UK Civil Aviation Authority

Economic regulation of Heathrow airport: H7 final issues

CAP2980

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About this document

This consultation deals with both the matters that were remitted to us by the Competition and Markets Authority by its Final Determinations of the appeals of our Final Decision on the H7 price control and the matters that we had not been able to resolve prior to making the Final Decision. These matters are:

- the approach to calculating the "AK" adjustment to revenues for 2020 and 2021;
- the "index-linked premium" used to calculate the cost of debt for the H7 WACC;
- verification of the "shock factor" used in the H7 passenger forecast;
- the appropriate contributions to the opex allowance "building block" used in the H7 price control for each of pension deficit repair costs and business rates; and
- treatment of HAL's revenues from its "Pod parking" product.

This consultation sets out our analysis of each of these issues, our proposals for resolving them and the statutory notice of the licence modifications we propose to implement our proposals.

Introduction and Summary

Introduction

Context: The Final Decision and appeals to the CMA

1. We issued our Final Decision[1] setting the price control for the "H7" period in March 2023. The Final Decision was appealed to the Competition and Markets Authority ("CMA") by HAL and airlines in April 2023. The CMA's Final Determinations of those appeals in October 2023 found that the CAA had struck broadly the right balance between ensuring prices for passengers are not too high and encouraging investors to maintain and improve the airport over time.

2. It did, however, find that there were a handful of smaller issues which the CAA needed to look at again and it we agreed to do so swiftly. These issues are:

    - the CAA's approach to setting the level of the additional adjustment factor ("AK") that reflects the difference between HAL's actual and allowed revenues per passenger in 2020 and 2021;
    - whether we should have included an uplift for index-linked debt in our calculation of the cost of debt used for the WACC for H7; and
    - verification of the calculation of the "shock factor" used for the H7 passenger forecast.

3. Of these, the AK adjustment appears to raise the most challenging issues and is of the greatest materiality.

4. The H7 Final Decision also left a small number of issues outstanding which we were unable to conclude prior to making that decision. These issues related to the appropriate allowances that should be fed into the price control to deal with:

    - the appropriate contributions to the opex allowance "building block" used in the H7 price control for pension deficit repair costs ("PDRCs") and business rates; and
    - the appropriate treatment of HAL's revenues from its commercial "pod parking" service.

[1] A glossary of the terms used in this consultation is set out at Appendix B.

5. We have decided it would be reasonable, proportionate and consistent with the interests of consumers to deal with these issues alongside the issues remitted to us by the CMA.

Summary of the matters the CMA sent back to us

Calculation of the AK adjustment

6. The AK adjustment sought to address the difference between HAL's actual revenues in 2020 and 2021 and those allowed under the price control applicable in those years. Calculated according to the approach in the Final Decision, that adjustment would have been £253 million.[2]

7. The CMA found that it was not wrong for us to have applied an adjustment in these circumstances, despite the fact that HAL made a loss in those years. However, we were wrong to apply the AK factor mechanistically to HAL's revenues in 2020 and 2021. The CMA identified three problematic elements that contributed to the level of the AK adjustment: these were the adjustments relating to capex and business rates, and the "passenger mix" adjustment arising from airlines choosing to fly planes with fewer passengers than forecast.

8. Having considered the CMA's findings in detail, we propose that the level of the AK adjustment should be calculated as follows:

    - adopting the CMA's analysis and mechanism for calculating the capex and business rates elements of the AK adjustment, we propose to make an adjustment of £32 million for capex and £19 million for business rates; and
    - as the CMA's criticism of our approach to the passenger mix adjustment pointed less clearly at an appropriate approach, we propose to share the "passenger mix" adjustment equally with consumers, making an adjustment of £25 million that takes account of both the issues raised by the CMA and advantages to consumers of ensuring that charges are no higher than is necessary.

9. Taken together, this would lead to an adjustment to reflect the difference between HAL's actual and allowed revenues in 2020 and 2021 of £76 million. We propose that this adjustment will be reflected in reduced airport charges in 2025 and 2026 (given that the CMA's Final Determination quashed the AK term contained in our Final Decision).

[2] Unless otherwise stated, prices in this consultation are stated at 2020 levels (consistent with the H7 final decision and the CMA's determination).

Inclusion of a premium for index-linked debt in the WACC

10. The CMA sent this issue back to us on the basis that we should have done more to assess if the evidence justified including this premium. Subsequent analysis indicates the dataset available to support a premium is relatively small and uncertain, and alternative approaches available to borrowers suggest that it is difficult to justify retaining this premium. Bearing these considerations in mind, we have decided it is in consumers' interests to remove the premium, which reduces our estimate of HAL's overall weighted average cost of capital (WACC) by two basis points.

11. To implement this, we propose reducing the WACC used in calculating the H7 price control by two basis points, with the impact on charges being focused on 2025 and 2026.

Verifying the "shock factor" in the passenger forecast

12. The CMA sent this back to us because we had not verified HAL's calculation of the shock factor. We have examined HAL's approach, consider it reasonable and have replicated key elements of HAL's calculations. As a result, we do not propose to make any change to the passenger forecast we have used for the H7 price control.[3]

Summary of the matters left open in the Final Decision

The level of PDRCs included in the opex allowance

13. The opex allowance we used as a "building block" for calculating the H7 price control included an allowance for PDRCs. However, we had not been able to complete our analysis of the appropriate level of PDRCs, so our Final Decision said HAL needed to justify the level of allowance or we would remove it.

14. Our pensions advisers have subsequently indicated that there appears to be no case for HAL to make PDRCs until towards the end of H7 at the earliest. Bearing this in mind we propose to remove £84 million of PDRC costs from the opex allowance for H7, and recalculate and reduce HAL's maximum allowed yield for 2025 and 2026 to reflect this. If HAL needs to incur PDRCs towards the end of the H7 period, we will address this through the H8 price control.

The level of business rates costs included in the opex allowance

15. The Final Decision said we would review the appropriate level of business rates that should be included in the opex allowance used to calculate H7 price control when we had the Valuation Office Agency's ("VOA") final decision on HAL's business rates.

16. Our review indicates that, based on HAL's current rates liability, the assumption we used in the Final Decision was £85 million too high. However, evidence from both

[3] In this context, it should be noted that the passenger forecast we used for the Final Decision was a key element of the H7 price control. This is not an opportunity to revisit that decision.

HAL and the VOA points to it being likely that HAL's business rates may increase significantly in the last year of H7 and that this increase will likely offset any reduction we might otherwise make. While the final position will only be clear once the VOA has carried out its next revaluation in time for 2026, the evidence indicating that business rates will increase is considerably stronger than the possibility that HAL might need to resume PDRCs towards the end of H7.

17. As a result, we propose to defer the £85 million reduction in HAL's opex allowance that we would otherwise have made, but "log it up" against the likely future increase for 2026. This will smooth any increase in charges that may result from higher business rates in 2026 and beyond. The position will be trued up as part of the H8 price control review when the next valuation is known.

18. For each of PDRCs and business rates, our approach is to seek to ensure that HAL neither loses nor gains from matters that are largely beyond its control.

Commercial revenues for HAL's "Pod parking" product

19. The capex for HAL's "Pod parking" product was excluded from the RAB at the Q5 price control review in 2008, so the revenues and costs associated with it should be excluded from the "single till" used to set the price control, in order that there is consistent treatment of these issues over time. When we made the H7 Final Decision, we did not have enough evidence to assess these revenues, so the matter was left open.

20. Having investigated these matters further, we have now calibrated an appropriate set of adjustments and used the H7 PCM to calculate the impact of this on charges. These changes will reduce the level of commercial revenue in the single till calculation and increase airport charges by just under £4 million over 2025 and 2026.[4]

Other issues

21. This consultation also addresses certain minor, technical and other issues that have emerged since the Final Decision. These are:

    - a modification to the Licence to correct one of the formulae in the price control so that is delivers the price profile we set out in the Final Decision;
    - consideration of an issue relating to the "starting point" for the calculation of charges in 2024; and

[4] The detailed calculations underlying this figure are discussed in chapter 8 (Implementation) and Appendix D at Table D.4.

- certain other issues raised by HAL that we have considered but decided not to make adjustments for as such adjustments would undermine our Final Decision and reduce incentives on HAL to seek out efficiencies.

Putting these proposals into effect

22. The Final Decision calculated that HAL's allowed aeronautical charges (nominal £ per passenger) would be £25.24 in 2025 and £25.28 in 2026. It also provided for an additional correction factor "AK" that would have further reduced HAL's revenue. If, following this consultation, we decide to implement the changes we propose, then, taken together, they would lead to decreases in HAL's charges of £1.516 in 2025 and £1.573 in 2026 (around 6%) compared to the charges for H7 we set in the Final Decision. However, this includes the impact of the modified AK term, which now reduces HAL's revenue by around £119 million (in nominal prices).[5] The original AK term was set to reduce HAL's revenue by £253 million in 2020 prices or around £390 million in nominal prices over 2025 and 2026. So, in overall terms, HAL's revenue will rise by around £140 million (in nominal prices) compared to the impact of the Final Decision once the full impact of the change in the AK factor is taken into account.[6] This amounts to an increase of approximately 3½% in charges for 2025 and 2026 compared to what it would have been had no changes been needed to the Final Decision.

23. Taken together and when adjusted for the time value of money, we estimate that the changes set out in this consultation will lead to decreases in HAL's charges of £1.516 in 2025 and £1.573 in 2026 compared to the charges for H7 we set in the Final Decision.[7]

24. To implement these changes, we will need to modify the price control condition in the Licence. In order to do so transparently, we propose to amend the definition of the WACC in the Licence where it appears and use two adjustment terms:

5 That is, after taking account of inflation and the time value of money on the same basis set out in Appendix D at Table D.2 and paragraphs D.3 to D.5 for the revised AK term.

6 So, instead of the reduction of the order of £390 million (in nominal prices) from the original AK term, revenues will reduce by a total of around £250 million, made up of £119 million (in nominal prices) from the revised AK term, and £131 million (in nominal prices) from the other adjustments to the H7 price control.

7 Estimates of the charges we set for H7 were set out in Table 8/Table 13.6 of the Final Decision. That table did not include the impact of the AK adjustment as this relates to the period 2020 and 2021 (that is, prior to the H7 period). The decreases in HAL's charges of £1.516 in 2025 and £1.573 in 2026 set out in paragraph 22 above are as compared to the estimated charges set out in Table 8 of the Final Decision. That table is reproduced in this consultation as Table 7.1.

- a new AK term that implements our recalibrated adjustment for 2020 and 2021 and is calculated in a similar manner (but requires a significantly lower reduction in charges) than the AK term in our Final Decision; and
- a new "H7" term that implements the other changes calculated using the PCM.

25. Each of these will lead to adjustments spread evenly over 2025 and 2026 (subject to adjustment for inflation). This will smooth out the impacts of these adjustments on airport charges.

26. To effect this, this consultation includes, at Appendix E, a notice under section 22(2) setting out the modifications that we propose to make to the Licence.

Our duties as economic regulator of HAL

27. Our work H7 has been guided by our duties under the Civil Aviation Act 2012 ("CAA12"). Our primary duty under CAA12 is to further the interests of users regarding the range, availability, continuity, cost and quality of airport operation services, having regard to the matters set out in our "secondary duties" (including HAL's ability to finance its activities). Further details of these duties are set out in Appendix A.

