- materially strengthen regulation where competition is not feasible, through greater transparency of HAL's costs and RAB, bolstered CAA expertise and capacity, and a stronger role for stakeholders in governance and decision-making.

4.9 Heathrow Reimagined also provided examples of how the regulatory model could be improved at Heathrow. These included two principal options:

- A "Capital Investment Committee", involving:
  - the establishment of a new structure, potentially a HAL subsidiary or joint venture with airlines, to scope requirements, set budgets, and oversee tendering for major projects;
  - strengthening of stakeholder scrutiny, with the intention of reducing HAL's ability to inflate costs, and improve alignment with passenger and airline priorities; and
  - improved cost transparency, stronger benchmarking, and enhanced CAA resourcing and involvement. Heathrow Reimagined stressed the CAA must play a leadership and oversight role, setting expenditure envelopes and monitoring delivery.
- Competition in terminal development and operations, involving:
  - competitive tendering for terminal operations: new or existing terminals could be operated by third parties selected through open competition;
  - long-term leases for terminal operators: granting independent operators responsibility for development, financing, and day-to-day operation of terminals; and
  - structural separation of terminals from HAL's ownership: allowing for genuine competition between facilities, with airlines and passengers able to benefit from choice across terminals.

September 2025 submission[37]

4.10 Heathrow Reimagined provided additional supporting information regarding regulatory models, including further details on how tighter controls over HAL's capex could be introduced and how competition between terminals could work. These proposals covered:

[37] Heathrow Reimagined (2025), "Fundamental reform of Heathrow: Case for change: Presentation of why HAL's claims, arguments and commissioned reports should be disregarded", August (noting that the presentation was only provided to the CAA in September).

- its views that setting budgets at an appropriate level early in the process is important, and that HAL has an incentive to delay the provision of information. They noted that HAL tends to provide an excessive volume of information that complicates the assessment of budgets and deliverables;
- its view that a Capital Investment Committee should be chaired by the CAA and be credible and effective. They drew comparisons with governance approaches adopted in other sectors, including the water industry, banking regulation, and international airports; and
- explanations of how Heathrow's operations could be more modular, pointing to examples where integration across assets was not critical (such as British Airways' control of Terminal 5 gate assignment, independent de-icing and apron systems).

HAL

4.11 HAL set out its views in respect of the regulatory model in a number of documents, including its H8 Business Plan and supporting evidence, its Expansion Plan, and various consultant reports.

4.12 HAL's preferred approach is to build on the existing regulatory model. It stated that this regulatory model has successfully underpinned private financing of Heathrow to date and remains the most efficient way of financing large-scale expansion. At the same time, HAL highlighted that certain targeted adaptations are needed to the regulatory framework to reflect the scale, complexity, and risk profile of capacity expansion.[38] HAL stated that these are designed to complement, rather than replace, the existing framework and are informed by precedents from UK infrastructure regulation. They comprise:

- a 15-20-year, multi-control period capital governance and incentive framework, to ensure recovery of investment, provide consistency and reduce exposure to mid-programme regulatory change;
- a multi-control period commitment to the cost of capital, incorporating a risk-appropriate premium to reflect the profile of Heathrow's expansion;
- an updated capital governance model, aligned with best practice in major programme delivery, to drive cost control, accountability and efficient execution. For example, large expansion schemes, routine business-as-usual capex, and long payback investments (such as commercial property or environmental projects) may each benefit from different governance frameworks, rather than a "one size fits all" approach;

[38] HAL (2025), "Expanding Heathrow: Capacity, Connectivity And Growth", July, p79.

- five-yearly control periods to reflect changes in traffic, operating costs, commercial revenues and relevant capital forecast updates as per the regulatory model; and
- protection of recovery of early expenditure on the scheme in the event of termination or cessation.

4.13 HAL stated that these proposals are intended to provide investors with the clarity and confidence required to commit capital at scale and the core regulatory structure should remain largely unchanged.

4.14 It also commissioned a report by Santander and Freshfields[39] to review and evaluate potential funding models to privately finance the expansion programme at the most efficient cost. The models included were:

- **The current RAB model**, under which costs are recovered and regulated returns earned on a single asset base through airport charges set by the CAA. The expansion programme's capex would be delivered within the current regulatory framework;
- **A "Dual RAB" model**, where separate RABs are created for expansion and existing operations. The expansion programme's capex is undertaken by a separate corporate entity with its own RAB but owned by Heathrow's existing shareholders (and separated from its existing activities within its own regulatory ring fence). Airport charges would continue to be set by the CAA in respect of each RAB;
- **"Specified Infrastructure Project Regulations"**: Santander and Freshfields describe this model as being similar to a Dual RAB model, in that it isolates expansion programme's capex. However, the separate corporate entity is operated under its own distinct licence and owned and equity-funded by independent third-party shareholders outside of Heathrow's existing shareholder base;
- **"Direct Procurement for Customers"**: Santander and Freshfields described this model as enabling competitively tendered, third-party financing and delivery of large infrastructure projects. There would be no direct regulatory oversight of the DPC counterparty.
- **"Project Finance SPV"**: This model structures infrastructure delivery through a standalone Special Purpose Vehicle ("SPV") that raises non-recourse debt, with repayment tied to project cash flows.

[39] Freshfields and Santander (2025), "Funding An Expanded Heathrow", July.

- **Public-Private Partnership:** Under this model, a publicly awarded competitive tender is run to select a private party to design, build, operate, maintain and finance public infrastructure throughout a defined concession period. Costs are recovered through airport charges during operation, with performance mechanisms to adjust revenue and allow reasonable returns that are guaranteed by the government.

- **Large Airport Expansions (such as JFK, Riyadh):** Under this model, the expansion programme and related assets are undertaken outside of the existing regulatory ring fence and their costs are not recovered from current regulated airport charges. This could work, for example, by financing capacity expansion from the airport charges levied on the users of new airport capacity. Santander and Freshfields suggested that this separate revenue stream could be supplemented by public sector funding and risk sharing agreements if appropriate.

- **"Cap/Floor":** Santander and Freshfields referred to the mechanism that is applied in the UK interconnector market[40], under which prices and returns are bounded for customers and investors. It suggested that a similar mechanism could be applied to airport charges at Heathrow. Revenues from airport charges above the cap (for example, resulting from faster than expected growth in passenger numbers) could be returned to consumers through a reduction of future airport charges, and any shortfall in revenue from airport charges below the floor (for example, resulting from slower than expected growth in passenger numbers) could be remunerated. Santander and Freshfields have suggested that this remuneration could be provided from either public sector funding or higher future airport charges).

4.15 Santander and Freshfields concluded that a Single RAB model is the most suitable to privately finance an expanded Heathrow at the most efficient cost. It suggested that a Direct Procurement for Customers model for discrete, separable and non-core projects within the expansion programme (for example, certain rail and road programmes) could also be explored.

[40] Electricity interconnectors are high-voltage cables that connect the electricity systems of neighbouring countries. Certain interconnector operators recover their costs through "arbitrage" between electricity prices in different countries' electricity markets: that is, purchasing electricity in the market with lower prices and selling it to the market with higher prices. Ofgem has created a mechanism by which interconnector revenues are subject to a cap and floor price. Where revenue falls below the floor, the interconnector revenues are supplemented with payments funded by the electricity system operator and recovered from UK electricity consumers. Where revenue is above the cap, the interconnector is obliged to pay the electricity system operator the difference, which is then used to lower consumer bills.

Our assessment

4.16 Building on the views of stakeholders and our independent work on these matters, we set out below our long-list of potential regulatory models, categorised as follows:

- variations of the current regulatory framework;
- approaches to facilitate competition; and
- new frameworks for setting airport charges.

Variations of the current regulatory framework

4.17 This group of regulatory models involve incremental changes to the current regulatory model. They assume that:

- HAL is permitted to maintain a position where it retains control over the provision of all provisional airport operation services at Heathrow airport; and
- HAL is permitted to recover its efficiently incurred costs together with a reasonable return on its RAB.

4.18 We note that similar models are common within the UK infrastructure sector, particularly within the energy, water and rail sectors, where large investments are added to an existing RAB. The use of the RAB model can provide confidence to investors that the regulated company can recover efficient capital costs over time, together with a reasonable return on investment, which supports access to capital on a cost-effective basis.

4.19 For the purposes of this document, we set out the following possible adaptations of the current regulatory model:

- changes to the current capex governance framework;
- targeted adjustments to the existing incentive regime; and
- establishing a long-term regulatory framework.

Regulatory model 1: Changes to the current capex governance framework

4.20 The current capex governance framework involves a series of milestones for each programme[41] and project[42], where a decision is taken as to whether the

[41] HAL's capital governance handbook defines a programme as "*a unique, transient strategic endeavour undertaken to achieve beneficial change and incorporating a group of related projects and activities to deliver common/related outcomes and benefits aligned to Heathrow's strategic objectives.*"

[42] HAL's capital governance handbook defines a project as "*a unique, transient endeavour undertaken for the purpose of delivering one or more business outputs that are required to enable the achievement of one of more of a programme's outcomes.*"

programme or project is progressed further. For programmes, the milestones are:

- P1, where the programme is identified and its initial viability confirmed;
- P2, where the programme is defined (including the solution(s) adopted and organisation and management control structures;
- P3, where the projects are managed and delivered; and
- P4, where the projects are closed out.[43]

4.21 Airlines are consulted in the early stages as programmes are identified and defined.

4.22 There is then a separate set of six gateways for the individual projects that make up each programme:

- G2 – Options decision;
- G3 – Investment decision;
- G4 – Start on site;
- G5 – Ready for use;
- G6 – Transition complete; and
- G7 – Capex financial closure.[44]

4.23 While airlines are consulted as projects are initiated and options are identified and evaluated, G3 is a particularly important gateway. This is the point at which the preferred option is identified and the investment decision is confirmed, and progress beyond G3 usually requires agreement from HAL and airlines.

4.24 As part of the H7 control determination, we introduced a new system of *ex ante* capex efficiency incentives. The project description that is agreed at the G3 gateway now includes an agreed capex baseline and a set of Delivery Obligations that describe the output, quality and timescales within which the project will be delivered.

4.25 HAL then bears 25 per cent of any under or overspend compared with the capex baseline. This baseline can be adjusted either by agreement with airlines through a formal change control process. Where HAL fails to deliver the output, quality

[43] After passing through gateway P2 a programme will typically be split into several tranches, each of which will pass separately through gateways P3 and P4.

[44] The previous G0 and G1 gateways are now merged into a programme level development phase that precedes P2.

and timing set out in the Delivery Obligations, the allowance is adjusted downwards to reflect the non-delivery, and HAL bears a share of the resulting variance. There is comparatively less airline engagement for the gateways after G3, although G5 (ready for use) is another important milestone where it is confirmed whether HAL has met the Delivery Obligations.

4.26 The current governance framework has, to date, applied to investment under a two-runway configuration of the airport. A possible regulatory model could involve further strengthening this framework, both in relation to business-as-usual capex and in respect of bespoke arrangements for capacity expansion. As noted in our July 2025 Statement, such work could also inform (and be informed by) the work on capex governance and incentive arrangements that is part of the H8 price control review.[45]

Regulatory model 1a: Changes to the capex governance processes

4.27 As noted above, the current governance framework involves a significant level of scrutiny at gateway G3. However, there may be opportunities to strengthen the governance framework and level of scrutiny applied to programmes and projects generally.

4.28 An important set of potential changes would aim to provide greater scrutiny of the cost efficiency of HAL's proposals than is undertaken at present. This could, for example, include expanding the remit of the existing Independent Funds Surveyor to assess cost efficiency on a project-by-project basis. This could also be strengthened by putting in place an alternative third-party assessor with enhanced functions to arbitrate between HAL and airlines.

4.29 The timely availability of relevant information is also key to effective governance. If there is too little information, either because it is not available or it has not been requested, then the ability of stakeholders and their representatives to make effective contributions to the development of investment plans will be reduced. The same applies if too much information is received and this prevents key issues being identified simply because of the sheer volume of material to review. Options for assuring that there is an appropriate amount of information could include:

- clarifying the information that HAL is required to provide at different points in the process. In some cases, this could involve the further development of standardised information templates and/or guidance about how different issues (such as assessment of options, cost ranges, risk registers, and delivery strategy options) should be covered;

[45] See paragraph 28 of CAP 3144.

- providing for an enhanced expert independent assessment of information and evidential requirements. This would be intended to address the issue that the informational requirements are not always obvious, particularly at the early stages of a project or programme; and
- developing efficient escalation/enforcement procedures in instances where HAL does not comply with the requirements around timely information provision.