Structure of this consultation

28. The structure of this consultation is set out below.

Chapters 1 to 3 set out our approach to, and proposals for, addressing the matters remitted to the CAA by the CMA's Final Determinations of the H7 appeals as follows:

Chapter 1 - the AK adjustment factor;

Chapter 2 – the premium applied to index-linked debt costs; and

Chapter 3 – the Shock factor applied to passenger forecasts.

Chapters 4 to 6 set out our approach to, and proposals for, addressing the matters left open by the Final Decision as follows:

Chapter 4 – Opex allowance in respect of Pension Deficit Repair Costs in H7;

Chapter 5 – Opex allowance in respect of Business Rates in H7; and

Chapter 6 – HAL's commercial revenues, "Pod parking" and the single till.

Chapter 7 discusses other issues arising from the Final Decision.

Chapter 8 sets out our approach Implementation.

Appendix A sets out a summary of our duties under CAA12;

Appendix B provides a glossary of terms used in this consultation;

Appendix C sets out some of the information we have used to verify the shock factor (as discussed in chapter 3 (Shock factor applied to passenger forecasts));

Appendix D sets out our calculations supporting the AK adjustment;

Appendix E sets out the notice of the modifications we propose to make to HAL's licence to implement these proposals.

29. Alongside this consultation we are also publishing analysis from our financial advisers, Centrus that supports the analysis in chapter 2 (Premium applied to index-linked debt costs) and a report from the Government Actuary's Department that supports our analysis in chapter 4 (Opex allowance in respect of Pension Deficit Repair Costs in H7). We are also re-publishing the price control model ("PCM") in support of the analysis set out in chapter 8 (Implementation).

Next steps and views invited

30. As noted above, we are consulting on the proposals set out in this consultation and the Notice of proposed licence modifications under section 22(2) of CAA12 set out in Appendix E. The consultation period will run for six weeks. Please e-mail responses to economicregulation@caa.co.uk by no later than 1 May 2024.

31. We note that we have previously granted requests for extensions to the consultation period. Given the importance of finalising the matters discussed in this consultation in a timely way, we will not be accepting any submissions after 1 May 2024.

32. We expect to publish the responses we receive on our website as soon as practicable after the period for representations expires. Any material that is regarded as confidential should be clearly marked as such and included in a separate annex. We have powers and duties with respect to the disclosure of information under section 59 CAA12 and the Freedom of Information Act 2000 and it may be necessary to disclose information consistent with these requirements.

33. After considering the responses we receive to the this consultation, we will publish our decision on the modifications we make to the Licence. If the responses we receive indicate that we need to propose an approach that differs substantially from that set out in this consultation, we will re-consult before making that decision.

34. Any questions related to this decision document should be sent to James Wynn-Evans at james.wynn-evans@caa.co.uk

Chapter 1

The AK adjustment factor

Introduction

1.1 The CAA's Final Decision for the H7 price control contained an adjustment term ("AK") which was intended to "true up" over- or under- recovery of revenue that had arisen in the years 2020 and 2021. Our approach in designing that term was to align HAL's revenues with those allowed by its price control.

1.2 While the price control for 2020 and 2021 included a "k" adjustment term, the adjustments for those years (which would have fed into the calculation of the price caps for 2022 and 2023 respectively) were not made in 2022 and 2023 because we decided to use simplified interim price caps for those years.

1.3 In the Final Decision, we took the view that, although the number of passengers and HAL's revenue fell very sharply in 2020 and 2021, HAL had nonetheless recovered considerably more than it was allowed by its price control. This figure was later determined to be of the order of £253 million, which was to be returned to airlines through the "additional" adjustment term,[8] which was the term to effect the adjustments for those years which would otherwise have been made through the operation of the "k" adjustment.

The CMA's Final Determination

1.4 HAL appealed this aspect of the Final Decision and the CMA considered it as "Ground D". The CMA found[9] that we had not erred in deciding that an AK factor should apply and were not wrong:

- to have considered that *some* adjustment should apply as a standard part of the regulatory settlement and all parties could have foreseen the possibility of HAL over recovering and the need for some correction;[10]

8 We decided to use this additional adjustment term (AK) because of the size of the adjustment to be made under it and to implement a policy of allowing HAL flexibility over when the adjustment was reflected in charges (which is not available for the "standard" k term.

9 See the Final Determinations at paragraphs 10.117 to 10.121.

10 See also the Final Determinations at paragraph 10.63 and 10.68.

- to apply any AK factor in the light of the losses HAL made in 2020 and 2021 and treat those losses as having already been taken into account in its Final Decision as part of its RAB adjustment assessment. The existence of such losses was not in itself a reason not to include a correction factor where it was identified that HAL had over-recovered certain revenues;[11], or
- to conclude that it would not be appropriate to change the identified level of the correction factors to reflect HAL's losses.[12]

1.5 However, the CMA found that the Final Decision was wrong in applying the AK factor in that it had did not given proper consideration to:

- capex underspend in 2020 and 2021 and the impact of the capex adjustment ("Dt") term in HAL's price control that adjusts HAL's allowed revenue downwards for the level of this underspend;
- the impact of the business rates ("BRt") term in HAL's price control that adjusts HAL's allowed revenue downwards for lower than expected levels of business rates; and
- over recovery in per passenger charges in 2020 and 2021 as a result of airlines operating flights with fewer passengers than before the pandemic.[13]

1.6 Specifically, the CMA found that the Final Decision was wrong:

- not to give due consideration to whether, in the exceptional circumstances of the pandemic, HAL did actually over-recover revenues to the extent implied by the standard application of the correction factor as the forecast passenger numbers and amount of the correction were so different from previous years; and
- not to have carried out a detailed assessment as to whether it was appropriate to apply the AK factor mechanistically.[14]

The CMA's analysis of the factors contributing to the AK adjustment

1.7 In reaching its Final Determinations, the CMA analysed:

- the operation of each of Dt and BRt adjustments; and
- the impact of airlines flying planes with fewer passengers than forecast (the "pax mix" adjustment).

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11 See the Final Determinations at paragraph 10.71.

12 See the Final Determinations at paragraph 10.69.

13 See the Final Determinations at paragraph 10.118.

14 And, as such, have calibrated each factor giving rise to the AK adjustment more closely to HAL's over recovery. See the Final Determinations at paragraph 10.120.

Dt

1.8 The CMA recognised the rationale for the Dt term in providing a means of ensuring that HAL is not able to benefit from delays to, or reductions in the size of, its capex investments relative to the assumptions used to set the price control. As the price control had allowed for a level of financing costs associated with investment that HAL did not ultimately undertake, it was to be expected that some level of over-recovery would be identified for 2020 and 2021.[15]

1.9 Nonetheless, the CMA's assessment of the way the Dt term worked was that it resulted in the calculation of an unduly high level of over recovery of revenue and HAL being required to return a significantly larger amount to users than it can reasonably be viewed as having over-recovered.[16] The CMA's worked example of this showed that the way that the Dt term worked could do more than unwind the effects of capex being forecast at too high a level, making HAL materially worse off and users (overall) materially better off than would have been the case had capex been forecast accurately.

1.10 The CMA also noted that there were legitimate reasons for HAL to reduce its capex programme in the pandemic and the CMA found that it had not seen evidence that HAL was gaming the regulatory framework for financing capex.[17]

BRt

1.11 The CMA took the view that, while the amount of business rates (unlike capex) was known,[18] the BRt formula had the same characteristics that were identified above in relation to the Dt term. Specifically, these included that it took no account of the effects of differences between forecast and actual passenger numbers, so could also result in HAL being required to return a significantly larger amount to users compared to a scenario when outturn passenger volumes were much closer to those forecast.[19]

1.12 Therefore, while it was clear that HAL had benefitted from paying lower business rates than assumed, it was not evident that HAL had over-recovered revenue in respect of the business rates allocation in 2020 and 2021 to the extent that the purely mechanistic application of the BRt determined.[20]

1.13 As with the BRt term, the CMA set out a worked example of the operation of the BRt term that demonstrated that, although HAL had over recovered to some extent, the way the BRt term worked was to return the full amount of over-recovery to

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15 See the Final Determinations at paragraph 10.91.

16 See the Final Determinations at paragraph 10.93.

17 See the Final Determinations at paragraph 10.100.

18 See the Final Determinations at paragraph 10.105.

19 See the Final Determinations at paragraph 10.104.

20 See the Final Determinations at paragraph 10.106.

consumers even though passenger numbers were significantly lower than forecast and that this led to a significant loss to HAL.[21]

Passenger mix

1.14 On the impact of the passenger mix, the CMA found that the CAA's evidence had not shown that it had a reliable basis for treating the differences between:

- HAL's actual yield per passenger in 2020 and 2021; and
- the amounts allowed under its price control in those years

as having arisen because of a "failure" on the part of HAL in the way it set its charges. While the exceptional nature of 2020 and 2021 did not itself prove a reason for departing from the approach that would otherwise have been expected to apply in relation to identified over- and under-recovery, the CAA should still have considered whether the operation of the k factor in the form that the CAA decided to impose it continued to be appropriate.[22]

1.15 The CMA considered that HAL's submissions regarding airlines' decisions to fly planes with fewer passengers on board were relevant and merited closer attention by the CAA as to whether the standard workings of the per-passenger yield price control provided an appropriate basis for determining over recovery. In particular, the CMA found that the application of fixed or minimum charges could automatically imply over-recovery and the scope for this kind of effect should have merited further assessment and due consideration by the CAA as it created a clear risk that the correction factor arrangements might generate perverse outcomes. As a result, the CAA should have given this further assessment.[23]

Responding to the CMA's broad findings

1.16 The CMA's order required us to reconsider the manner of application of the AK adjustment for 2020 and 2021.[24] Given the nature of the CMA's reasoning in the Final Determinations, it is clear that such reconsideration may lead to a lower AK adjustment.

1.17 Making an adjustment that is lower than that implied by the mechanistic application of the AK term will lead to charges being higher than they would have been had the AK term been applied mechanistically. This would not normally be in the interests of consumers, were there not to be a strong reason for us to apply a lower adjustment.

21 See the Final Determinations at paragraphs 10.109 and 10.110.

22 See the Final determinations at paragraph 1.114.

23 See the Final Determinations at paragraphs 10.115 and 10.116.

24 See the Order at paragraph 9.

So, our approach needs to ensure that we have strong and well-founded reasons for making any changes.

1.18 There has been a clear finding by the CMA that our approach to applying the 2020 and 2021 price controls to determine the size of the AK adjustment was flawed. When making this finding, the CMA was considering the same duties as we had done in taking the Final Decision.[25]

1.19 Investors will expect the CAA to give due consideration to the CMA's Final Determinations in responding to the matters remitted to it. In this context, we consider that it would undermine the credibility of the regulatory regime as a whole for the CAA not to give due weight to the findings of the CMA when considering these matters. If the CAA were not to do so, regulatory certainty and investor confidence in the regime would likely be undermined. This in turn would make it harder for HAL to seek efficient finance in the long run and make financing more expensive.

1.20 As the costs of efficient financing are reflected in the price control that we set for HAL, this would increase the costs for future consumers and would not be in their interests in the long run. We consider that the risk of us not responding appropriately to the CMA's Final Determinations appropriately (which could be both material and long-lasting) outweighs the detriment that consumers would be likely to face in the short term as a result of a change to the level of the AK adjustment increasing airport charges in the short term in H7.[26]

1.21 Further, we consider that our general approach of setting the price control at a level that is no higher than necessary to support the efficient operation of Heathrow airport has a corollary that the price control should also not be set at a level that is lower than is necessary. The CMA's findings are such that the impact of the AK factor was to set the price control overall at a level that was lower than necessary. This is not in the interests of consumers.

1.22 Taken together, these make clear that it is appropriate for the CAA to revisit the calculation of the AK given that there is the likelihood of detriment arising for consumers in the shorter term a result of the CAA reconsidering the way in which the AK term is calculated.

Our approach to reconsidering the AK adjustment

1.23 In developing our response to the CMA's Final Determinations, we have considered the CMA's approach in detail. In doing so, we note that the AK adjustment this is a "one-off" to take account of the specific circumstances of the covid-19 pandemic. Our

[25] See section 30 CAA12.

[26] In this context, having considered our "secondary duties" under CAA12, the most important of those duties is our need to have regard to the need to our activities being carried out in a manner that is "consistent" with and "proportionate" to the Final Determinations.

approach to addressing the CMA's findings is, therefore, wholly confined to responding appropriately to the CMA's Final Determinations in the context of the facts prevailing in 2020 and 2021.[27]

1.24 The CMA clearly found that it is appropriate for some adjustment to be made to reflect appropriately identified over recovery of revenues by HAL in 2020 and 2021, and that the level of that adjustment would not be properly reflect either of the upper or lower bounds represented by:

- HAL's submissions that the adjustment should be zero; or
- the mechanistic application of the AK formula set out in our Final Decision.[28]

1.25 Bearing this in mind, we have sought to calculate an adjustment in respect of 2020 and 2021 that:

- takes account of the CMA's approach to estimating the distorting impact of the Dt and BRt terms; and
- appropriately holds HAL to the price control conditions that applied in 2020 and 2021, proportionately reflecting the level of actual over-recovery by HAL and the need to avoid perverse outcomes.

Adjustments in respect of capex and business rates

1.26 We noted that:

- the CMA explicitly acknowledged that holding HAL to the price control conditions that applied in 2020 and 2021 was an important consideration;[29]
- we had already taken account of the impact of the covid-19 pandemic on HAL by making a RAB adjustment; and
- that the CMA noted that the use of correction factor forms one of a broader set of price control arrangements and that it would not expect there to be any necessary or straightforward relationship between HAL's overall returns and the overall of the correction factor to be applied.[30]

1.27 However, we note that the CMA was clear that the AK adjustment raised matters that were substantively different from the RAB adjustment:

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27 As such, the CAA does not consider that the approach set out in this chapter sets any precedent (other than in respect of our recognition of the importance of the Final Determinations) for the way in which it will either approach price controls, or consider the impact of other exceptional circumstances in the future.

28 See, comments above and, for example, the Final Determinations at paragraph 10.94(d).

29 See the Final Determinations at paragraph 10.86.

30 See the Final Determinations at paragraph 10.72.

- the RAB adjustment addressed forward looking issues concerned with financeability and incentives; while
- the AK term was backward looking in comparing outcomes with forecasts and had the effect of increasing HAL's losses when volumes are low.[31]

1.28 As a result, we propose to adopt an approach based on the CMA's Final Determinations. The CMA sought to analyse the appropriateness of the overall AK adjustment by reference to the underlying drivers of HAL's allowed revenues. In so doing, it analysed the workings of the capex ("Dt") and business rates ("BRt") adjustments and found that, through comparing the outturn figures with the relevant forecasts for capex, business rates and passengers, those terms led to HAL returning amounts that exceeded the revenues that it has actually earned in relation to those elements of the price control, so increasing its losses.

1.29 The CMA clearly indicated that, for the Dt and BRt terms, a more appropriate approach would have been to calculate the adjustments consistent with the revenues that would have arisen if the levels of capex and business rates had been accurately forecast and so avoiding HAL in returning a significantly larger amount to users than it can reasonably be viewed as having over-recovered. This would have then better reflected the revenues from the numbers of passengers that actually used the airport.[32, 33]

1.30 This is the approach we propose to adopt so that we act consistently with the CMA's Final Determinations and the amounts of the adjustment arising from the Dt and BRt terms are based on what HAL actually did recover given the level of passengers in 2020 and 2021. On this basis, we have recalibrated these adjustments by applying the proportion of outturn passenger volume to forecast passenger volume to the original figures. For 2020 and 2021, the outturn passenger volume was 27.1% and 23.6% of forecast passenger volumes respectively, giving adjustments totalling £51 million as further set out in Table 1.1.

[31] See the Final Determinations at paragraph 10.87.

[32] See the Final Determinations at paragraph 10.94.

[33] See the Final Determinations at paragraph 10.109ff.

Table 1.1: Proposed recalibration of capex and business rates components of the AK factor. Figures calculated in accordance with the Final Proposals in brackets)[34]

Adjustment (£ million, 2020 CPI-real prices)	2020	2021	Total
Over-recovery due to the development capex term Dt	11 (40)	21 (89)	32 (129)
Over-recovery due to the business rates term BRt	9 (35)	9 (40)	19 (74)
Total (may not sum due to rounding)	**20** **(75)**	**30** **(129)**	**51** **(204)**

Source: CAA calculation

Adjustments in respect of the "Passenger mix"

1.31 While the CMA set out an alternative approach to making adjustments for the Dt and BRt terms and was clear that the approach used in the Final Decision exaggerated the level of HAL's over recovery, its criticisms of the issues around passenger mix were made in less forceful terms. The CMA did not point to an alternative means of assessing the appropriate level of this adjustment.

1.32 We also note that:

- unlike the Dt and BRt terms, the "passenger mix" adjustment does not arise as a result of a comparison between the actual level of revenue recovered and that which HAL was entitled to recover under any specific element of the price control formula;
- the fact that airlines operated flights with fewer passengers than expected is a direct consequence of the impact of the covid-19 pandemic, rather than a function of the price control formula itself. As such, it appears to be, at least to an extent, a manifestation of the volume risk, which the CMA decided, in its Final Determinations, had clearly been allocated to HAL by the Q6 (and therefore the iH7 price controls); and

[34] The detailed calculations underlying these figures are set out in Appendix D.

- much of the difference between the outturn yield per passenger and the actual allowed yield per passenger may also be a function of HAL's choices over the way it structured its charges (to include charges that are invariant to passenger numbers, such as aircraft parking) which are not mandated by the CAA under the price control formula.

1.33 As such, the justification for making an adjustment to reflect the "passenger mix" does not appear to be the same as that for making adjustments to the impact of the Dt and BRt terms. Further, as the CMA recognised, [35] we need to reflect the importance of holding HAL to the price control set.

1.34 At the same time, we need to take appropriate account of the CMA's observation[36] that we had not got a reliable basis for treating the differences between the actual and allowed yield per passenger as having arisen as a result of a "failure" on the part of HAL in the way it set its charges. We also recognise the difficulties HAL encountered in making an accurate passenger forecast in the context of the circumstances of the covid-19 pandemic which also manifested themselves in the problems the CMA identified in relation to calculating the Dt and BRt terms.

1.35 In this light, and given the need to act consistently with the CMA's Final Determinations, we have considered again how to reassess the level of adjustment arising from the "passenger mix". In doing so, we have taken the view that:

- As with the adjustments relating to the Dt and BRt terms, it would not be appropriate for the CAA to make no adjustment to the amount calculated for the purposes of the Final Decision. We have taken this view in the light of the CMA's comments on the risk that the exceptional circumstances of the covid-19 pandemic, the scope for fixed or minimum charges that would normally be considered appropriate could imply over-recovery where passenger numbers were very low;[37]
- Equally, in line with the CMA's broad findings it would not be appropriate for us to completely remove the passenger mix adjustment, as to do so would not give appropriate weight to:
    (i) the need to hold HAL to the price control arrangements prevailing at the time, including the allocation of volume risk under the price control for 2020 and 2021; and

35 See the Final Determinations at paragraph 10.86.

36 See the Final Determinations at paragraph 10.114.

37 See the CMA's Final Determinations at paragraph 1.116.

(ii) the CMA's comments that the fact that passenger numbers turned out to be significantly lower than forecast did not itself provide a reason for departing from the approach that would otherwise have been expected to apply.[38]

1.36 As a result, we consider that we should use a different approach to calculating the passenger mix adjustment that should apply that differs from the "standard workings" of the per-passenger yield price control. The options we have considered are:

- Option 1: to take the same approach to scaling this element of the AK adjustment as we did for the Dt and BRt adjustments, by pro-rating it to the actual number of passengers seen in 2020 and 2021. This would have the benefit of consistency with the other elements of the adjustment, but has the weakness of applying the same solution to different kinds of problem, where the underlying issues and reasons for the adjustments are different; and
- Option 2: to share the "passenger mix" adjustment equally with consumers, which would have the benefit of acknowledging that HAL's failure to forecast passenger numbers accurately in 2020 cannot be seen as a "failure" on its part in the circumstances of the covid-19 pandemic, but which appears to us to be more appropriate as it also reflects the importance of holding HAL accountable to a price control settlement that clearly allocated volume risk to HAL.

1.37 Having considered these matters carefully, we consider that it is appropriate to reflect the difference in justification between the adjustments we should make in respect of the Dt and BRt terms and that in respect of the "pax mix" adjustment as set out in Table 1.2. We consider that this difference is most appropriately reflected by adopting a different approach for the pax mix adjustment in line with Option 2 above, giving adjustments totalling £25 million as further set out in Table 1.2.

Table 1.2 Proposed recalibration of pax mix component of the AK factor. Figures calculated in accordance with the Final Decision in brackets

Adjustment (£ million, 2020 CPI-real prices)	2020	2021	Total
Over-recovery due to the passenger mix element	8 (17)	17 (33)	25 (50)

Source: CAA calculation

[38] See the CMA's Final Determinations at paragraph 10.114.

1.38 The combined effect of these adjustments is set out in Table 1.3 below. On this basis, we propose to recalibrate the AK adjustment at £76 million instead of the £253 million calculated in accordance with the Final Decision.

Table 1.3 Proposed recalibration of all components of the AK factor

Adjustment (£ million, 2020 CPI-real prices)	2020	2021	Total
Over-recovery due to the development capex term Dt	11	21	32
Over-recovery due to the business rates term BRt	9	9	19
Over-recovery due to the passenger mix element	8	17	25
Total (may not sum due to rounding)	**29**	**47**	**76**

Source: CAA calculation

Summary of our proposals

1.39 We propose to recalibrate the AK adjustment calculated in accordance with the approach taken in the Final Decision with an approach to calculating it that:

- for the capex element of the adjustment, adopts the CMA's reasoning in the Final Determinations to calculate an adjustment of £32 million;
- for the business rates element of the adjustment, also adopted the CMA's reasoning to calculate an adjustment of £19 million; and
- for the passenger mix element of the adjustment shares the adjustment calculated in accordance with the approach taken in our Final Proposals with a 50% sharing of that amount with consumers to calculate an adjustment of £25 million.