4.30 Other possible changes include strengthening our role and that of airlines. For example, at stages prior to gateway G3, HAL is currently required to consult airlines rather than obtain their agreement. We could consider requiring airline sign-off at additional early stages and/or allowing airlines to escalate issues for our review.

4.31 Among other things, these changes could help to ensure that we and the airlines are better able to review and challenge HAL's proposals at earlier stages of planning, which might reduce the risk of major design and cost decisions being "locked in" before they have been subject to robust challenge.

4.32 The provision of more relevant information at stages after G3 could also balance the effectiveness of the regulatory regime's *ex ante* incentives with the importance of ensuring that HAL is taking timely and reasonable steps to address any significant problems that arise during the delivery stage.

4.33 We also note that, as part of its representations on the H8 price control process, HAL has raised concerns that the current £1 million gateway threshold for Delivery Obligations captures a large volume of relatively small schemes. It suggested that a higher threshold could simplify processes and ensure regulatory scrutiny is focused on larger, more material projects.

4.34 A further consideration is whether the CAA could strengthen measures to enforce HAL's compliance with its obligation arising from the capex governance processes. In principle, these could extend beyond capex governance and be applied to broader outputs and standards under the price control. Such measures would need to considered carefully. For example, where specific measures have been introduced in other sectors, these have required primary legislation[46]. We would also need to consider possible unintended consequences in terms of investor confidence and potential "chilling effects"[47] on investment.

[46] For example, Ofwat's interventions regarding performance related pay were undertaken using new powers set out in the Water (Special Measures) Act 2025.

[47] A chilling effect on investment occurs when concerns regarding potential legal, regulatory, or political consequences makes investors hesitant to commit capital, even if the specific investment might be legal and sound.

4.35 Finally, we would emphasise that, in order for strengthened capex governance processes to be effective, it will be necessary for both HAL and Users to allocate the appropriate level of resources and expertise when engaging with these processes. Indeed, we consider that additional engagement with the current capex governance process could already materially improve its effectiveness.

Regulatory model 1b: Separating HAL's system planning function from its operational function

4.36 A more significant intervention would be to separate the function of determining which programmes and projects must be undertaken and when (which we refer to as "system planning") from the function of constructing, financing and operating those assets. There are similarities between this concept and the Capital Investment Committee proposed by Heathrow Reimagined. The rationale for doing so would be to address potential conflicts of interest arising from combining these functions, with the intention of ensuring that investment decisions are not unduly influenced by HAL's commercial interests.

4.37 There are various ways in which this might be achieved. One example would be functional separation within HAL's broader corporate structure. Under this approach, the system planning function would be separated from HAL's broader operations in terms of its staff, physical location, IT systems, reporting and governance. This would provide a clearer distinction between system planning and asset delivery/operation within HAL and would make scrutiny of HAL's system planning more straightforward for us and stakeholders.

4.38 A stronger form of separation would be to vest the system planning function into a separate legal entity, with the scope to transfer ownership to a third party. Where the separate entity was jointly owned by HAL and airport users, this could ensure that users are provided with the opportunity to influence system planning decisions. The separate entity could also be regulated and subject to financial or reputational incentives linked to the effectiveness of its system planning operations. An example of a separate system operator is the National Energy System Operator ("NESO"), summarised in Case Study 1 below.

4.39 A system planner could also undertake retrospective analysis of how effectively projects have delivered the benefits on which their business cases were based. This could be used to inform future business cases and broader investment planning.

4.40 It is important to note that a separation of any kind is likely to involve significant regulatory, legal and operational interventions, as shown in the case study below.

Case Study 1: National Energy System Operator

The UK's 2023 Energy Act set the legislative framework for an independent system planner and operator to help accelerate Great Britain's net zero energy transition, leading to the establishment of the NESO. NESO is responsible for planning, design and whole-system coordination of the national energy system (including electricity transmission and distribution, gas and nascent sectors such as hydrogen).

It is independent from regulated energy companies (such as National Grid or the Distribution Network Operators) and other market participants to avoid conflicts of interest when coordinating investments and system reform. NESO is a state-owned entity, unlike other market participants. With relatively minor exceptions[48], NESO does not own infrastructure assets in transmission or distribution. This allows it to take an independent view of the energy system. It is subject to regulatory oversight from Ofgem that sets its objectives, incentives and performance targets.

NESO was formed by transferring various functions relating to system design and operation out of National Grid plc which formerly performed asset ownership, system design and system operation roles for gas and electricity. There was a long lead time (six years) between concept development and the point at which it became operational in 2024. Reasons for this included:

- Creating a new legal entity with defined statutory duties required new legislation (the Energy Security Bill) and changes to existing licences, codes, and regulatory frameworks.[49]
- The need for extensive consultation by Ofgem on developing the regulatory framework for NESO, which involved input from multiple stakeholders including other system operators and industry participants.[50]
- Complexity in respect of accounting and valuation resulting from transferring the Electricity System Operator into public ownership.[51,52]

Parallels could potentially be drawn with developing a system operator responsible for the strategic design and coordination of capacity expansion at Heathrow. An independent system operator at Heathrow could deliver similar benefits to NESO in terms of being independent of commercial interests and enabling coordination between multiple stakeholders. On the other hand, the creation of an independent system operator would involve challenges in terms of the time required, and complexity involved.

Regulatory model 2: Targeted adjustments to the existing incentive regime

4.41 This regulatory model would be focussed on amending the current system of capital incentives such that it could reflect the characteristics of specific projects and programmes. This could involve adjusting the proportion of cost under and overspends that HAL bears (currently 25 per cent). Options could include:

- a differentiated set of incentives, so that HAL bears a different share of cost under- or overspends on certain parts of the expansion programme. For example, where costs and/or timescales are particularly difficult to forecast or control, a lower incentive rate might be appropriate[53]. Conversely, a higher incentive rate might be appropriate where there is a high degree of confidence in forecasts, or the consequences of cost escalation could be particularly serious; and
- we could consider limiting HAL's exposure to extreme cost overruns that may undermine its access to debt and equity finance[54]. Measures to mitigate such extreme outcomes were applied in the context of Thames Tideway Tunnel, to ensure that the infrastructure provider had cost efficient access to capital. This could include, for example, a cap on the total cost overrun that HAL should be expected to bear, or a weakening of incentive rates once cost overruns have reached a certain level.

4.42 The way that *ex ante* incentives are implemented within the current governance framework could also be amended. This could include changes such as:

- enabling cost allowances and Delivery Obligations for some projects to be agreed in stages rather than at a single point in time (that is, at G3). Where projects are complex or the solution is novel or untested, allowing for refinement of forecasts at a later stage could avoid unnecessary delays or having to finalise cost allowances/Delivery Obligations before the necessary information becomes available; and/or
- introducing further possible adjustments to previously agreed cost allowances (in addition to the current change control process). This would aim to reduce HAL's exposure to cost risks that are outside of its control, and could include mechanistic adjustments, such as the use of specific cost indices, or more general provisions that allow cost allowances to be reopened in specific circumstances.

[48] Such as the national electricity control room.

[49] National Grid: Separating the ESO from National Grid plc.

[50] Consultation on the policy direction for the Future System Operator's regulatory framework | Ofgem

[51] p221, download

[52] Funding National Grid's consequential costs from the separation of the Electricity System Operator | Ofgem

[53] In extreme cases, where costs cannot be estimated robustly upfront or these lie largely outside of HAL's control, it might be appropriate to disapply *ex ante* incentives altogether and rely exclusively on *ex post* evaluation.

[54] The concern being that exposure to extreme outcomes can foreclose access to debt and equity capital, regardless of the returns available.

Regulatory model 3: Longer-term regulatory framework for expansion

4.43 This regulatory model aligns to HAL's proposal for a multi-period commitment in respect of certain elements of the price control.

4.44 The likely scale of HAL's future capital programme (regardless of whether expansion takes place) means that there are benefits from providing comfort to investors that the regulatory framework will not be inappropriately amended once capital has been committed. Providing this comfort could serve to reduce the level of return necessary to compensate investors for risk, with correspondingly lower costs being passed on to consumers. However, a regulatory model involving less frequent redeterminations could also expose investors to increased forecasting error. Investors may then require greater compensation for bearing this risk, which could increase the costs to consumers. There is some evidence to suggest that longer price controls are associated with lower perceptions of risk overall: for example, equity analysts have reacted positively to the prospect of a lengthening of the price control to up to 10 years in the context of Paris Charles de Gaulle airport.[55]

4.45 There are two broad means by which we could commit to a longer-term framework in respect to some or all aspects of HAL's price control:

- a formal lengthening of the HAL price control through the licence: this would require a longer-term determination for both business-as-usual and expansion related activities, assuming that HAL would retain a single price control. This could potentially include an intention to conduct a focused mid-period review if required; and

- a published policy statement without a formal lengthening of the price control through the licence. These policy commitments would guide, but could not fetter, our discretion in making future price control determinations.

4.46 The latter may enable a set of more targeted options in terms of the specific elements of the price control in respect of which longer-term commitments could be made. Policy commitments could also be made in respect of the price control as a whole (that is, including both expansion and business-as-usual assets):

- **WACC**: we could commit to the application of a specific method or numerical value for estimating a WACC to be applied to the single RAB;

- **Profiling**: we could indicate our intention to adhere to a specified profile of charges spanning several price control periods; and

[55] See, for example, Barclays (2025), "Reasonable Paris trading, FX and tax weigh as warned", July 31st, which states that "*we welcome the parth towards a long-term, up to ten-year, regulatory agreement*".

- **Capital governance**: we could indicate our intention to retain a consistent approach to capital governance across multiple price control periods. For example, we would indicate that we would not amend the treatment (for example, in terms of budgets, Delivery Obligations and incentives) of specific capital programmes or projects once these are underway.

4.47 Alternatively, we could make policy commitments in respect of the treatment of expansion assets specifically:

- **WACC**: we could commit to the application of a specific methodology or numerical value for estimating the WACC to be applied to expansion assets; and

- **Capital governance**: as above, we could indicate our intention to retain a consistent approach to capital governance across multiple price controls for expansion programmes and projects. We could potentially leave open the possibility of amending the capital governance framework for business-as-usual programmes and projects.

Interventions to facilitate competition in the delivery of infrastructure

4.48 Regulatory Models 4-8 consider how we could require HAL to involve third parties in the development and/or operation of airport assets to strengthen incentives for efficiency and value for money, rather than relying solely on regulatory price control determinations to set incentives allowances for efficient costs.

4.49 Competition can benefit consumers by reducing costs and improving service quality. It can create incentives for bidders to put forward their best possible proposals, as inefficient bids risk being displaced by those that better meet the required specification.[56]

4.50 For competition to deliver benefits to consumers, it is likely that at least the following four conditions must be satisfied:

- there must be a realistic prospect of multiple parties submitting tenders;

- the procuring entity should have a clear view of what it is seeking to procure, and this should be clearly reflected in the bid specifications;

[56] CAA intervention on HAL's charging/settlement arrangements (for example, ring-fencing costs and revenues, terminal-level performance incentives, limits on cross-subsidy, transparent reporting) may be required to ensure cost efficiencies are passed onto consumers and not internalised by HAL.

- the asset/activity that is subject to competition must be reasonably separable from other assets/activities, such that clear boundaries can be drawn in terms of allocating risks, responsibilities and obligations (and clear and robust arrangements can be put in place to manage "interface" issues where the parties' interests interact); and
- effective mechanisms must be put in place to ensure compliance with the terms of the bid specifications.

4.51 Each of these requirements presents challenges in the context of airport infrastructure, and the extent to which facilitating competition is likely to further the interests of consumers will depend on the project characteristics:

- where assets are large, complex and bespoke, there may be limitations on the number of parties that have the expertise, supply chain and risk appetite necessary to deliver the project and hence are willing to submit a bid. For example, this challenge was encountered in the context of the water sector Haweswater Aqueduct Resilience Programme project, where there were a limited number of interested suppliers, and no UK firms were willing to bid for the project;
- where assets are small in scale, the costs and risks of facilitating competition may outweigh the benefits of doing so;
- the specifications for some assets/activities may be difficult to define fully; and
- some assets/activities may be highly integrated within the broader asset portfolio, which can render clear allocation of risks, responsibilities and obligations (and/or appropriate contractual arrangements intended to manage these) difficult and/or costly.

4.52 The existence of numerous precedents where airport operators have entered into agreements with third parties for the delivery and/or operation of airport infrastructure implies that these challenges can be surmounted where all parties work together to achieve a successful outcome. We note that Heathrow Reimagined has cited examples of airports in the United States that have implemented similar arrangements: particularly, New York JFK[57] and Hartsfield-Jackson Atlanta International Airport.

4.53 We note that there are a range of project-specific models that HAL could implement itself without the need for regulatory intervention. Regardless of the regulatory model that we ultimately choose to adopt, we expect HAL to

[57] We note in Case Study 2, that there have been issues regarding quality of service at JFK that may relate to the involvement of multiple parties in delivering and operating airport infrastructure.

demonstrate that it has given serious consideration to such options in its ongoing capacity expansion planning.

4.54 In the approaches below, we differentiate between models where HAL remains the asset owner and licence holder, and those where a third party assumes ownership of assets.

Approaches to facilitate competition under HAL's ownership

4.55 Under these models, a third party would undertake activities as a contractor to HAL, with HAL retaining ownership of the underlying assets, and retaining overall responsibility of the airport in an integrated fashion. Competition would then be facilitated through one of two mechanisms:

- **Competition for contracts**: third parties would bid to design, build and/or operate discrete assets under contract to HAL, with competitive tendering helping to reveal efficient costs and innovative approaches; and
- **Comparative competition**: once appointed to deliver and operate services and assets, the cost and service quality performance of the third party could be used to benchmark similar assets delivered and operated by HAL. This could provide better information regarding efficient costs and service quality levels against which to set budgets, Delivery Obligations and other price control parameters.

4.56 We consider two regulatory models within this category:

- Regulatory model 4: mandate procurement with oversight; and
- Regulatory model 5: competition for delivery and operation.

Regulatory model 4: CAA oversight/mandate of procurement

4.57 This model would increase the role of competition in the design and/or build of infrastructure assets. The focus would be on competitive procurement and delivery rather than day-to-day operations. The latter is covered separately under Model 5. We consider two model variants:

- Enhanced scrutiny and regulatory obligations in respect of HAL's approach to procurement; and
- Mandated Design and Build contracts.

Regulatory model 4a: enhanced scrutiny of HAL's approach to procurement

4.58 Under this model, HAL retains primary responsibility for its approach to procurement, but we would exercise oversight. This would not preclude the delivery of projects through existing resources and contractual arrangements, but would provide greater comfort that there was competitive tendering for some or all elements of the design and build where appropriate.

4.59 We would review HAL's procurement strategy, monitor major tenders, and provide observations or require justification where we considered that competition had not been used effectively. The emphasis would be on transparency and assurance that HAL is pursuing efficient, value-for-money outcomes.

Regulatory model 4b: mandated design and build contracts

4.60 Under this variant, we would require HAL to procure certain assets through one or more design and build contracts. This would oblige HAL to tender competitively for the combined design and construction of packages of works that we or an independent capital governance process would specify. HAL would let and manage these contracts, but the defining feature of this model is that there would be regulatory oversight over what activities would be outsourced.

4.61 This approach could involve the CAA setting licence conditions or guidance that require HAL to adopt design and build procurement for particular projects or categories of works. HAL would retain ownership, financing, and operational responsibility throughout, and would bear ultimate responsibility for managing and coordinating its contractors. Case Study 2 provides examples of third party involvement in the design and construction of infrastructure assets.

Case Study 2: Third party involvement in the design and construction of infrastructure assets

US airports

A design and build approach has been used for several airport terminals including Istanbul New Airport, La Guardia Airport, Newark Liberty International airport and Changi Airport. These design and build contracts historically have taken approximately three to four years for completion with a minimum of around two years and a maximum of five.

This approach has typically involved sponsor-led implementation that has been chosen by the airport, though there are examples where it was also a consequence of the contract framework set by a public authority (for example, the Turkish government decided the delivery model for Istanbul New Airport).

Heathrow airport

For both Heathrow Terminal 5 and Terminal 2, design was procured separately from construction. Terminal 5 was procured on a standalone design contract consulted on with multiple stakeholders, with a multi-package procurement approach for construction of 147 sub-projects.[58] Terminal 2 involved a hybrid delivery model where there was a master design only contract alongside multiple design and build contracts for major packages such as the Terminal 2 terminal building, energy centre and a satellite building.

Regulatory model 5: Contract for delivery and operation

4.62 Under this model, HAL would tender contracts for the operation of airport assets. The third party would then undertake day-to-day operations as a contractor to HAL and would be paid a fee by HAL under the terms of the contract, for example through availability payments or performance-linked fees. These would be recovered from consumers through airport charges. HAL would remain the owner of the assets and retain overall responsibility for operating the airport in an integrated fashion. Consumers would benefit from competition from third parties putting forward bids reflecting their lowest possible costs and/or highest possible service quality terms.

4.63 We consider two model variants:

- Under Model 5a, the third party would only operate the asset; and
- Under Model 5b, the third party would undertake both design and construction, and day-to-day operations.

[58] Terminal 5, Heathrow Airport – Transport – Projects – RSHP

Regulatory model 5a: Operation (management contract)

4.64 Under this model variant, HAL would retain ownership and, typically, the design and build role, but would outsource day-to-day operations of an asset to a third party under a competitively tendered management contract.

4.65 We could require HAL to benchmark operations through contracted-out management, or approve management contracts as part of its capex/opex plans. HAL would remain financially responsible for the asset and would continue to bear revenue risk. Implementation may be complex for legacy assets where IT, shared services, or security systems are heavily integrated across Heathrow Airport, creating uncertainty regarding the boundary between HAL's responsibilities and those of the operator. An example of a management contract is the rail franchise system in the UK summarised in Case Study 3 below.

Case Study 3: Third party operation of major infrastructure

Rail franchises

There are UK rail franchises that are based on operation-only models, with local transport government bodies retaining fare revenues and owning the service design whilst private operators are paid to operate the train service.

This includes London Overground and the Elizabeth line which operate on concession agreements with operators, with Transport for London retaining all revenue risk. A competitive tender process is run to select an operator, with successful bidders remunerated a fixed fee, adjusted for performance incentives and penalties against defined service performance agreements.[59,60] Key performance metrics include punctuality, reliability and customer satisfaction.

These operation-only models result in lower commercial risk for operators overall, as they do not bear revenue risk fluctuations or significant capital costs.

Typical evaluation criteria used to assess bids include technical capabilities in operating rail services, financial stability, proposals for innovation and delivering social value.

Regulatory model 5b: design, build and operate

4.66 This model variant represents a more extensive form of third-party involvement. A competitively procured partner would be responsible for designing, building, and operating a new asset, on HAL's behalf and within a contractual structure.

4.67 This model variant essentially combines a mandated design and build contract (as set out in Regulatory model 4b) with a management contract (as set out in Regulatory model 5a). The benefit of doing so is that the contractor would have a

[59] London overground train operating concession- board-160317-item16-lo-op-p1.pdf

[60] Elizabeth line Train Operating Concession Extension - Committee - Panels- Report Template

greater incentive to ensure that the design and build was fit for purpose, since it would then be exposed to the operational risk associated with providing services under the management contract.

4.68 An example of a design, build, operate contract along these lines is the Direct Procurement for Customers framework applied by Ofwat, summarised in Case Study 4 below.

Case Study 4: Competition for delivery and operation (including Design, Build, Operate)

Direct Procurement for Customers ("DPC")

Ofwat's DPC framework involves water or wastewater companies competitively tendering for the delivery of certain major projects by a third-party to design, build, finance, operate and maintain infrastructure.

DPC was initially introduced in the PR19 price control review. In the PR24 price review methodology, Ofwat set out an expectation that companies would consider using DPC for each project put forward in their business plan, and challenged companies where they had not done so.

There are three stages under the DPC process:

- designation of a project, where Ofwat issues a statement that a company is required to deliver a project through DPC;
- the company undertakes a procurement exercise and draws up a proposed contract to be entered into with the successful bidder; and
- Ofwat approves the contract, and sets an allowed revenue entitlement for the company to be recovered over the life of the project.

Notably, the successful bidder is not subject to a licence. As such, DPC did not require primary legislation to implement.

To be eligible for designation as a DPC project, the project must meet a minimum size threshold and a discreteness test, which sets a minimum threshold regarding the extent to which the project is separate from the incumbent company's existing network.

There has only been a single project that is being delivered through DPC (the HARP aqueduct). However, numerous projects have been identified in companies' PR24 (price review 2025-2030) business plans that may be delivered under this framework.

Approaches to facilitate competition under third-party ownership

4.69 In this section, we discuss additional regulatory models that we might apply on the assumption that a third party is permitted and able to own specific assets at Heathrow airport.

4.70 Similar to model 5b discussed above, for all models within this group, arrangements would need to be put in place to co-ordinate delivery activities between the third party and HAL (or other third parties) and to avoid any disruption to the operation of the existing airport. We may need to have a role in developing and implementing these arrangements, either overseeing co-ordination ourselves or ensuring that other parties are able to carry out this role.

Regulatory model 6: Third party builds assets, then transfers ownership to HAL

4.71 Under this model, a third party designs, finances, and builds a new asset, but transfers it to HAL upon completion. HAL becomes the long-term owner and operator, with the asset entering HAL's RAB. This model is similar to but separate from model 4b discussed above.

4.72 To facilitate this model, there would need to be appropriate arrangements to review the quality and specification of the asset being handed over, and to ensure subsequent responsibilities (for example if any faults arise) are clearly articulated.

4.73 An important question under this model is how the price that HAL pays the third party for the assets (and is then added to HAL's RAB) would be determined. Some broad options include:

- **A price determined before construction**: The terms on which the asset would transfer to HAL could be agreed upfront as part of the process by which the third party assumes ownership over the relevant assets: for example, as part of the planning process. This could be a fixed price or reflect some form of risk-sharing mechanism, for example based on actual outturn costs.

- **A price determined after construction**: Under this approach, the CAA or another authority would directly determine the transfer price, for example based on an assessment of efficient costs incurred. This would require the CAA to have the power to require the third party to transfer the assets to HAL on these terms: for example, in a similar manner to how Ofgem can require offshore generators to transfer ownership of transmission assets to Offshore Transmission Owners[61].

[61] Under the offshore transmission owner regime, owners of transmission assets must be separate from the owners of generation assets in accordance with UK and EU law. Windfarm developers construct the transmission assets but are then obliged to transfer these to a separate owner. Ofgem runs competitive tenders to appoint a party to own and operate the transmission assets and the successful bidder is granted an economic licence. The winning bidder acquires the assets from the offshore wind farm developer, post-construction, for a pre-agreed transfer value. The new owner must then operate and maintain the assets for the licence period, in exchange for an availability-based revenue stream (with performance incentives and penalties).

Regulatory model 7: Third party continues to own and operate assets

4.74 In this model, the third party not only designs, finances, and builds the asset, but also retains ownership and operates the asset. We consider two variants of this model. Under the first, the third part acts as an upstream supplier to HAL. Under the second, it competes directly with HAL's provision of services.

Regulatory model 7a: Upstream supplier model

4.75 Under this model variant, the third party would operate the asset, and recover its required revenues through a charge to HAL. In effect, the third party would act as a provider of services that would be an input into the overall airport operation services. We could modify HAL's licence to require HAL to pay the charge, which it would then be permitted to recover through airport charges levied on users.

4.76 We would generally expect that the third party would be appointed through a competitive process where parties submit bids in respect of the charges they would levy, with the successful bidder being chosen based on the lowest bid charge. The charge would then be based on the outcome of this process. Consideration would need to be given to the period over which the bid charges would apply. Where these are for a limited term, consideration would need to be given regarding what would happen once this term expires. It may be necessary for us to carry out a market power determination at this stage. Where this revealed that the third party possessed significant market power, we may need to intervene to limit the charges that the third party could subsequently levy.

4.77 Some of the legal considerations relating to such a situation are discussed in the Technical Information note that the CAA published in 2018 when it last considered this issue.[62]

4.78 An example of a precedent where a third party independently owns infrastructure assets and acts as a provider of upstream services is the CATO model proposed by Ofgem and summarised in Case Study 5 below.

[62] https://www.caa.co.uk/media/xyhdcu4b/technicalinformationnote-heathrowcapacityexpansion.pdf.

Case Study 5: Third party upstream supplier under separate ownership and licence

Competitively Appointed Transmission Owners ("CATOs")

CATOs are a proposed delivery model being developed by Ofgem for new, onshore transmission projects. It involves a competition to determine a solution to a need on the network that is run before detailed design of the preferred solution has been carried out. The CATO framework is expected to be launched in 2026.