1.40 Taken together, this would reduce the AK adjustment from £253 million to £76 million.

1.41 In order to smooth the impact of this adjustment over the remaining years of the H7 period, we propose that this adjustment should feed into HAL's charges equally in 2025 and 2026. This and other implementation issues are discussed in more detail in chapter 8 (Implementation).

Chapter 2

Premium applied to index-linked debt costs

Introduction

2.1 The approach we adopted to estimating the overall WACC for the Final Decision included, within the calculation of HAL's the cost of debt, an "index linked premium" to reflect the costs incurred by HAL in issuing index-linked debt. Index-linked debt represents debt whose yield is dependent on outturn inflation. The index-linked premium we used was intended to reflect the difference in the cost of such instruments compared to the cost of equivalent debt with a fixed coupon, when the cost of each type of instrument is expressed on a comparable basis.

2.2 In the Final Decision, we assumed that index-linked debt would be 15 basis points ("bps") more expensive than fixed-rate debt on a nominal basis.[39] We based this assumption on an estimate set out by HAL in its Revised Business Plan,[40] supported by our own assessment of five HAL's Class A bonds. This fed through into an increase in the estimate of the WACC that we used for the Final Decision of two basis points (from 3.16% to 3.18%).

Summary of the Airlines' Appeal

Grounds of Appeal

2.3 The Airlines contended that the Final Decision included two errors of fact and two errors of law.

Error of fact one: Premium principle

2.4 The Airlines submitted that:

- in justifying the inclusion of an index-linked premium by comparing the spreads of five of HAL's index-linked bonds with contemporaneous iBoxx spreads, the CAA's interpretation of the data was wrong. For three of the five bonds, the issuance spread was lower for HAL's index-linked bonds. The simple average difference was that HAL's index-linked bonds had a negative premium of over 10bps;

39 CAP2524D, paragraph 9.142.

40 HAL (2020), "*H7 Revised Business Plan (Detailed)*", December, p412.

- the CAA had made a statistically invalid comparison between the spread of five of HAL's index-linked bonds as against recognised benchmarks. This had resulted in an error of fact which (in and of itself) undermined the CAA's analysis; and
- investors generally required a lower return on index-linked debt because it does not carry inflation risk, meaning that the CAA's estimation of an uplift was wrong conceptually.

Error of fact two: Premium calibration

2.5 The Airlines argued that the CAA was wrong in fact because it was inappropriate to add a premium of 15bps in circumstances where HAL would also receive a benefit of lower costs from issuing its own index-linked bonds. They argued that, in the context of RIIO-2, it was estimated that energy network companies issued nominal index-linked debt at 11bps below equivalent nominal debt, and it would be appropriate to reduce the cost of index-linked debt by up to 10bps, not to apply a 15bps premium.

Error of law one: Premium principle

2.6 The Airlines submitted that:

- the reported average was based on a weighted average which gave a 60.5% weight to a single observation when the CAA should have considered a simple average;
- the CAA placed the incorrect interpretation on the bonds data;
- the inclusion of an index-linked premium was novel and unjustified. There was no premium included in recent decisions by other regulators and the CAA had failed to adequately justify its inclusion of such a premium; and
- the CAA's approach was based on a material misunderstanding of the nature of index-linked debt. The cost of index-linked debt could be derived by subtracting inflation expectations from a nominal yield but, to derive a sufficiently accurate measure, other factors specific to such debt need to be considered, that is, the lower return required by investors as they no longer bear inflation risk. This was the primary reason why the CAA's treatment of the adjustment could not reasonably be supported. Adding a positive index-linked premium of 15bps to the return from nominal gilts, and assuming that 30% of debt was index-linked, was irrational.

Error of law two: Premium calibration

2.7 The Airlines submitted that:

- In calculating the magnitude of the adjustment required, the CAA considered only a sample of five HAL index-linked bonds. The correct method for estimating the appropriate adjustment involves comparing the yields of index-linked and nominal bonds issued, not just by HAL, but in the market more widely.
- British Airways contended that the index-linked premium should have been calculated by:
    - taking the 20-year nominal gilt yield from the Bank of England's yield curve calculations;
    - deducting the long-term expected RPI inflation of 2.9%; and
    - then further deducting the 20-year index-linked gilt yield from the Bank of England's yield curve calculations.

The CMA's Final Determination

2.8 In its Final Determination, the CMA:

- agreed with the Airlines that they would typically expect index-linked bonds to exhibit lower yields than fixed-rate debt due to the absence of an inflation risk premium. However, the CMA also noted that there was some merit to our supposition that this is offset by lower liquidity in corporate index-linked markets. Overall, the CMA said that we might have had grounds for applying a premium, but as economic theory suggested a discount was more appropriate, we should have had a sufficient evidential basis for finding that a premium existed;
- found that the evidence base (of five bonds) we considered was limited and far from compelling, and that we were wrong to draw any meaningful conclusions from it;
- determined that, as our objective was to assess how any premium would translate into an impact on the cost of debt, such an approach would be more consistent with taking a weighted average (as we did) rather than a simple average. Nonetheless, the CAA had been wrong to rely on such limited data to draw meaningful conclusions and should have given the matter more scrutiny;
- it is unclear how using evidence from government bond markets would have avoided any error, and that such markets are different to corporate bond markets in important respects; and

- the absence of a positive index-linked premium in other regulated sectors is not necessarily sufficient evidence that a positive index-linked premium for H7 was wrong. However, this was a relevant consideration that we were wrong not to have taken into account.

2.9 The CMA concluded overall that we erred in fact and law that in concluding a 15bps index-linked premium in the calculation of the WACC on the basis of the evidence we considered and, as the error was material (having the potential to have a significant impact on the overall level of the price control and future controls), remitted this determination to us for reconsideration.

Our approach to reconsidering this issue

2.10 We have further considered the evidence regarding whether or not index-linked debt is generally issued at a higher cost than fixed-rate debt. To support this, we commissioned our advisors, Centrus, to examine whether an issuer pays an additional issuance premium when issuing index-linked bonds compared with fixed-rate nominal bonds.

2.11 Centrus undertook a comparison of index-linked bonds compared to fixed-rate bonds of various issuers including Heathrow and other investment grade regulated utility companies. Centrus's analysis is presented published alongside this consultation. In summary, Centrus found that there is a weighted average index-linked premium in the range of 10-20 basis points for index-linked bond issues. However, Centrus cautioned that this needed to be considered in the context of the following:

- The data set is small – only 17 pairwise comparisons were viable given the lack of strong comparable examples;
- For context, based on the issuers sampled by Centrus, there were 90 inflation linked bonds outstanding, meaning there is only a comparable fixed-rate bond data point for around 20% of these bonds;
- Of these pairwise comparisons, most bonds were not issued on the same date. While Centrus tried to control for this by interpolating values using the iBoxx index as a reference point, the difference in date is a constraining factor with respect to the analysis of bond pairs;
- In practice, index-linked public corporate bond issuances have recently been significantly smaller in size than their fixed-rate counterparts and volumes have been very low. For example, Centrus observed that index-linked bond issuance by the sampled issuers was 87% lower in the period 2018-2023 compared with the period 2005-2010);

- private market institutional investors are more likely to buy and hold index-linked bonds to maturity, in order to match specific liabilities. As such index-linked debt is often issued privately and in smaller size compared with its fixed-rate equivalents; and
- there is also an active index-linked swap market and issuers often find it more cost effective to issue fixed-rate debt and then enter inflation swaps.

Our views and summary of our proposed approach

2.12 Having considered Centrus's analysis, our view is that the small size of the dataset and the constraining factors identified by Centrus are cause for concern, given the CMA's feedback in respect of the evidentiary threshold needed to conclude on the existence of an index-linked premium.

2.13 We note that, although the weighted average index-linked premium is positive, there are several examples of index-linked bonds being issued at a discount to their fixed-rate counterparts. This undermines the confidence with which we can robustly conclude that any index-linked premium exists.

2.14 Further, the decrease in the liquidity of the index linked bond market and the existence of an active index-linked swap market suggests that issuers may have the option of achieving more cost effective results by issuing a combination of fixed rate debt and inflation swaps.

2.15 On this basis, we consider that there is insufficient evidence to conclude that there is a systematic index-linked premium, and propose to remove the premium from our WACC estimates. This has the effect of reducing the H7 RPI-real cost of debt allowance from 0.80% to 0.62% and the H7 RPI-real WACC from 3.18% to 3.16%.

2.16 Removing the index-linked premium also suggests the need to update the cost of new debt indexation model, which currently includes this premium.

2.17 We discuss in chapter 8 (Implementation) how we adjust HAL's price control for the 2 bps reduction in its WACC.

Chapter 3

Shock factor applied to passenger forecasts

Introduction

3.1 As the final step in the process the CAA used to develop its passenger forecast for H7, we applied the "shock factor" to the passenger forecast. This adjusted the forecast to represent the downward impact of the typically occurring, but unforecastable events that it is reasonable for the CAA to anticipate would be likely to affect the forecast for the H7 period. As such, using the shock factor allowed us to take account of asymmetric non-economic downside risks (due to events such as adverse weather, volcanic eruptions, terrorism or strike action).

3.2 We had previously applied an adjustment of this kind in the Q6 price control determination, in which we made applied a "shock factor" adjustment calibrated to match the average annual loss of volumes that HAL had experienced over the period from 1991 to 2012 as a result of one-off events such as the Gulf War, the 9/11 terrorism attacks, SARS and the disruption caused by Icelandic volcanic ash.

3.3 In the Final Decision, we applied a shock factor only to the remaining years of the H7 period (2023 to 2026), rather than those where the outturn number of passengers was known. We explained that:

> "*We continue to consider that the shock factor is an appropriate tool for producing a risk-weighted forecast for the purpose of a price control. This is because the shock factor takes account of asymmetric non-economic downside risks (such as adverse weather, volcanic eruptions, terrorist events and international conflicts), that lead to acute falls in passenger numbers and which are difficult to predict, but where the occurrence in any four or five year forecasting period is likely enough that applying a factor to take account of such events is appropriate to improve the accuracy of the forecast for that period*"[41].

3.4 The magnitude of the shock factor we applied was 0.87% which was consistent with the updated estimate that HAL had applied to the forecasts in its RBP Update2.[42]

[41] CAP2524B, paragraph 1.28.

[42] CAP2524B, footnote 3.

Summary of the Airlines' Appeal

Grounds of Appeal

3.5 The Airlines appealed against our use of the shock factor on the grounds that:

- it was wrong to apply a shock factor at all because it double counted the downside risks that had been taken into account elsewhere – namely, in the forecast for 2023 (which, the airlines stated, included a downside risk adjustment particularly for staffing risk including strike action) and in the cost of capital;[43]
- it was wrong to apply the adjustment to the whole of 2023, despite the fact that we had the benefit of outturn data for at least part of that year; and
- it was wrong to apply a shock factor of 0.87% as the magnitude of the adjustment was arbitrary and not supported by evidence, being based on an unvalidated calculation made by HAL.