Currently, onshore transmission works are exclusively carried out by or on behalf of three regional Transmission Owners. The new framework would allow an appointed private company (the CATO) to design, build, finance and operate new transmission infrastructure.

For new onshore transmission projects to qualify under the CATO framework they must be:

1) New: not involving upgrading or replacing existing licensee's assets;
2) Separable: clearly delineated from the existing transmission assets; and
3) Significant: being of sufficient scale to justify the cost of the tender process.

More than 20% of new onshore transmission projects are expected to be undertaken under the CATO framework. The UK Government has stated that allowing for onshore competition could drive consumer savings of up to £1 billion by 2050.[63]

Primary legislation was required to give effect to the CATO framework. Attempts to introduce the required legislation were made in two previous bills that were not ultimately passed. Ofgem first proposed an approach for a CATO regime in 2016. This is notable in the context of capacity extension, as progressing a similar approach might require further primary legislation along with significant changes to the current regulatory framework that is underpinned by HAL's economic licence.

Regulatory model 7b: Direct competition for airport operation services

4.79 Under this model variant, the third party would directly provide services to and recover its required revenues from users. In doing so, it would compete directly with HAL's own provision of services to users, who would be able to choose between using the third party's or HAL's services.

4.80 Competition between the third party and HAL, would expose HAL to competitive pressure in respect of the services being provided: HAL would have an incentive to constrain its costs and improve its service quality to retain or attract users, which would directly benefit consumers. It would also potentially provide us with

[63] https://www.gov.uk/government/publications/energy-security-bill-factsheets/energy-security-bill-factsheet-competition-in-onshore-electricity-networks

additional information regarding efficient costs elsewhere within HAL's operating cost base.

4.81 To facilitate this model variant, HAL would be required to develop and price a wholesale product for airport operations that would be necessary for the third party to offer a complete service to users. HAL would be obliged to offer these services to the third party and we would regulate the wholesale cost. This would require us to determine, monitor and enforce the allocation of costs between the competed services and the wholesale service, as HAL may have an incentive to allocate costs to the latter. We may also need to apply a non-discrimination requirement, so that the cost of the wholesale services provided to HAL's own downstream assets is no lower than that charged to the third party.

4.82 Further, we may need to carry out market power determinations to ascertain the extent of competition between the third party and HAL.

4.83 Examples of inter-asset competition are independent terminal ownership at JFK International Airport, and independent cargo operations at Hong Kong International Airport summarised in Case Study 6 below.

Case Study 6: Inter-asset competition

JFK International Airport

The John F. Kennedy ("JFK") International airport operates under a public ownership model with private sector participation through terminal leasing. The airport itself is owned by The Port Authority of New York and New Jersey ("PANYNJ") who oversees JFK's operations and infrastructure, though multiple terminals have or will be privately financed, built and operated under long-term leases[64] (Terminal 1- consortium of international airlines, Terminal 4 – JFKIAT private airport terminal operator, Terminal 5 – JetBlue airline).[65,66,67]

As JFK airport is both owned and regulated by PANYNJ, it is not subject to economic regulation in the same manner as HAL. Ownership of the airport as a whole allows for coordinated long-term planning by the Port Authority, while the long-term lease model in respect of individual terminals transfers financial and operating risks to private developers. The model facilitates a degree of competition, as terminal operators are awarded leases based on the quality of their bids. It also involves competition in the market as operators compete to attract airlines and passengers, though this is limited by long-term contracts between airlines and terminals that make switching less feasible.

Service quality at JFK has historically been criticised when compared to global peers, ranking poorly in Skytrax World Airport Awards and often falling outside the top 50 globally.[68] Reasons for this include passenger congestion and a lack of cohesion between terminals when being run by different operators. This has, in part, led to PANYNJ prioritising modernisation and unified planning under the JFK Vision Plan.[69]

[64] For example, the lease for the New Terminal One will run until 2060.

[65] Terminal 1

[66] About T4 | JFK Terminal 4

[67] JFK Airport Terminals I The New York Airport Terminals

[68] In the 2024 Skytrax World Airport Awards, Heathrow airport was ranked 21st globally whereas JFK was 93rd in the list. World's Top 100 Airports 2024 | SKYTRAX

[69] JFK Rebuild

Hong Kong International Airport ("HKIA") cargo hub competition

HKIA is an example of inter-asset competition within its cargo sector. The Airport Authority Hong Kong awards franchises for cargo terminals to different operators, and airlines can choose which provider to use.[70] This creates direct competition for airline cargo handling services. Notable examples include[71]:

- Hong Kong Air Cargo Terminals Limited, which operates SuperTerminal 1, the world's largest single automated air cargo terminal;
- Cathay Pacific Services Ltd, which operates the Cathay Cargo Terminal; and
- Asia Airfreight Terminal, another dedicated air cargo terminal operator at HKIA.

This model of multiple independent operators is intended to facilitate an environment that can drive efficiency and innovation in cargo services. The operators compete directly to attract airlines by offering:

- Competitive pricing: airlines can choose the terminal that offers the most favourable rates for handling and storing their cargo; and
- Value-added services: operators can differentiate themselves by providing a range of services beyond basic handling, advanced tracking systems, and expedited processing for time-sensitive shipments.

Regulatory model 8: Transfer of ownership and operation of an existing asset

4.84 Under this model, HAL would be required to transfer ownership and operation of an existing asset to a third party. Since the asset would already be built, the scope of the third party's activities would be the operation and maintenance of the asset only, as under Regulatory model 5a. As under Regulatory model 7, the third party could act either as an upstream supplier to HAL, or directly compete with HAL in the provision of services to users.

4.85 Challenges in respect of determining the boundaries of roles and responsibilities between the third party and HAL are likely to be particularly acute in this model. This is because existing assets are unlikely to have been designed in a modular fashion and may be more highly integrated into the overall operation of the airport.

New frameworks for setting airport charges

4.86 This group of regulatory models involves developing alternative approaches to setting maximum allowed airport charges.

[70] https://www.hactl.com/en/media/news-press/latest-news/hactl-appointed-by-starlux-airlines-for-cargo-handling-of-new-hong-kong-flights/

[71] https://www.hongkongairport.com/en/the-airport/air-cargo/infrastructure-facilities.page

Regulatory model 9: New frameworks for setting airport charges

4.87 We have identified three variants of this regulatory model, which are discussed in turn below:

- price benchmarking;
- long-run incremental costs ("LRIC"); and
- "lighter touch" regulation.

Regulatory model 9a: Price benchmarking

4.88 An alternative means of setting maximum allowed charges for the airport as a whole is to do so with reference to the charges levied by comparable airports globally. This has the advantage of ensuring that charges remain competitive with comparable airports.

4.89 However, the level of charges at other airports may be influenced by different factors and circumstances. This means that charges may not be directly related to efficient costs, meaning that HAL may earn a return that is substantially above or below its cost of capital. This is an important disadvantage of this approach.

4.90 If returns were systemically above HAL's cost of capital, this is likely to be incompatible with protecting the interests of consumers. Where it is below the cost of capital, this is likely to be incompatible with ensuring that HAL is able to finance its functions in the absence of sufficient public funding to address any shortfall relative to efficiently-incurred costs. Moreover, a situation where HAL is unable to raise debt and equity finance to fund needed investment at a reasonable cost is unlikely to be in the interests of consumers.

4.91 We note that stakeholders have referred to the precedent of Changi airport as an example of where price benchmarking has been used to set airport charges. We make two observations in respect of this precedent:

- while price benchmarking is used as an input into the determination of maximum allowed charges at Changi airport, the latter are not set mechanistically with respect to price benchmarks. Other factors are also considered, including recovery of efficient costs; and
- where it is determined that Changi airport would be unable to recover its efficient costs, it is able to request public funding to address the shortfall. We understand that this has been forthcoming in various contexts, as set out in Case Study 7.

Case Study 7: Price benchmarking

Changi Airport

Singapore's Changi Airport is the primary international airport that serves the country of Singapore. Like Heathrow, it is a major hub airport.

The charges that Changi Airport are permitted to levy on airlines operating at the airport are subject to maximum allowed levels determined by the Civil Aviation Authority of Singapore.

Until 2018, the maximum allowed charges at Changi Airport were determined in a similar manner to how the UK CAA determines maximum allowed charges for Heathrow: based on the recovery of efficient costs together with a return on the RAB. In 2018, the Civil Aviation Authority of Singapore moved away from a RAB-based approach to setting maximum allowed charges in favour of a price path that is negotiated with airlines.

We understand that this price path is not directly based on benchmarking of charges with reference to other airports. However, charges levied by other airports are closely monitored and represent an input into the price setting process.

Changi Airport is expected to manage its costs within the negotiated price path. Where this is not possible, Changi Airport can submit a proposal for public funding, though substantial public funding has only been required to date during the pandemic period.

The funding of major capital projects appears to be determined on a case-by-case basis. For example, we understand that the bulk of capital costs for the construction of Terminal 5 will be financed through public funds, with a smaller proportion funded by Changi Airport. Debt issued by Changi Airport to fund the new terminal construction will also benefit from a government guarantee.

Once the terminal is built, the cost of ongoing operations is intended to be funded through airport charges

4.92 We are not aware of any other examples of where price benchmarking has been directly used to set maximum allowed charges.

Regulatory model 9b: LRIC

4.93 Under the LRIC approach to setting maximum allowed charges, charges are set by reference to the forward-looking cost associated with providing an additional increment of output. This approach seeks to mimic pricing in competitive markets and, hence, create "correct" pricing signals, for example, in determining whether new entrants should seek access to an incumbent's existing assets, or seek to build their own assets.

4.94 A LRIC approach was also considered in the context of the Competition Commission report in respect of the Q5 price control review[72]. The Commission noted this LRIC approach could result in prices that are closer to the long-run competitive level compared with a RAB approach. This would provide appropriate signals to the market for efficient entry, investment and innovation. However, the Commission noted several drawbacks to the application of a LRIC approach, including challenges associated with determining the appropriate increment, and establishing both reliable long-term forecasts and an accurate estimate of the efficient level of capex. The Commission also highlighted challenges associated with regulatory consistency associated with moving from a RAB approach to a LRIC approach.

4.95 The CAA has also considered LRIC as a potential cost-based reference point for airport charges but has not pursued this approach[73]. Challenges included the reliance on regulatory judgement to define incremental costs, the difficulty of aligning long-term measures with recovery of historic costs, and the scale and "lumpiness" of airport investments, which make LRIC an unreliable proxy for competitive prices.

Regulatory model 9c: "Lighter touch" regulation

4.96 Lighter touch regulation is an approach where the regulator allows the airport operator more freedom to set prices and manage operations, where emphasis is placed on market discipline rather than retailed regulatory intervention.

4.97 This may involve relying more on commercial agreements and voluntary commitments instead of more detailed price controls that set maximum charges. It typically involves no formal price cap with the regulated entity publishing a set of non-binding commitments covering charges, service quality and investment plans. This allows the regulated entity more flexibility in responding to market conditions, with the regulator retaining monitoring and enforcement powers.

4.98 However, this approach is likely to mean reduced scrutiny over costs and charges by the regulator, which could considerably weaken incentives for cost efficiency if the airport has sufficient market power it can excise.

4.99 An example of a lighter-touch regulatory model is the commitments framework approach used at Gatwick Airport since 2014, where the airport makes publicly stated commitments on charges, investment and service quality, instead of more direct intervention from the regulator. Gatwick Airport Limited ("GAL") does not

[72] Competition Commission (2008), "Stansted Airport Ltd: Q5 price control review", Appendix C, paragraphs 45-60.

[73] CAP1030, paragraphs 3.30-3.38.

have a RAB and therefore there is no direct link between investment and the future level of charges. Case Study 8 below sets out further detail.

Figure 9: "Lighter Touch" Regulation

Precedent: Gatwick Q6

As part of the Q6 price control (2014-2019) and following a market power assessment under the Civil Aviation Act 2012, the CAA determined that Gatwick was a "dominant airport" with substantial market power that would persist throughout Q6. Instead of being regulated under a RAB-based price control, the CAA decided that it could be effectively regulated by commercial negotiations between airport and airlines. The outcome of these negotiations would be formalised in "commitments" on service quality, capital investment, and prices which would be backed by obligations in a licence issued by the CAA under CAA12. [74]

The CAA retains oversight of this regime and can reimpose stricter regulation if it deems it is necessary to. In 2025, CAA accepted new commitments proposed by GAL and incorporated these into GAL's economic licence.[75]

This model imposes a lower regulatory burden than implementing a traditional price control model as had previously applied to Gatwick airport. It also encourages more flexibility in the airport pursuing market-based bespoke commercial negotiations with airlines. This lighter-touch regulatory approach may also encourage faster innovation as less of a lengthy regulatory approval processes may be needed: for example, by enabling the airport to be better able to respond to additional requirements (such as for environmental mitigations) that arose from its Development Consent Order application for capacity expansion that it submitted in July 2023.

That said, the model relies on airlines having enough bargaining power to provide a degree of countervailing power to help offset and limit the scope for GAL to exercise its own market power. Bilateral deals between airlines and GAL may offer less transparency when scrutinising price, service levels and incentives.

Summary of the regulatory models

4.100 We have identified a long-list of regulatory models, that fall into the following broad categories:

- variations of the current regulatory model, such as strengthened governance arrangements for capex and bespoke treatment of specific projects;
- interventions to facilitate competition in the delivery of infrastructure; and

[74] https://www.caa.co.uk/publication/download/15878

[75] See CAP3113.

- new frameworks for setting airport charges, such as through benchmarking.

4.101 We would expect each model to have advantages and drawbacks. While we provide some initial views in this section based on our initial work, our full assessment of the regulatory models will be based on the evaluation framework set out in chapter 3 as part of the next phase of work.

4.102 It is likely that incremental amendments to the current regulatory framework will be more straightforward to implement compared with interventions that involve changes to the scope of HAL's operations and asset ownership. Where these could be undertaken within the scope of our existing powers, they could also require less time to implement. In particular, we do not see material drawbacks to strengthening capex governance arrangements to take account of the scale and complexity of the Heathrow expansion programme.

4.103 Regulatory models that involve the introduction of competition could materially improve outcomes by revealing information regarding efficient costs and service quality levels, which would reduce the need to rely solely on regulatory determinations of efficient cost.

4.104 However, we have also highlighted important challenges. For example, the assets and activities would need to be well-defined and separable, and risks and responsibilities would need to be clearly specified. Particularly where existing assets and activities are highly integrated within the broader asset portfolio, this is likely to be more complex.

4.105 We will carefully consider how any competition models we take forwards to the short-list could be implemented. We will need to take account of limitations on our powers under the Civil Aviation Act 2012 and the potential timescales for implementing these approaches. The case studies we have considered demonstrate that challenges with competitive models are surmountable, but require parties, including HAL, to work together to achieve the intended outcomes.

4.106 Our clear view is that there are significant challenges to the options for a new framework for setting airport charges, such as through price benchmarking. In particular, setting charges in a manner that is not linked to the recovery of efficient costs together with a reasonable return is likely to be incompatible with our primary duty of protecting consumers, or with our secondary duty to have regard to the need for HAL to finance its functions.

4.107 The long-list of regulatory models we have considered in this section is summarised in Figure 10 below.

Figure 10: Long-list of regulatory models

Regulatory model 1: Changes to the current capex governance framework

- Regulatory model 1a: Changes to capex governance processes
- Regulatory model 1b: Separating HAL's system planning function from its operational function

Regulatory model 2: Targeted adjustments to the existing incentive regime

Regulatory model 3: Long-term regulatory framework for expansion

Regulatory model 4: CAA oversight/mandate of procurement

- Regulatory model 4a: Enhanced scrutiny of HAL's approach to procurement
- Regulatory model 4b: Mandate Design and Build contract

Regulatory model 5: Contract for delivery and operation

- Regulatory model 5a: Operation (management contract)
- Regulatory model 5b: Design, Build, Operate

Regulatory model 6: Third party builds assets, then transfers ownership to HAL

Regulatory model 7: Third party continues to own and operate assets

- Regulatory model 7a: Wholesale supplier model
- Regulatory model 7b: Direct competition for airport operation services

Regulatory model 8: Transfer of ownership and operation of an existing asset

Regulatory model 9: New frameworks for setting airport charges

- Regulatory model 9a: Price benchmarking
- Regulatory model 9b: LRIC
- Regulatory model 9c: "Lighter touch" regulation

Key questions for consultation

4.108 Do you agree with our description of the regulatory models we have identified, and do you have initial views on the advantages and disadvantages of these models?

- Are there additional variants of the current regulatory model or additional alternative regulatory models that we should consider and what would be the advantages and disadvantages of these approaches?

APPENDIX A

Abbreviations

AOS	Airport Operation Services
CAA12	The Civil Aviation Act 2012
capex	capital expenditure
CATO	Competitively Appointed Transmission Owner
CPI	Consumer Price Index
DPC	Direct Procurement for Customers
GAL	Gatwick Airport Limited
H7	The price control for the period from 1 January 2022 until 31 December 2026
H8	The price control for Heathrow following H7
HAL	Heathrow Airport Limited
iH7	An interim price control period for the period from 1 January 2020 until 31 December 2021
LRIC	Long Run Incremental Cost
NESO	National Energy System Operator
OBR	Outcome based regulation
Ofcom	The Office of Communications
Ofgem	The Office of Gas and Electricity Markets
Ofwat	The Water Services Regulation Authority
opex	operating expenditure
PR19	The five-year price control settlement for water companies in England and Wales for 2020-2024
PR24	The five-year price control settlement for water companies in England and Wales for 2025-2029
SPV	Special Purpose Vehicle
Q4	The price control for the period from 2003 to 2008

Q5 The price control for the period from 2008 to 2013, the approach to which was subsequently extended to cover January to March 2014

Q6 The price control for the period from 2014 to 2018, the approach to which was subsequently extended to cover January to December 2019

Q6+1 The extension of the Q6 price control period to the end of 2019

RAB Regulated Asset Base

WACC Weighted Average Cost of Capital

APPENDIX B

Further detail on analysis of airport charges

1. This appendix sets out further detail in respect of our analysis of KPMG's analysis and the amendments that we make in order to arrive at a view of a like-for-like comparison of airport charges between HAL and the comparator airports in KPMG's sample.

Amendments to KPMG's analysis

2. We comment below on the factors that KPMG considered to be beyond HAL's control and explain differences in charges relative to the comparator airports in its sample. These are:

   - Construction costs;
   - Differences in fixed asset requirements between hub and non-hub airports;
   - Rail access;
   - Taxation policies;
   - Factors affecting counterfactual passenger numbers;
   - Wider revenue;
   - Differences in passenger mix; and
   - Other factors.

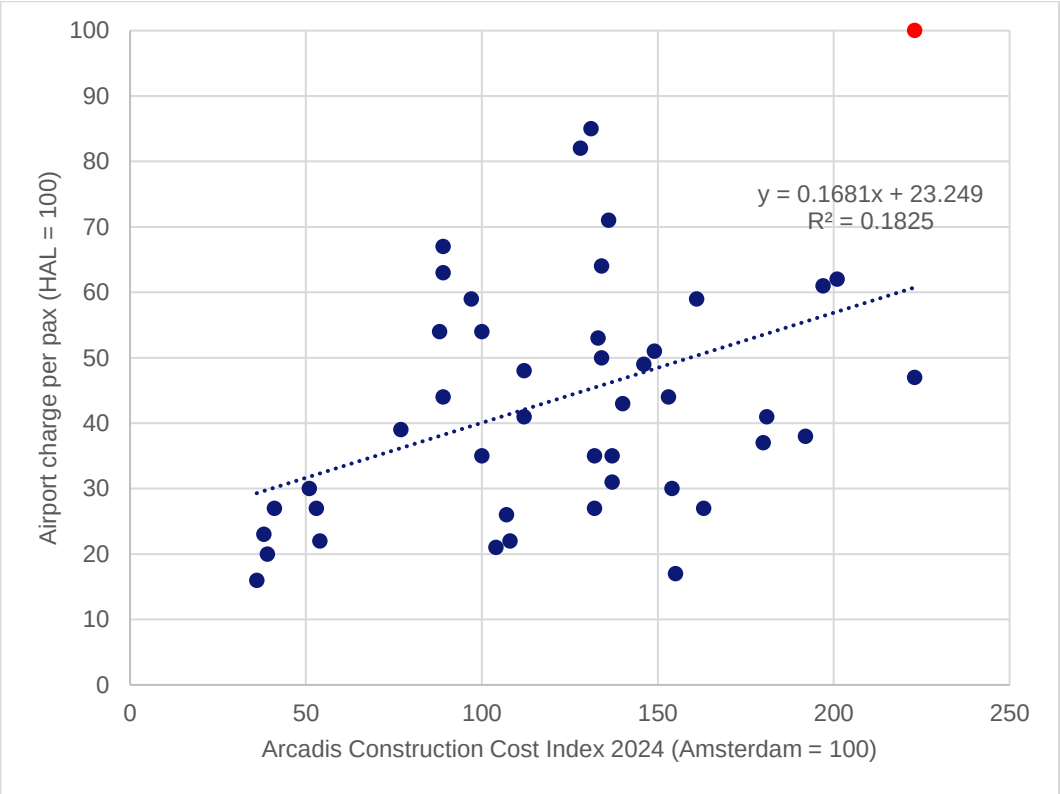
Construction costs

3. Local construction costs influence the costs that airports incur in building, maintaining and operating their assets.

4. To determine whether there is a material relationship between airport charges and construction costs, we have carried out a high-level regression based on the Review of Airport Charges 2024 produced by Jacobs, and the International Construction Cost index across a broad sample of airports.

5. The is summarised in Figure B1 below.

Figure B1: Comparison of airport charges and construction costs



Airport charge per pax (HAL = 100)

Source: Jacobs (2024), "Review Of Airport Charges 2024", December; Arcadis (2024), "International Construction Costs 2024".

6. We find a p-value of 0.025 in respect of construction costs, meaning that this relationship is statistically significant at the 5% level. This suggests to us that differences in local construction costs can explain a proportion of the difference in charges between HAL and other airports.

7. An important caveat to this assessment is that, as with airport charges as a whole, robustly accounting for differences in construction costs between airports is not straightforward. KPMG's analysis relies exclusively on data sourced from the Arcadis ICC index. While this is a widely used and respected source, other credible indices are also available. These can lead to different estimates for the impact of regional construction costs on airport charges.

8. For example, we are also using the International Construction Market Survey produced by Turner & Townsend in the context of our assessment of H8 capex. A further observation is that differences in local construction costs is likely to vary depending on the types of construction costs considered (for example infrastructure, housing, public works) and over time (for example tender prices changing over a business cycle).

9. As such, the extent to which differences in local construction costs can explain differences in airport charges will depend on the index used and should be interpreted with caution.

Differences in fixed asset requirements between hub and non-hub airports

10. KPMG suggest that Heathrow's business model as a hub airport drives higher infrastructure costs relative to non-hub airports. Specifically, it states that hub airports exhibit a higher level of capital employed compared with non-hub airports.

11. We are not persuaded that this can credibly explain differences in airport charges between HAL and other airports based on the evidence put forward by KPMG.

12. We firstly note that it is not clear from KPMG's analysis that hub airports exhibit materially higher levels of capital employed per passenger than non-hub airports.

- Both of the airports that KPMG consider to be non-hub airports exhibit higher levels of capital employed per passenger than Madrid, which KPMG considers to be a hub airport;
- It is not clear that the classification of Dublin as a non-hub airport is robust, as both Ryanair and Aer Lingus undertake hub operations from this airport; and
- Only three hub and two non-hub airports are used in its sample.

13. Further, the binary classification of airports as "hubs" and "non-hubs" is likely to be overly simplistic, as airports exhibit a varying degree of transfer traffic.