The CMA's Final Determination

3.6 In its Final Determination, the CMA found that the use of the shock factor was not wrong on account of double counting between the shock factor and other elements of the passenger forecast because:

- the degree of overlap between the risks taken into account elsewhere within the passenger forecast (industrial action and macroeconomic risks) and those reflected in the shock factor were likely to be minimal;[44] and
- there was no interaction between the shock factor and the cost of capital and in the Final Decision each address different sources of risk".[45]

3.7 The CMA also determined that that we had not been wrong to apply the shock factor to the entirety of 2023 passenger forecasts because :[46]

- the forecast for 2023 was not based on actual data;
- where forecasts are based on forward-looking booking data, however up to date this data was at the time, the resulting passenger forecasts will be vulnerable to the types of downside risk which are considered in the application of the shock factor; and

43 VAA Notice of Appeal, paragraphs 4.122-4.123.

44 CMA (2023), Final Determination, paragraph 9.278.

45 CMA (2023), Final Determination, paragraph 9.283.

46 CMA (2023), Final Determination, paragraph 9.287-9.289.

- the Airlines' argument was inconsistent with the purpose and application of the shock factor.

3.8 On this basis, the CMA did not consider that we were not wrong to have applied the shock factor to the entirety of 2023 passenger forecasts.

3.9 However, the CMA did find that that we erred because we had failed properly to assess (by not properly checking the and verifying the calculations and the methodology underpinning those calculations) whether HAL's calculation of the figure of 0.87% was correct and thus failed to take account of relevant considerations and evidence and made a decision without adequate foundation in the evidence.

Our views and summary of our proposed approach

3.10 In response to the CMA's order, we have carried out an assessment of HAL's calculation of the 0.87% shock factor. We undertook this by checking the and verifying the calculations and the method underpinning the calculations used by HAL in its RBPUpdate2.

3.11 Our assessment is that HAL's calculations involved making certain judgements, including:

- the precise start and end date of those shocks; and
- the passenger numbers that would have prevailed in the absence of the shock.

3.12 In order to verify HAL's calculations, we have reviewed these judgements, having taken into account that the CMA determined that we had "*erred in failing to verify the calculations comprising the Shock Factor, not as to the shock events included in its scope*".[47]

3.13 We consider that the precise start and end dates of each shock are subject to a considerable degree of judgement, but, having reviewed them, we consider that the dates chosen by HAL appear reasonable and consistent with our understanding of the chronology of each shock. A summary of our work on these matters is set out in Appendix C.

3.14 We have examined HAL's approach to estimating the passenger numbers that would have prevailed in the absence of the shock. HAL had assumed that the counterfactual passenger numbers during a shock period would be equal to the average of the passenger numbers in the same month immediately prior to and after the onset of the shock. We consider that this was a reasonable approach and given that shocks can occur in any month of the year introduces no

[47] CMA (2023), Final determination, paragraph 9.306.

significant bias to the shock factor calculation, and that there are not clearly preferable alternative approaches.

3.15 On the basis of the judgements that we have considered and verified set out above, we have been able to independently replicate HAL's estimate of the shock factor (0.87%). We have also been able to establish that the reason for the reduction in the level of the shock factor since Q6 is that there has been a proportionately lower prevalence of downside shocks since 2014. If this trend were to continue, this would imply an even lower shock factor in H8.

3.16 Based on these observations, we conclude that HAL calculated the shock factor on a reasonable basis, and propose to retain its estimate of 0.87% and make no further adjustments to HAL's price control for these matters.

Chapter 4

Opex allowance in respect of Pension Deficit Repair Costs in H7

Introduction

4.1 The allowance that we made for HAL's operating expenditure ("opex") in the H7 price control was a key building block in the calculation of airport charges. Opex comprises a number of costs needed for HAL to operate the airport on a day-to-day basis. An appropriate opex allowance furthers the interests of consumers by ensuring that airport charges are calculated by reference to an efficient level of these costs and so has regard to the need to:

- secure that users' reasonable demands for AOS at Heathrow are met; and
- promote economy and efficiency on the part of HAL in its provision of AOS.

4.2 As part of our development of the opex allowance for the Final Decision, we considered the level of pension costs that HAL would incur during the H7 period, including those relating to a defined benefit pension scheme for employees joining before 2008, the BAA Pension Scheme (the "Scheme").

4.3 HAL's pension costs in relation to the Scheme have historically reflected the contribution plan agreed between the HAL and the Trustee of the Scheme at successive actuarial valuations, including any payments needed to address an actuarial deficit in the longer-term pension scheme funding (known as pension deficit repair costs or "PDRCs").

The Final Proposals and Final Decision

4.4 The Final Proposals included an allowance of £99m for PDRCs within the overall opex allowance.[48] We said if compelling evidence was provided by HAL that the allowance was appropriate and necessary, we would retain the allowance: if not we would make a downward adjustment to this allowance in our Final Decision.

4.5 In response to the Final Proposals, in August 2022, HAL explained that, while the overall pension scheme was in surplus at the time of the 2021 actuarial valuation, Heathrow's notional share of the overall scheme was continuing to experience a deficit. HAL provided a funding update as of September 2022, which presented an apparent deficit in its notional share of the scheme.

[48] CAP2365, Economic regulation of Heathrow Airport: H7 Final Proposals Section 2: Building Blocks, paragraph 4.72.

4.6 In January 2023, HAL's agreement with its pension fund trustees on contribution rates from 2023 to 2025 (inclusive) was made available to us. Our advisors on defined benefit pensions, the Government Actuary's Department ("GAD"), provided an initial assessment of this suggesting that PDRCs were not needed for the period covered by the 2021 valuation.

4.7 As the information on the 2021 actuarial valuation was made available to us late in the process, we did not have enough time before the 2023 Final Decision to conduct a detailed review of HAL's proposals in relation to PDRCs. Given the materiality of the amounts involved, we considered that it was appropriate for us to continue work and review this area beyond the timescales of the H7 Final Decision.

4.8 In the Final Decision we said we would bring forward proposals for a licence modification to put the required changes into effect if any adjustment to HAL's price control were required to reflect the outcome of this review.[49]

Developments since the Final Decision

4.9 HAL provided further updates in April 2023 to support the requested allowance.

4.10 We commissioned a report from GAD (the "GAD Report") reviewing HAL's position in relation to PDRCs in more detail. The GAD Report considers the evidence provided by HAL to support the request for £99 million of PDRCs as a part of H7, as well as the outcomes of the 2018 and 2021 actuarial valuations and possible outcomes from the 2024 actuarial valuation.

4.11 The GAD Report (published alongside this consultation) came to the following conclusions:

- The Scheme was assessed as being in surplus at the 2021 valuation. Therefore, there is no regulatory requirement for the Trustee and HAL to agree a recovery plan and, therefore, no requirement for HAL to pay PDRCs at present;
- Without formal sectionalisation arrangements in place, there is no requirement for PDRCs to be paid to remedy a notional deficit in any putative "HAL share" of the Scheme. HAL previously explained that the notional Heathrow section of the Scheme would remain in deficit following the conclusion of the current recovery plan. The GAD Report expressed the view that there would be no regulatory requirement to negotiate such a funding agreement, as there is no formal sectionalisation arrangement in place; and

[49] CAP2524C, Economic regulation of Heathrow Airport: H7 Final Proposals Section 2: Building Blocks paragraph 4.51.

- There is uncertainty surrounding what the position will be following the 2024 valuation, which is likely to conclude late 2025. Therefore, a degree of flexibility within the regulatory framework may be needed.

4.12 The GAD Report indicated the PDRC allowances set out in Table 4.1 may be appropriate for the H7 period.

Table 4.1: Level of PDRCs indicated by the GAD Report.

Actuarial Valuation	Period	Implied PDRCs allowance
2018 Valuation	January 2022- September 2022	£15m[50]
2021 Valuation	October 2022- December 2025	Nil
2024 Valuation	January 2026- December 2026	Nil but flexibility

Source: the GAD Report

Stakeholder Engagement

4.13 We wrote to HAL and airlines in September 2023 setting out the findings of the GAD Report and our intention to apply adjustments to HAL's allowance on the above basis.

4.14 HAL responded setting out its view that the level of PDRCs required in H7 remains unclear. HAL said there remains a risk its funding levels[51] may drop below a specified threshold leading to the Trustees requiring HAL to recommence PDRCs before the 2024 valuation is concluded. HAL also considers that there is a risk PDRCs will be required to recommence from 2026 onwards (that is, following the 2024 valuation). To address this, HAL proposed that we either:

- leave the PDRC allowance unchanged but allocate the risk of required repayments to HAL; or
- assume PDRCs will not be required but include an adjustment mechanism (such as an end of period RAB or revenue uplift) to allow actual PDRCs to be reflected.

[50] PDRCs for this year were agreed as part of the 2018 valuation and therefore not being reassessed as part of this consultation.

[51] The ratio of the Scheme's assets to its liabilities.

4.15 HAL also said the relevant pension scheme is the Heathrow section only. It disagrees with the conclusion of the GAD report that the absence of formal sectionalisation is an argument robust enough to justify its recommendation.

Our Views

4.16 Appendix A of the GAD report sets out that, as the BAA Pension Scheme is not explicitly sectionalised, the valuation of the scheme, where appropriate deficit repair costs would be assessed, treats the assets and liabilities as a whole. We do not consider that HAL's argument around the notional Heathrow section of the scheme justifies cost allowances in addition to those suggested in the GAD report.

4.17 In the light of the findings of the GAD Report and HAL's subsequent comments on our letter of September 2023, it seems relatively unlikely that HAL will be required to pay PDRCs for the period 2023 to 2025. Nonetheless, we recognise that there is a possibility (discussed further below) that the next valuation of the Scheme may give rise to the need for HAL to resume making payments into the Scheme in respect of PDRCs in 2026.

4.18 As a result, we do not consider that it is in the interests of consumers for airport charges to continue to be set using an opex allowance that is calculated on the basis that HAL will be making PDRCs. We propose to remove a figure equivalent to the allowance we had made for PDRCs for the period from 2023 to 2025 from the opex allowance used to calculate airport charges. This will reduce HAL's revenue and airport charges by £84 million (calculated as the £99 million[52] total allowance for PDRCs in H7, less the £15 million PRDCs required in 2022).

4.19 In reaching this view, we understand that there remains a possibility that HAL will need to recommence PDRCs during the H7 period. This could arise as a result of either:

- HAL breaching the requirement not to drop its funding levels below 95% for two consecutive quarters; or
- following the 2024 valuation, which will affect whether (and if so, how much) HAL will be required to pay by way of PDRCs for the period from 2026 to 2028.

4.20 While we might receive information on the first of these two sooner, we will likely receive information on the outcome of the 2024 valuation towards the end of 2025.This will be too late for us to make changes that can be reflected in HAL's airport charges during 2026, the last year of H7. We therefore propose to assess

[52] In 2020 prices (CPI deflated).

the level and appropriateness of any PDRCs payable in 2023 to 2026 as part of the H8 review process.

Summary of our proposals

4.21 We have decided to reduce HAL's opex allowance by £84 million, in line with the findings of the GAD Report.

4.22 We have set out how we will implement this reduction through a licence modification in chapter 8 (Implementation).

4.23 We recognise that there is still some uncertainty surrounding PDRCs for the rest of the H7 period. We will therefore assess (i) any PDRCs incurred in 2026 as part of the 2024 valuation, and (ii) any other PDRCs incurred between now and 2025, as part of our H8 review.