14. We are also not persuaded by KPMG's explanation for why, in principle, hub airports might incur higher costs (and hence capital employed) per passenger compared with non-hub airports. KPMG note three reasons why this may be the case:

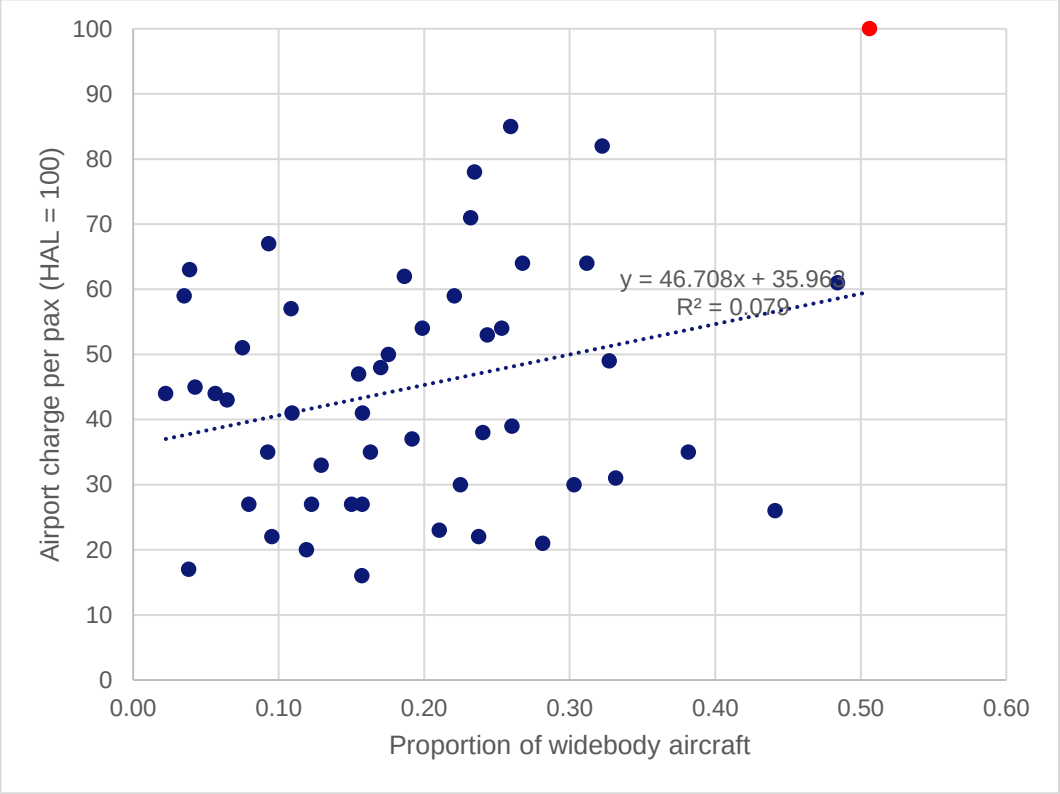
- Hub airports exhibit a higher proportion of widebody airport, which require more assets and utilise these for longer;
- Hub airports exhibit a higher proportion of long-haul and transfer passengers, which result in higher costs because these passengers are in terminal longer and require more complex assets; and
- Heathrow is a major cargo hub, and cargo operations involve additional cost and complexity.

15. We comment on each in turn. As an overarching observation, we note that KPMG has not provided any quantitative evidence linking these cost drivers to higher capital employed, or to the adjustments they apply to airport charges levied by non-hub airports.

Widebody aircraft

16. To determine whether there is a material relationship between airport charges and the proportion of widebody aircraft at each airport, we have carried out a high-level regression based on the Review of Airport Charges 2024 produced by Jacobs, and proportion of widebody aircraft flights from OAG across a broad sample of airports.

Figure B2: Comparison of airport charges and the proportion of widebody aircraft



Note: HAL is highlighted in red. It is included for illustrative purposes only. It is not used as part of the regression. This is because we are attempting to explain HAL's charges relative to other airports. Including HAL in the data would therefore introduce endogeneity into the analysis.

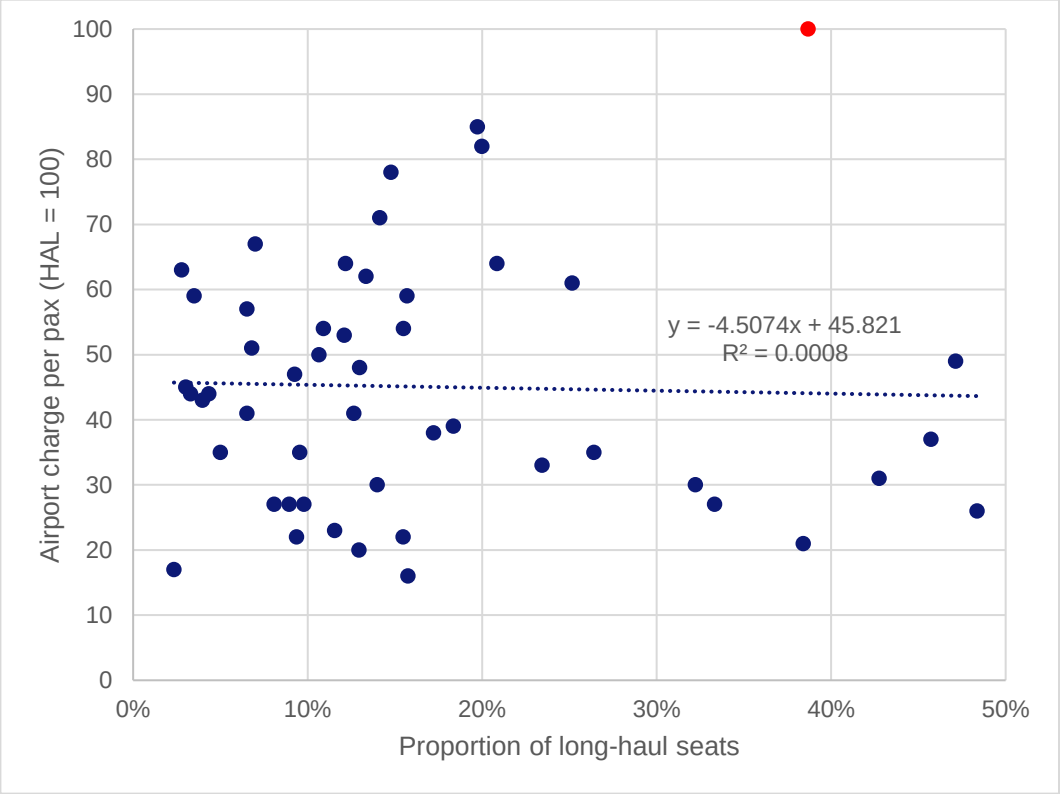
Source: Jacobs (2024), "Review Of Airport Charges 2024", December; OAG Flight Schedules, June '24 - May '25.

17. We find a p-value of 0.326 in respect of the proportion of widebody aircraft, suggesting that this variable is not statistically significant. We therefore conclude that the proportion of proportion of widebody aircraft cannot plausibly explain differences in airport charges.

Long-haul seats

18. To determine whether there is a material relationship between airport charges and the proportion of long-haul seats at each airport, we have carried out a high-level regression based on the Review of Airport Charges 2024 produced by Jacobs, and proportion of long-haul seats from OAG across a broad sample of airports.

Figure B3: Comparison of airport charges and the proportion of long-haul seats



Note: HAL is highlighted in red. It is included for illustrative purposes only. It is not used as part of the regression. This is because we are attempting to explain HAL's charges relative to other airports. Including HAL in the data would therefore introduce endogeneity into the analysis.

Source: Jacobs (2024), "Review Of Airport Charges 2024", December; OAG Flight Schedules, June '24 - May '25.

19. We find a p-value of 0.288 in respect of proportion of long-haul seats, suggesting that this variable is not statistically significant. We therefore conclude that the proportion of long-haul seats cannot plausibly explain differences in airport charges.

Cargo operations

20. It is not clear to us why cargo operations would present additional cost and complexity, and KPMG do not explain why this would be the case.

21. Overall, we do not consider that the evidence provided indicates that Heathrow's charges relative to other airports can be explained by its status as a hub airport.

Rail access

22. While we acknowledge that HAL incurs costs in respect of rail access, KPMG has not determined whether the other airports in its sample have incurred similar costs and instead assumed they do not incur any rail access costs.

23. Overall, we do not consider that KPMG has provided sufficient evidence to infer that HAL incurs materially higher rail access costs than other airports. We are open to considering further evidence on this area.

Taxation policies

24. We consider that it is reasonable to make an adjustment to charges to reflect the relatively high tax rates incurred by Heathrow airport. The evidence we have seen suggests that UK firms do face a higher tax burden relative to the comparator airports in KPMG's sample.

25. While we have not been able to identify any studies that quantify the total tax burden faced by UK companies inclusive of all forms of taxes, it is reasonable to expect that the forms of taxation identified by KPMG[76] are likely to represent a significant proportion of airports' total tax burden. We have also not identified evidence to suggest that UK companies face offsetting benefits from other forms of taxation.

Factors affecting counterfactual passenger numbers

26. KPMG identified three factors that it said constrained the number of passengers at Heathrow Airport, and were not faced by other hub airports:

- Restrictions on the airport's operating hours;
- The lower load factors exhibited by aircraft at Heathrow; and
- The smaller number of seats relative to maximum seat configuration on aircraft operating at Heathrow.

27. It said that this reduction in passenger numbers imply higher charges per passenger.[77]

28. We do not consider that these factors can credibly explain HAL's higher charges. We acknowledge that higher passenger numbers would enable HAL to spread its costs over a wider customer base. We further acknowledge that, in the short-term, higher capacity usage could plausibly result in lower charges. However:

- The number of additional passengers that KPMG state that HAL could accommodate in the absence of these factors (at least 16 million[78]) is inconsistent with the significant capacity constraint currently faced by HAL;

[76] These include National Corporate Tax, Taxes on Social Security, Taxes on Property and VAT on shopping at airports.

[77] Conversely, KPMG's assessment could be interpreted as suggesting that these factors mean that other airports would have higher passenger numbers and therefore lower charges than if these factors did not apply.

[78] KPMG (2025), "Aeronautical Revenue Benchmarking Study", June, p48.

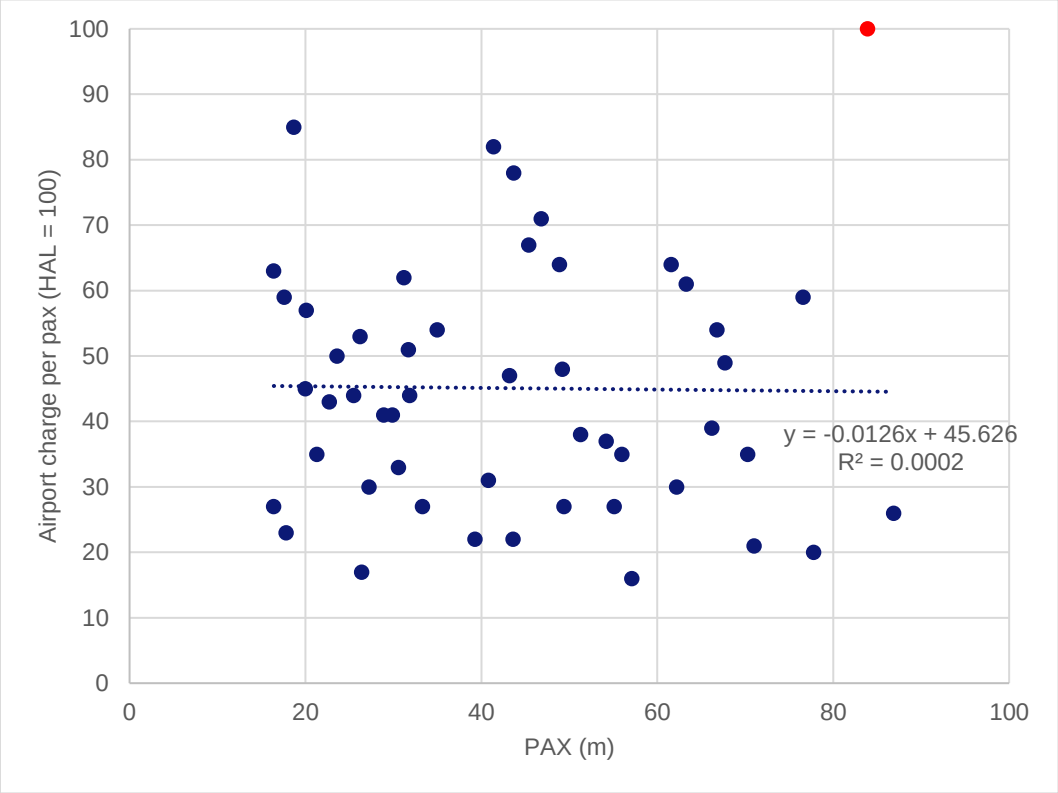
- In the long run, there are substantial costs associated with accommodating a higher number of passengers. We note, for example, the extensive costs that HAL proposes to incur in order to expand capacity at Heathrow in H8 and beyond; and
- We have seen no evidence to suggest that increases in passenger numbers at Heathrow to date have led to lower charges.

29. To cross-check our views, we have carried out a high-level analysis of the relationship between airport charges and passenger numbers across a broad sample of airports, based on a simple regression.

30. We have used the data on airport charges set out in the Review of Airport Charges 2024 produced by Jacobs, and our own desktop research to source data on passenger numbers as of 2024.

31. This analysis is summarised in Figure B4 below.

Figure B4: Comparison of airport charges and passenger numbers



Note: HAL is highlighted in red. It is included for illustrative purposes only. It is not used as part of the regression. This is because we are attempting to explain HAL's charges relative to other airports. Including HAL in the data would therefore introduce endogeneity into the analysis.

Source: Jacobs (2024), "Review Of Airport Charges 2024", December; CAA desktop research.

32. We find a p-value of 0.284 in respect of passenger numbers, suggesting that this variable is not statistically significant. We therefore conclude that factors that

allegedly constrain HAL's passenger numbers relative to other airports cannot plausibly explain differences in airport charges.

Wider revenue

33. We agree with KPMG that it is relevant to consider other sources of revenue that airports earn. It is a matter of fact that HAL earns lower such revenues as a proportion of total revenues, and this may lead to higher charges since these revenues are unavailable to contribute to the funding of HAL's total cost base.

Differences in passenger mix

34. As indicated above, the evidence we have seen suggests that the proportion of long-haul passengers cannot plausibly explain differences in airport charges.

Other factors presented by KPMG

35. We have considered the four additional factors presented by KPMG. We do not consider these support additional adjustments to charges:

- On non-Schengen costs, we are not persuaded by KPMG's evidence in respect of this factor. KPMG noted that the extent to which differences in airport charges are driven by security requirements is unclear, and that "*there is not a consistent way to enable the effect to be isolated in the analysis*".[79] Regardless, KPMG applied an unsubstantiated increase in core opex of 5%. We further note KPMG's view that there may be a reduction in security requirements for connecting passengers who start and end their journey within the Schengen area, but that this represents a relatively small share of passengers.

- On alternative assumptions regarding the relationship between passenger numbers and per passenger costs, we set out our view above that there does not appear to be a simple relationship between airport charges and passenger numbers to support an adjustment.

- On HAL's constrained site, it is plausible that this drives higher costs. However, we are not persuaded by the evidence KPMG has presented. KPMG itself notes that "*the evidence for making a specific adjustment appears to be limited.*"[80] Despite this, it applied an uplift to HAL's asset value of 25% which, given KPMG's own statement, does not appear to be properly substantiated.

- On the absence of land costs incurred by comparator airports, KPMG has not attempted to quantify land-related costs incurred by comparator airports, so we do not have sufficient evidence to make an adjustment in respect of this factor.

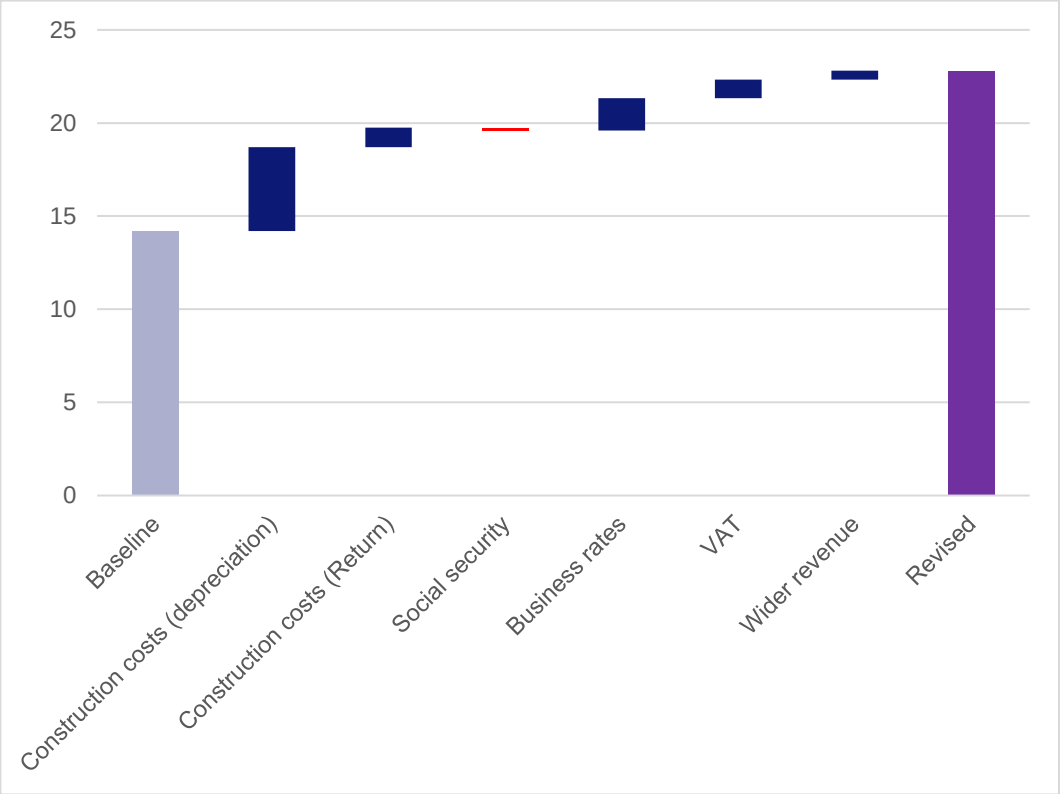
36. Given our views above, we have amended KPMG's adjustments for each of the seven airports in its comparator sample to reflect the factors that we consider

[79] KPMG (2025), "Aeronautical Revenue Benchmarking Study", June, p44.

[80] KPMG (2025), "Aeronautical Revenue Benchmarking Study", June, p23.

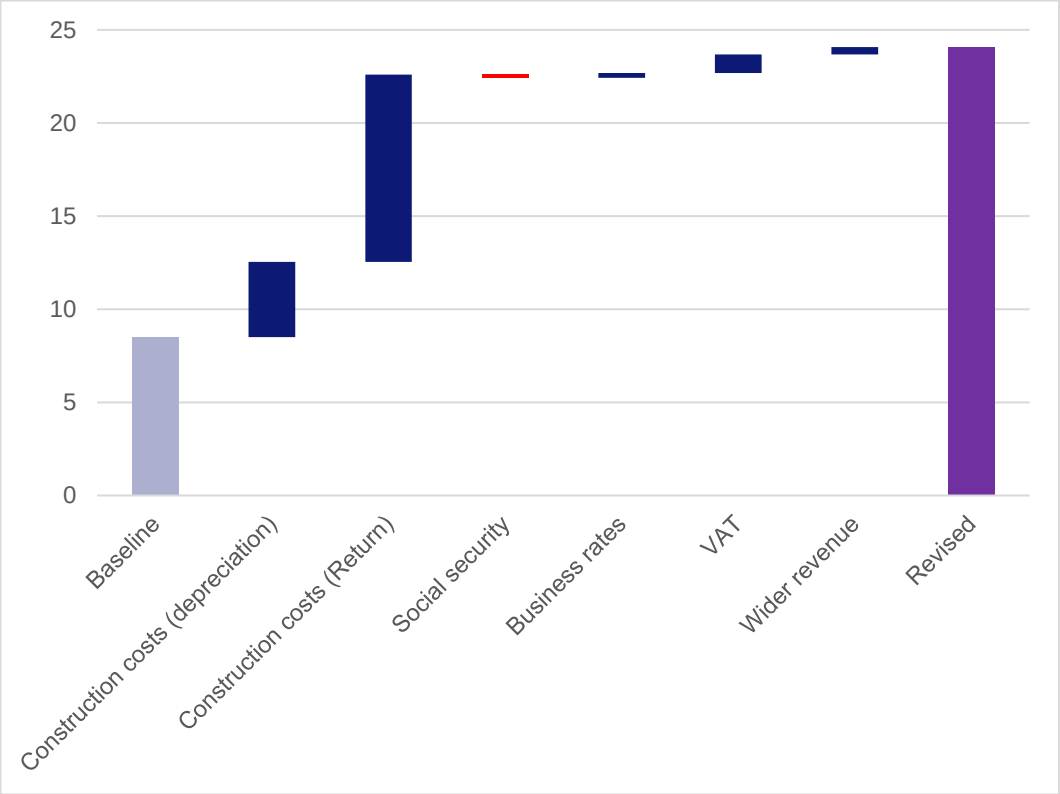
could plausibly explain the difference in charges between HAL and these airports. These are summarised in Figures B5 to B11 below.

Figure B5: adjusted airport charges for Amsterdam Airport



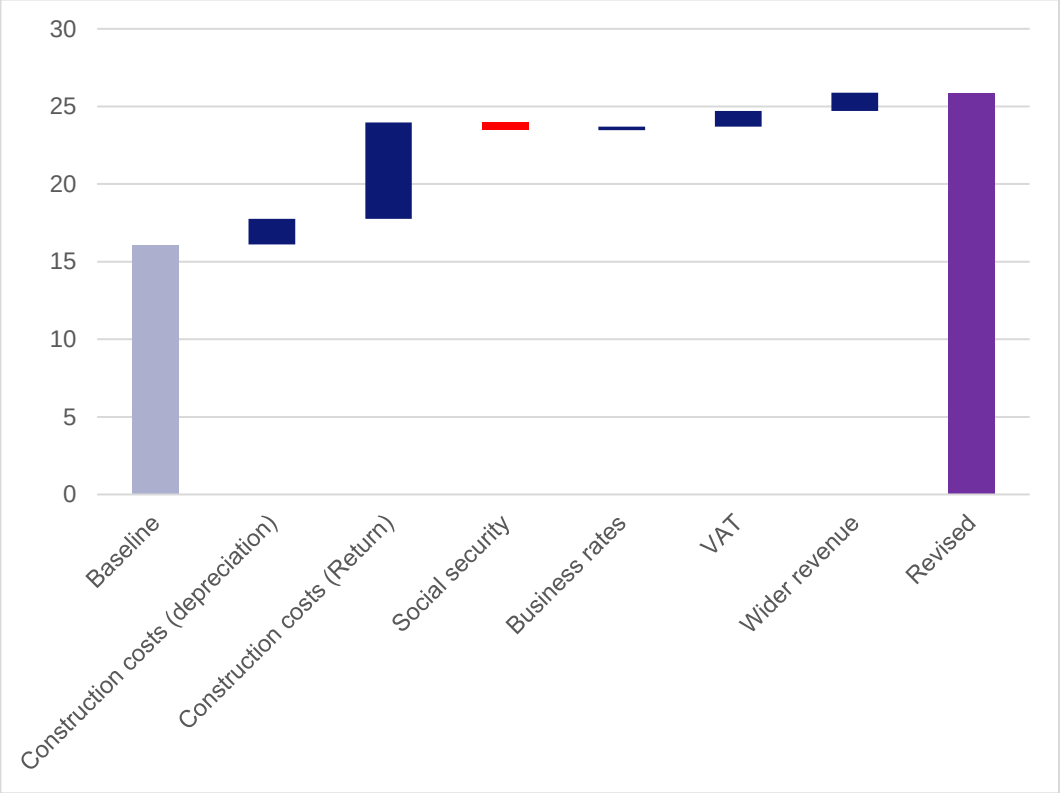
Source: CAA analysis based on KPMG (2025), “Aeronautical Revenue Benchmarking Study”.