Chapter 5

Opex allowance in respect of Business Rates in H7

Introduction

5.1 During the H7 price control review, HAL was in discussions with the Valuation Office Agency ("VOA") about the business rates revaluation and the costs that would apply from 2023 onwards. This revaluation was based on the Heathrow airport operation as it was in 2021, that is, during the covid-19 pandemic, when two passenger terminals were closed at the airport in response to lower passenger numbers.

5.2 As part of our development of the opex allowance for the Final Decision,[53] we considered the level of business rates that HAL would pay during the H7 period, pending the outcome of HAL's negotiations with the VOA.

The Final Proposals and Final Decision

5.3 The Final Proposals included an allowance of £593 million[54,55] for business rates within the overall opex allowance, and a separate non-airlines business rates forecast of £5.6 million[56] relating to Other Regulated Charges.[57]

5.4 The Final Decision noted the 2023 rating list was subsequently published and applied from 1 April 2023 and the business rates that HAL would pay for the remainder of the H7 period was now clearer. The estimated annual payments that HAL was expected to make were lower than the figures that we had included in the Final Proposals by around £80 million.

5.5 Our view in the Final Decision was that the new estimated profile was a reasonable basis on which to base the future allowance in respect of business rates, and that we would confirm our approach to these matters in the second half of 2023 by carrying out a proportionate review of the costs arising from the 2023 rating revaluation. [58]

53 The role, and importance for consumers, of the opex allowance is discussed in the previous chapter.

54 See The Final Proposals at Table 5.3.

55 In 2020 prices (CPI deflated).

56 See the Final Proposals at Table 8.3.

57 See the Final Proposals at paragraph 4.69.

58 See the Final Decision at paragraph 4.47.

Developments since the Final Decision

5.6 Following the Final Decision, we carried out the review we had indicated we would undertake. This review covered HAL's actual business rates for 2022 and the payments it was committed to make for 2023 arising from the 2023 rating list. This review indicated that HAL's business rates liability over the H7 period would be £85 million lower than the opex allowance of £593 million and £5.6 million to be recovered from non-airline ORC users, set out in the Final Proposals and used for the Final Decision.

5.7 We now understand that the VOA intends to review airport business rates again during the H7 period, with updated business rates taking effect from April 2026. This revised level of business rates will be payable for the final nine months of the H7 period. Our understanding is that the VOA revaluation of business rates may result in an increase in business rates for 2026 to a level that is in excess of the allowance made in our Final Decision.

Stakeholder Engagement

5.8 We wrote to HAL and airlines in September 2023 setting out our assessment of the position relating to business rates and suggesting that an £85 million downward adjustment be made to the opex allowance to take account of these matters.[59] That letter also set out our understanding of the VOA's plans for conducting a revaluation to take effect from 2026 and suggested that the outcome of the next revaluation could be addressed by inserting an adjustment term in the price control.

5.9 In response, HAL acknowledged the level of its actual payments for 2022 and its committed payments for 2023 and that this suggested a downward adjustment of £85 million. However, HAL also indicated that it had been advised of the potential for a very large increase in rates payable from 2026 onwards.

5.10 HAL said that this uncertainty might be best dealt with by a mechanism that corrected the price control allowance when the final outcome for business rates in 2026 is known.

Our Views

5.11 Our assessment of the actual payments made by HAL in 2022 and its business rates liability for 2023 suggests that a downwards adjustment in the opex allowance to reflect this lower level of business rates might be appropriate. However, we also need to take into account the prospect of a further planned revaluation by the VOA to take effect towards the end of the H7 period.

[59] The impact on ORCs is very significantly smaller, being of the order of £200,000.

5.12 The VOA's revaluation may cause HAL's business rates to increase in a material way during 2026. This in part reflects the circumstances of the last revaluation, that was affected by the covid-19 pandemic and its consequential impacts on HAL's passenger numbers and profits.

5.13 The timing of the next revaluation also makes it difficult to resolve this issue within the H7 period. We understand that the new valuation will be published too late to be taken into account by HAL in its airport charges consultation for 2026. In addition, the rateable value may, potentially, be subject to challenge and subsequent revision.

5.14 To address this uncertainty and avoid a position in which HAL's business rates liabilities towards the end of H7 significantly exceed the allowance on which the price control was calculated, we propose not to make a downwards adjustment to the H7 business rates allowance set in our Final Decision at this time. The £85 million reduction in the opex allowance that would otherwise be due now will be "logged up" against any future increase in business rates for 2026 and the position "trued up" as part of the H8 price control review when the results of the next revaluation will be known.

5.15 We consider that this approach has the following benefits in the interests of consumers:

- It will reduce volatility in charges that might result from a short-term reduction in charges followed by a significant increase following the revaluation;
- HAL will face less exposure to the need to finance an increased business rates in 2026 which are not taken account of in the H7 price control; and
- The final position can be resolved promptly as part of the H8 price control review when the level of business rates for 2026 and the appropriateness of HAL's engagement with the VOA during the revaluation is clear.

5.16 This approach would spread the costs and risks associated with the volatility of HAL's business rates liabilities across both present and future consumers which we consider will best further the interests of consumers overall.

Summary of our proposals

5.17 We propose to:

- defer a downward adjustment to HAL's opex allowance by £85 million, pending the outcome of the planned revaluation by the VOA given our view that it is likely there will be a significant likely increase in HAL's business rates liability from April 2026;

- assess the level of business rates from 2026 in conjunction with the deferred £85 million downward adjustment for the H7 business rates allowance as part of setting the operating costs allowance for the H8 price control; and
- true-up the HAL's business rates liability over the H7 period as part of our work on the H8 price control.

Chapter 6

HAL's commercial revenues, "Pod parking" and the single till

Introduction

6.1 HAL's commercial revenues include income from a wide range of HAL's activities at Heathrow airport, including car parks. We make projections of these commercial revenues and include these projections in the "single till" calculations that we use to set the price control that applies to HAL's airport charges. In making these projections we seek to create appropriate incentives on HAL to encourage efficiency and protect the interest of consumers in the short and longer-term. An issue arose relatively late in the H7 process relating to what assumptions we should make in relation to a particular category of HAL's car parking revenue referred to as Pod parking revenue.

6.2 At the Q4 and Q5 price control reviews, we decided not to allow the capital expenditure associated with Pod parking into the RAB, as it was a novel project with a degree of technical and commercial development risk which did not enjoy airlines' support. We decided that excluding the project from the RAB would avoid users underwriting this risk. We retained this approach at Q6[60] and also excluded the operating costs and revenues associated with Pod parking from the single till calculations. As a result, the development and operation of the Pod parking product fell outside the single till price control arrangements.

The Final Proposals and Final Decision

6.3 In the Final Proposals we had omitted to make appropriate adjustments for Pod parking costs and revenues. We recognised this in the Final Decision but did not have sufficient time to calibrate and implement appropriate adjustments.

Developments since the Final Decision

6.4 Following the Final Decision and further engagement with HAL, we wrote to HAL explaining that we intended to take a proportionate approach to estimating incremental revenues from Pod parking, broadly consistent with our approach at the Q6 price control review.

60 CAP 1151: Economic regulation at Heathrow from April 2014: Notice granting the licence (caa.co.uk) at paragraph C41.

6.5 With support from CEPA, we completed analysis of incremental costs and revenues of Pod parking based on information provided by HAL.

Costs

6.6 In relation to capex, we note that:

- initial capex of £8.6 million in 2015[61] was removed from the RAB for the rapid transit system, equivalent to £10 million in 2020 CPI prices;
- HAL confirmed that no incremental capex has been incurred in relation to the Pod parking system since inception, and that it is not aware of any increase in underlying land values for the land used for the Pod car park and system; and
- we assessed HAL's estimate of £2.1 million per annum (2020, CPI) of incremental opex as being within the benchmark range for a system of this type (at 22% of the initial capex per annum).

Revenues

6.7 In relation to estimates of incremental commercial revenues from Pod parking, HAL provided various data and suggested an approach to estimating the premium (incremental revenue). This included comparing the average yield per parking space from Pod parking with the average yield per parking space for other similar business parking facilities at Heathrow. On this basis, HAL estimated that Pod parking would realise yield 73% greater than other parking products. HAL's estimate of the revenues from the Pod parking product that should be excluded from the forecast was £20.2 million.[62]

6.8 Having reviewed HAL's evidence, we considered that the Pod parking product is likely to command a premium closer to 50% over other parking products. We observe:

- It is more appropriate to compare the Pod car park revenue per space against the T5 business car park only, rather than against all business car parks as they are adjacent facilities that both serve the same terminal;
- On this basis, there was roughly a 50% premium in 2019;

61 See: CAP 1151: Economic regulation at Heathrow from April 2014: Notice granting the licence (caa.co.uk) at paragraph C41.

62 In 2020 prices (CPI deflated).

- Over the period 2015 to 2019, the premium has ranged from 38% to 51%. The premium was significantly higher in 2022 at 95.1%, but that appears to be because the T5 business car park was shut for the first six months of the year and, when that car park reopened, it took several months for the volume of users to recover; and
- Most of the premium is down to differences in occupancy between the Pod car park and the T5 business car park. We assume conservatively that differences in occupancy between the car parks are fully down to the relative attractiveness of the Pod parking product. When we strip out the effect of differences in occupancy, the 2019 premium reduces to 8.2%.

6.9 Applying this premium without allowing for incremental opex costs would lead to a reduction of £14.5 million in the commercial revenue forecasts over the H7 period. However, to remove Pod parking from the single till calculations we must also reduce the opex allowance to account for the relevant opex HAL incurs on this product. We have assessed the appropriate reduction in the opex allowance to be £10.5 million, which would reduce HAL's allowed revenues by £10.5 million.

6.10 As these two adjustments need to be set off against one another, the net effect of these two adjustments is a reduction in allowed revenues of £4 million (2020, CPI) over H7 (£14.5 million minus £10.5 million).[63]

6.11 We set out this analysis to HAL in a letter we sent to HAL in September 2023.

Stakeholder Responses

6.12 HAL responded to our September 2023 letter setting out that our assumption of a 50% premium likely to be an underestimation of the premium which applied to Pod parking. HAL set out that it has obtained research showing passengers prefer Pod parking and are, therefore, willing to pay more for the service.

6.13 On this basis, HAL stated that the T5 car park comparison should be a minimum, and that we should instead set a range with the T5 car park being the minimum premium and full portfolio of car parks being the maximum premium. HAL set out that this would equate to an average premium of 76.5% between 2015-2016.

6.14 Increasing the premium from 50% to 76.5% would decrease the commercial revenue related to Pod parking and, therefore, increase HAL's allowed revenue from airport charges.

63 The precise figure is set out in Appendix D at Table D.3.

Our Views and summary of our proposals

6.15 HAL did not provide any new evidence to support its suggestions that T5 business parking is not a reasonable comparison to set the premium for Pod parking.

6.16 Our view is that it continues to be appropriate to compare the Pod car park revenue per space against the T5 business car park only, rather than against all business car parks as they are adjacent facilities that both serve the same terminal. On balance, this approach ensures we do not underestimate the commercial revenues associated with Pod parking.