Figure B6: adjusted airport charges for Madrid Airport



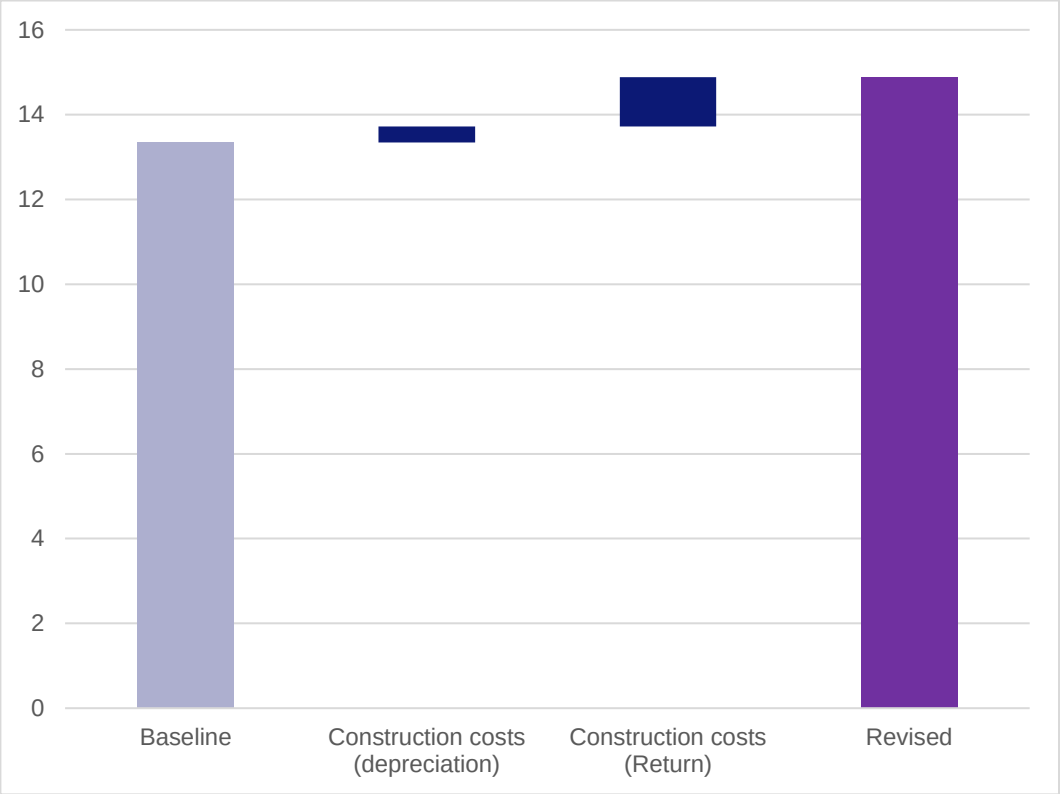
Source: CAA analysis based on KPMG (2025), "Aeronautical Revenue Benchmarking Study".

Figure B7: adjusted airport charges for Frankfurt Airport



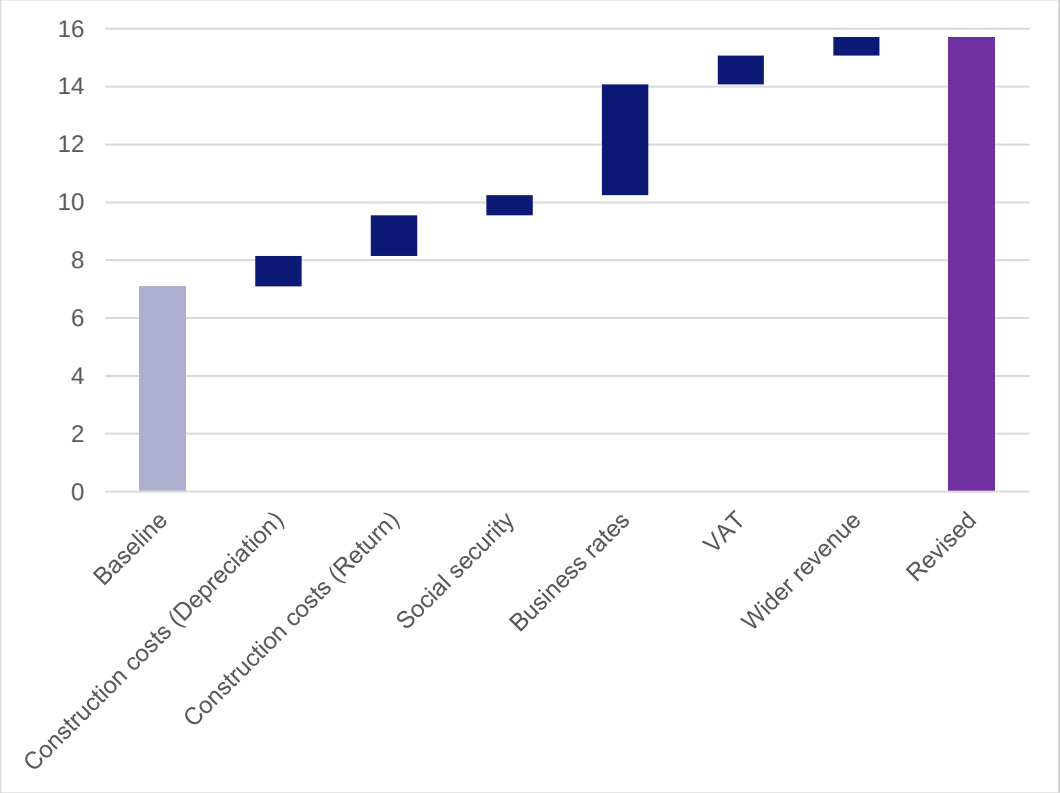
Source: CAA analysis based on KPMG (2025), "Aeronautical Revenue Benchmarking Study".

Figure B8: adjusted airport charges for Gatwick Airport



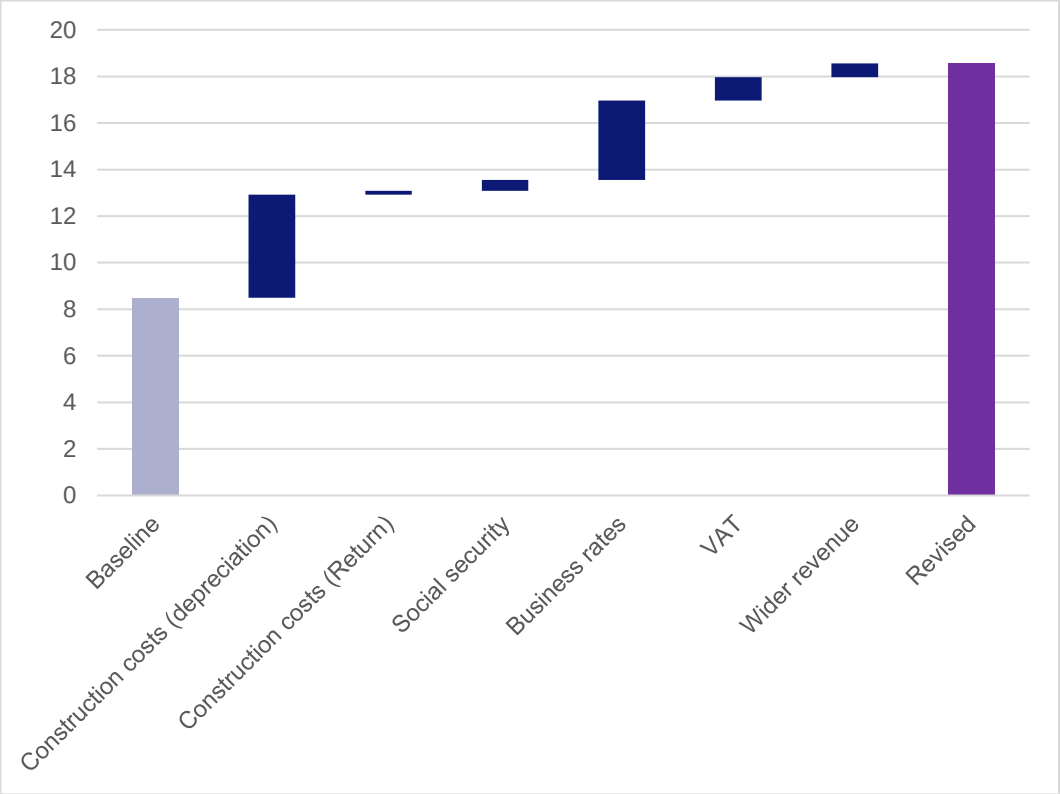
Source: CAA analysis based on KPMG (2025), "Aeronautical Revenue Benchmarking Study".

Figure B9: adjusted airport charges for Dublin Airport



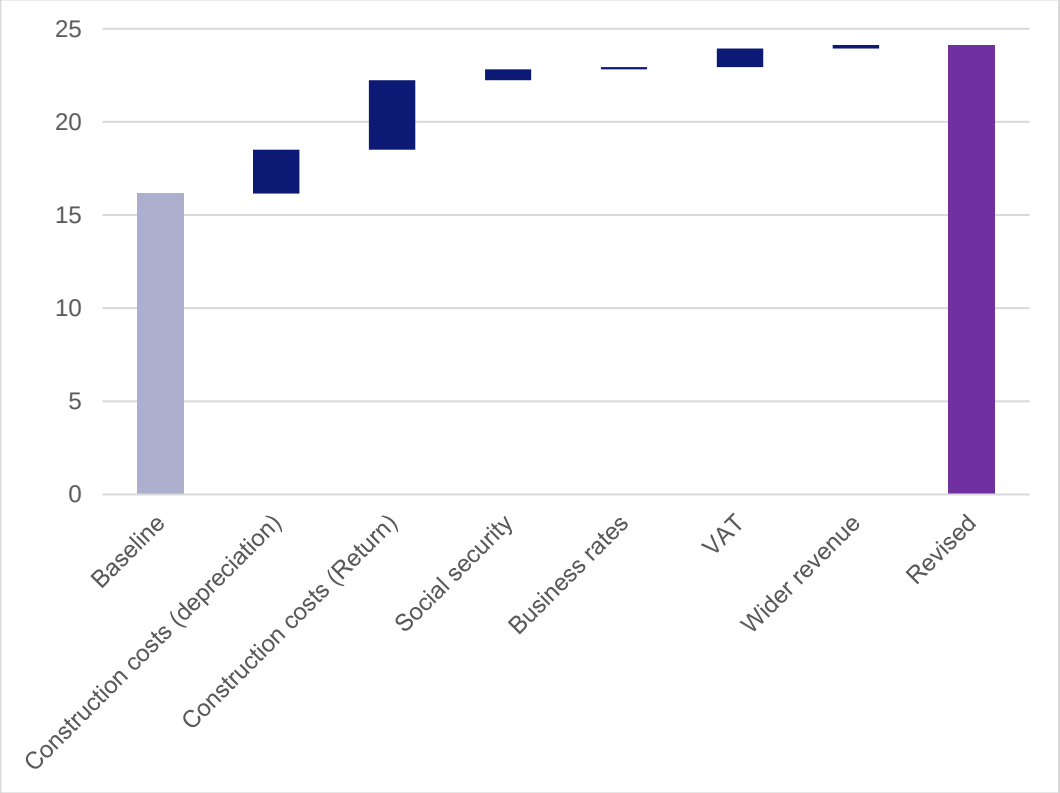
Source: CAA analysis based on KPMG (2025), "Aeronautical Revenue Benchmarking Study".

Figure B10: adjusted airport charges for Singapore Airport



Source: CAA analysis based on KPMG (2025), "Aeronautical Revenue Benchmarking Study".

Figure B11: adjusted airport charges for Toronto Airport



Source: CAA analysis based on KPMG (2025), "Aeronautical Revenue Benchmarking Study".

APPENDIX C

Our duties

1. The CAA is an independent economic regulator. Our duties in relation to the economic regulation of airport operation services ("AOS"), including capacity expansion, are set out in the CAA12.
2. CAA12 gives the CAA a general ("primary") duty, to carry out its functions under CAA12 in a manner which it considers will further the interests of users of air transport services regarding the range, availability, continuity, cost and quality of AOS.
3. CAA12 defines users of air transport services as present and future passengers and those with a right in property carried by the service (i.e. cargo owners). We often refer to these users by using the shorthand of "consumers".
4. The CAA must also carry out its functions, where appropriate, in a manner that will promote competition in the provision of AOS.
5. In discharging this primary duty, the CAA must also have regard to a range of other matters specified in the CAA12. These include:
    - the need to secure that each licensee is able to finance its licensed activities;
    - the need to secure that all reasonable demands for AOS are met;
    - the need to promote economy and efficiency on the part of licensees in the provision of AOS;
    - the need to secure that the licensee is able to take reasonable measures to reduce, control and/or mitigate adverse environmental effects;
    - any guidance issued by the Secretary of State or international obligation on the UK notified by the Secretary of State; and
    - the principles of transparency, accountability, proportionality and consistency and that regulatory activities should be targeted only at cases where action is needed.
6. In relation to the capacity expansion at Heathrow, these duties relate to the CAA's functions concerning the activities of HAL as the operator at Heathrow.
7. CAA12 also sets out the circumstances in which we can regulate airport operators through an economic licence. In particular, airport operators must be subject to economic regulation where they fulfil the Market Power Test as set out in CAA12. Airport operators that do not fulfil the Test are not subject to economic regulation.

As a result of the market power determinations we completed in 2014 both HAL and GAL are subject to economic regulation.

8. We are only required to update these determinations if we are requested to do so and there has been a material change in circumstances since the most recent determination. We may also undertake a market power determination whenever we consider it appropriate to do so.