6.17 As a result, we propose to apply a net reduction in the commercial revenue forecast of just under £4 million (2020, CPI) over H7 (£14.5 million - £10.5 million). The detailed calculations underlying this figure are discussed in chapter 8 (Implementation) and Appendix D at Table D.4.

6.18 This will lead to an equivalent small increase in HAL's airport charges. Our approach to implementing these changes is set out in chapter 8 (Implementation).

Chapter 7

Other issues arising from the Final Decision

Introduction

7.1 The Final Decision made the modifications to the Licence that we had consulted on in the Final Proposals to give effect to our policy.[64] Since the Final Decision:

- we have identified a manifest error in the formula in condition C1.6 of the Licence;
- a potential issue with how charges are calculated for 2025 and 2026 has been raised with us; and
- HAL has also raised certain other matters in relation to the H7 price control for consideration.

7.2 This chapter sets out the background to these issues, our views on them and our proposed course of action in relation to each one.

Formula error in Condition C1.6

Background

7.3 Condition C1.6 of the licence contains the formula for calculating the average revenue yield per passenger for the given Regulatory Year. This is a crucial input to the overall price control formula for calculating the maximum allowed yield per passenger in the current year.[65] The output of the formula is intended to calculate the value of Y_t in an iterative way so that the value in each current year is a function of the value in the prior year.

7.4 The formula in Condition C1.6 is as follows:

$$Y_{t-1} = Y_{t-2} \times (1 + CPI_{t-1} + X_t) + S_{t-1}$$

Where:

- Y_t is the average revenue yield per passenger in Regulatory Year t – 1 (in the year 2023 this was £31.570 +S_t);
- CPI_t is an inflation term;

64 Appendix E to our Final Decision which is a notice of the CAA's decision to modify HAL's licence. See CAP2524E3: H7 Final Decision: Appendices D – H | Civil Aviation Authority (caa.co.uk)

65 This output is an input to the formula used to calculate the maximum allowed yield for the current year in accordance with the formula in Condition 1.5.

- X_t is a value defined in the licence to give effect to our decisions with regard to the level and profile of the price cap; and
- S_t is the allowable security and/or health and safety cost per passenger in Regulatory Year t – 1.

7.5 The value of X_t in this formula points to a different year from the value of Y_t. We have identified a suspected error in the formula resulting from the value of X_t pointing to a different year from the value of Y_t. The formula as set out in the Licence would produce a profile of charges which is very different from the policy that we stated in our Final Decision. In paragraph 13.73 of the Final Decision, we stated:

> *"Our final decision is to have a flat price cap profile for 2024-26, combined with the 2022 and 2023 previously specified holding caps*".[66]

7.6 This statement of our policy was supported by a table to show the exact charges we expected. This is reproduced as Table 7.1 below.

Table 7.1: price cap for the H7 price control in 2020 real and nominal prices, as shown in the H7 Final Decision

£/passenger	2022	2023	2024	2025	2026
Allowed aeronautical charges (CPI 2020)	26.96	26.06	21.03	21.03	21.03
Allowed aeronautical charges (Nominal)	30.19	31.32[67]	25.43	25.24	25.28

Source: CAA,: The Final Decision, Table 13.6

7.7 The issue that we have identified with the formula as written in the Licence at Condition C1.6 is that it would generate a profile of charges that is very different from that set out in the Table above. Table 7.2 below makes clear the impact of the suspected error by illustrating the profile of charges which would result from application of the formula as currently set out in Condition C1.6 compared to the charges set out in the Final Decision:

66 See the Final Decision at paragraph 13.73.

67 The licence refers to a figure of £31.57. The difference of £0.25 is the result of service quality incentives recoverable by HAL. See the discussion of this matter below.

Table 7.2: Illustration of the impact of the suspected error

Allowed aeronautical charges (Nominal, £/passenger)	2022	2023	2024	2025	2026
As specified in Final Decision	30.19	31.32	25.43	25.24	25.28
As calculated from current licence drafting	30.19	31.32	25.43	31.52	31.58
Difference	**0.00**	**0.00**	**0.00**	**6.28**	**6.30**

Source: CAA. This table reproduces the charges set out Table 8 and Table 13.6 of the Final Decision

7.8 Table 7.1 shows the very significant difference this error makes to charges arising in 2025 and 2026 and that this is manifestly at odds with the Final Decision.

Stakeholder views

7.9 We identified this issue in the course of responding to a separate issue raised by stakeholders. We have discussed this issue with BA and HAL in the context of conversations that were primarily about that other issue. BA and HAL expressed the view that this did indeed appear to be a manifest error as it produced a profile of charges that is very significantly different from the profile we published in our Final Decision.

7.10 In response to our raising of this issue, British Airways suggested that this matter could, in the interests of speed, be addressed through an “erratum notice” correcting the position.

Our views and proposed approach

7.11 We have considered the impact of the issues raised above and consider that the formula set out in Condition C1.6 contains a manifest error that means that it would not deliver a profile of charges that is consistent with the Final Decision.

7.12 It is clearly in the interests of consumers that we address this issue and we also consider this approach to be consistent with good practice in public administration by correcting errors as and when they come to our attention.

7.13 We have considered the best way to address this and propose that this is to modify HAL’s licence to correct the issue. While it may have been appropriate for us to use an erratum notice to correct, for example, a typographical error in the Licence identified shortly after the Final Decision, such an approach does not seem appropriate now that a year has passed since the Final Decision was published.

7.14 In this light, we propose to correct this error by using the licence modification procedure set out in CAA12 to amend the formula in Condition C1.6 of the Licence to insert "-1" after "X" so that it reads (new text is highlighted):

$$Y_{t-1} = Y_{t-2} \times (1 + CPI_{t-1} + X_{\mathbf{t-1}}) + S_{t-1}$$

7.15 No other amendment is needed and each of the individual terms within the formula would retain the meaning presently given them in the Licence.

Calculation of charges for 2025 and 2026

7.16 In this section we discuss a potential issue with respect to how charges are calculated for 2025 and 2026.

7.17 As noted above, Table 13.6 of the Final Decision set out the profile of charges for H7. The same table was set out as Table 8 of the "Summary" document for the Final Decision[68] setting a price cap for 2023 of £31.32.

7.18 However, Condition C1.1 of the Licence specifies a maximum revenue yield per passenger of £31.57 for 2023.[69] We explained the difference between these two figures in a footnote to Table 8 as follows:

> *"[4] HAL's price cap for 2023 was set in January 2023 by means of a holding cap. The maximum revenue per passenger specified in the holding cap decision is £31.57 rather than the £31.32 shown above. The figure of £31.32 reflects the underlying revenue requirement for 2023 excluding the impact of capital triggers and the payment of the 2021 service quality bonus."*

7.19 Typically, the amount that is recorded in the Licence for the maximum revenue yield per passenger[70] would *exclude* payments for capital triggers and service quality bonuses. This is because there are separate terms that separately remunerate those terms. However, the modifications we made to implement the Final Decision included these payments (totalling £0.25 within the maximum revenue yield per passenger term). In order to ensure that charges for 2024 were calculated correctly under the Licence, we needed to make a corresponding change to the way the X value is calculated for that year. Consequently, we calculated the value of X_{2024} directly as the change required to ensure that the charge reduced from £31.57 in 2023 to £25.43 in line with our Final Decision.

Stakeholder views

7.20 BA, the LACC, the AOC and Delta all contacted the CAA to express concerns about the calculation of charges for 2024. Their concern was that, because the

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68 At page 19: See: www.caa.co.uk/CAP2524A.

69 See paragraph C1.1 of the Licence.

70 This is expressed as the term "Y_t" discussed above.

£0.25 per passenger in respect of capital triggers and service quality bonuses had been included in the maximum revenue yield per passenger, this would lead to an overstatement of the charge in 2024.

7.21 HAL expressed an opposing view. HAL referred to our Final Decision to explain its understanding that the value of X_{2024} was correctly calculated. It set out how X_{2024} was calculated as the value required to ensure that the charge for 2024 matched the £25.43 presented in our Final Decision.

Our views

7.22 We have reviewed the calculation of charges for 2024 set out in the Licence in the light of the comments made by stakeholders. We have also cross checked the charges calculated under the Licence against both the figures set out in our Final Decision and the underlying price control model.

7.23 We have found that the formulae in the Licence correctly calculate the charges for 2024 and subsequent years. Specifically, the amounts that the formulae calculate are the same as those presented in our Final Decision and contained within the published price control model.[71]

7.24 We acknowledge that the inclusion of the £0.25 per passenger in the maximum revenue yield per passenger for 2023 is somewhat anomalous. We recognise that by including the £0.25 per passenger in this way it gives rise to some understandable confusion about the charges for 2024 and subsequent years. That said, this issue was drawn to stakeholders' attention in the Final Decision as set out above.

7.25 Taking this into account, we consider that the issue raised by airlines and their representatives discloses no error in relation to the calculation of charges for 2024 and we will, therefore, not be taking any action in respect of it.

Other issues raised by HAL

7.26 HAL has raised two further issues with us. These are to suggest that we have overestimated commercial revenues and underestimated operating costs for H7. Specifically, HAL has contended that, if we are adjusting the price control to address PDRCs and rates, we should also update it for:

- energy costs as the Final Decision was based on a forecast of energy costs from December 2021. In support, HAL provided a forecast from November 2022, indicating higher energy costs of £70m (2020 prices) over H7; and

[71] The price control model was published alongside the Final Decision and an updated model published alongside this consultation.

- forecast Electricity Distribution Costs as the Final Decision had used nominal figures from 2021, despite these being linked to RPI, meaning a real reduction in the opex allowance of £14 million was being applied over H7.

7.27 Having considered HAL's representations, we do not propose to reopen the H7 price control to make changes in relation to the areas set out above because this would not be:

- consistent with the Final Decision which clearly set out the specific areas that had not been closed out in that decision due to insufficient information from HAL and we have dealt with these (see chapters 4 to 6 above);
- reopening additional individual elements would tend to drive the price control more towards a "costs pass-though" model which would undermine the overall incentive effect of the price control and the protections it offers to consumers; and
- it would not generally be in the interests of consumers for the CAA to reopen parts of the price control that have been consulted and decided on. In this context, we also note that HAL had the opportunity to raise these issues by way of an appeal to the CMA.

Chapter 8

Implementation

Introduction

8.1 This chapter sets out how we propose to implement the changes to HAL's allowed revenues for H7 arising from the matters discussed in the preceding chapters.

Current adjustment mechanisms

8.2 Price controls have an impact on HAL's allowed revenues through:

- changing the size of the RAB, the long-term building block used to calculate price controls for successive periods;[72] and/or
- changing the maximum allowable yield per passenger ("the allowed price cap") for the duration of the relevant price control but not beyond.[73]

8.3 Each approach deals with cash flows incurred in different years by applying adjustments for inflation and the time value of money.[74] Unlike other in-period adjustments, the additional correction ("AK") factor that we inserted into the Licence in the Final Decision is unusual as it allows HAL flexibility in determining the years in which it will return revenues to consumers through charges. Because of this, the AK adjustment also requires a means of dealing with inflation and the time value of money.[75]

Proposed adjustment mechanism

8.4 In determining the appropriate approach to making the adjustments discussed in previous chapters, we have considered the following :

- whether to make the adjustments through the RAB or the allowed price cap;
- whether to apply the same treatment to each adjustment;
- how many adjustment terms to use to implement our approach; and

[72] An example of this is the RAB Adjustment we made in 2021.

[73] Examples of these are the adjustment terms in the price control for capex and traffic risk.

[74] The RAB is indexed by the retail price index (RPI), and has a weighted average cost of capital (WACC) allowance applied to it, while the allowed price cap is calculated in current year prices by price profiling using forecast CPI, corrected for outturn inflation (and other variables) using the correction (K) factor.

[75] See Condition C1.22 of the Licence.

- how to design the adjustment terms.

Should we make the adjustments through the RAB or allowed price cap?

8.5 We note that some of the adjustments we propose in chapters 1 to 6 above relate to matters that have been outstanding for some time. Specifically:

- the AK adjustment relates to HAL's revenues in 2020 and 2021; and
- all the other adjustments reflect matters that either we would have taken into account in calculating the H7 price control had the information been available at that time, or which have been remitted to us by the CMA in relation to that calculation.

8.6 As a result, we consider that it is in consumers' interests to make the relevant adjustments within H7 by adjusting the allowed price cap, rather than more slowly through the RAB. This also reduces the number of issues outstanding for the H8 price control process. To do this, we propose to amend the price control licence condition in the Licence.[76] Only where the position is too uncertain to be addressed now do we propose to defer implementing the adjustment.[77]

Should we apply different treatments to different policy areas?

8.7 We have considered whether we should apply different treatments to different policy areas. To be consistent with the approach taken in the Final Decision, we propose to follow the approach to the time value of money used in the Final Decision for each adjustment to ensure that there is no gain or loss to consumers resulting from this. On this basis:

- the recalculated WACC will be used to recalibrate the AK_t factor, using RPI and the pre-tax WACC uplift to account for the time value of money; while
- for the PDRC and pod parking adjustments, we will re-run the PCM using the updated WACC to identify the appropriate figures.

8.8 We consider that this is a reasonably clear and transparent approach which is consistent with that used for the calculations in the Final Decision.

Should we have one adjustment term or more?

8.9 We have considered whether to introduce separate adjustment factors for each of the four areas for maximum transparency, or combine some or all of for simplicity. Having considered the merits of each approach, we have concluded

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76 Condition C1 (Price Control).

77 This higher level of uncertainty applies to the truing up of HAL's business rates expenditure during H7 and addressing any PDRCs that might arise in H7.

that having two adjustment factors would achieve a suitable balance between transparency and simplicity. So, we propose to:

- reinstate an AK_t factor but recalculate it for the adjustments for 2020 and 2021 as set out in chapter 1 (The AK adjustment factor); and
- introduce a new adjustment factor for the H7 period (referred to as $H7_t$), to account for the recalculation of the H7 price control and the other adjustments we are making.

How to design the adjustment terms?

The AK_t adjustment

8.10 In considering this, our starting point was the design of the AK_t factor we included in the Final Decision because:

- it allows adjustments to be made to the allowed price cap over more than one year, with appropriate uplifts for indexation and for the time value of money; and
- the structure of the AK_t term (rather than how the underlying adjustment was derived) was not a matter of contention before the CMA.

8.11 However, the time that has passed since the Final Decision means that we consider that it is appropriate for us to make two changes to the broad approach adopted in the Final Decision.

- as the amounts (in 2020 prices) for the adjustments are now known, we propose to specify the amounts of the adjustments; and
- as only two years of the H7 period remain, we consider it appropriate to remove HAL's discretion as to how it profiles the implementation of the adjustment through its charges, and to require it to be returned equally in 2025 and 2026.[78] We consider that this is in the interests of consumers as it will reduce charge volatility.

The $H7_t$ factor

8.12 We consider that the same factors are relevant to the design of the $H7_t$ factor and therefore propose to adopt the same structure as the AK_t factor for this adjustment, with clearly specified adjustment amounts and a 50:50 adjustment profile (adjusted for the time value of money) over 2025 and 2026.

[78] The amounts will be equal in net present value terms, which means that the nominal amount in 2026 will be slightly larger.

Impact on the allowed price caps for 2025 and 2026

The AK_t adjustment

8.13 On the basis of the analysis that we set out in chapter 1 (The AK adjustment factor), we consider that the appropriate amount of the AK_t adjustment is £29 million in respect of 2020 and £48 million for 2021, giving a total of £77 million.[79]

8.14 To convert these amounts into the changes to be made in the 2025 and 2026 allowed price caps we have:

- provided for indexation uplift to 2025 and 2026 prices through the formulae in the Licence;
- applied the revised real pre-tax WACC of 4.01% to 2025 and 2026;
- spread the adjustment equally across in 2025 and 2026; and
- adopted the 2025 and 2026 forecast passenger volumes in the H7 Final Decision.

8.15 Following these calculations steps, the estimated reduction in the allowed price caps per passenger will be -£0.718 for 2025 and -£0.748 for 2026. These figures have been calculated in the manner set out in Appendix D.[80]

The $H7_t$ factor

8.16 For the adjustments to the H7 price control, we have employed the PCM to work out what the allowed revenues over each year of the H7 period should have been and compared them to the amounts we used for the Final Decision to determine the difference. The PCM takes the inputs relating to all five years of the H7 period and calculates a profile of charges for that period, albeit that for the first two years the level of the charge was specified by means of a holding cap. Consequently, the impact of the changes is presented as affecting only the years 2024 to 2026. These differences are set out in Table 8.1.

79 The detail of the recalculation of these figures is set out in Appendix D at Tables D.1 (2020 CPI-real prices) and D.2 (rebased to current prices).

80 To ensure a consistent approach with the H7 Final Decision, we have used the inflation data that was available at the time of publication the H7 Final Decision (March 2023), that is, outturn inflation figures published by the ONS up to 2021, and inflation forecasts published by the OBR (November 2022 edition) from 2022 onwards.

Table 8.1 Total amount of adjustment for the $H7_t$ factor

£ million 2020 CPI-real prices	2024	2025	2026	Total
Removal of index-linked debt premium	-8.19	-8.37	-8.44	-24.99
Changing Pensions Deficit Repair Costs allowance	-28.25	-28.88	-29.12	-86.26
Changing Pod parking allowance	+1.31	+1.33	+1.35	+3.99
Total $H7_t$ adjustment	-35.13	-35.92	-36.21	-107.27

Source: CAA analysis. Numbers may not add up due to rounding.

8.17 In practice we propose to change charges in 2025 and 2026, but not 2024 as charges for 2024 are already being levied. A result of this is that the impact of the adjustment on charges in those years is greater than it would otherwise have been, yet the net present value of the adjustment remains the same. The estimated reduction in the allowed price caps as a result of the $H7_t$ adjustment will be -£0.798 for 2025 and -£0.825 for 2026 as set out in Table 8.2. These figures have been calculated in the manner set out in Appendix D

Table 8.2 Estimated reduction in the allowed price cap in ($H7_t$)

Estimated reduction in the allowed price cap in £ per passenger current year prices	2025	2026
Removal of index-linked debt premium	-0.186	-0.192
Pensions Deficit Repair Costs	-0.642	-0.663
Pod parking	+0.030	+0.031
Total	-0.798	-0.825

Source: CAA analysis. Numbers may not add up due to rounding.

8.18 Taken together and when adjusted for the time value of money, we estimate that the changes set out in this consultation will lead to decreases in HAL's charges of £1.516 in 2025 and £1.573 in 2026 compared to the charges for H7 we set in the Final Decision.[81] This size of reduction is the result of having two years to apply the reduction in allowed revenues that corresponds to a period of seven years (from 2020 to 2026) to which the underlying adjustments relate.

[81] Estimates of the charges we set for H7 were set out in Table 8 of the Final Decision. That table did not include the impact of the AK adjustment as this relates to the period 2020 and 2021 (that is, prior to the H7 period). The decreases in HAL's charges of £1.516 in 2025 and £1.573 in 2026 set out in paragraph 22 above are as compared to the estimated charges set out in Table 8 of the Final Decision.

Modifying the Licence

8.19 Having considered the matters set out above, we are proposing to implement these changes through modifications to Condition C.1 (Price Control) of the Licence. The modifications that we propose will give effect to the approach that we propose above so that the adjustments in relation to both the AK_t and $H7_t$ adjustments are reflected in HAL's charges in 2025 and 2026. These modifications are set out in the Notice under section 21(2) CAA12 which accompanies this consultation at Appendix E.

8.20 Subject to stakeholders' responses, it is our intention to make our decision on whether to modify the Licence in the manner proposed in the summer of 2024 so that our decision can be reflected by HAL when it consults on 2025 charges later in the year. We also consider that this approach is consistent with the requirements of the CMA's Order.

APPENDIX A

Our duties

A1 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.

A2 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.

A3 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".

A4 The CAA must also carry out its functions, where appropriate, in a manner that will promote competition in the provision of AOS.

A5 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 Better Regulation principles.

A6 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.

A7 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.

APPENDIX B

Glossary

B1 The terms used in this document are arranged in the following groups:

- legislation and regulatory processes;
- price controls; and
- other terms.

Legislation and regulatory processes

Acronym / term	Description
CAA12	The Civil Aviation Act 2012
CMA	The Competition and Markets Authority
Final Proposals	CAP2365 "Economic regulation of Heathrow Airport Limited: H7 Final Proposals" June 2022. See: www.caa.co.uk/CAP2365
Final Decision	CAP2524 "Economic regulation of Heathrow Airport: H7 Final Decision" March 2023. See: https://www.caa.co.uk/commercial-industry/airports/economic-regulation/h7/consultations/final-and-initial-proposals-for-h7-price-control/
The Final Determinations	CMA Final Determinations of the appeals against the CAA's decision on H7 dated 17 October 2023. See: https://assets.publishing.service.gov.uk/media/652fe1e4d06662000d1b7cc0/3_H7_Appeal_Final_Determinations_Non-Sensitive.pdf
Consumers	"Users" are defined in section 69 CAA12 as passengers and those with "a right in property" (cargo) carried by air transport services and include future users.
The Licence	The licence granted to Heathrow Airport Limited by the Civil Aviation Authority under section 15 CAA12 on 13 February 2014.

Price controls

Acronym / term	Description
Q5	Q5 was the price control for the period from 2008 to 2013, the approach to which was subsequently extended to cover January to March 2014.
Q6 / Q6 price control	Q6 was the price control for the period from 2014 to 2018, the approach to which was successively extended to cover 2019 and 2020 to 2021.
H7	The price control period for Heathrow from 1 January 2022 until 31 December 2026.
iH7	The interim H7 price control, running from 1 January 2020 until 31 December 2021.
H8	The price control for Heathrow following H7.

Other

Acronym / term	Description
AOC/LACC	Airline Operators' Committee (for Heathrow) / London (Heathrow) Airline Consultative Committee, set up by IATA to implement a collaborative consultation framework for Heathrow airport.
BA/IAG	British Airways plc/International Airlines Group (owner of British Airways)
BA	British Airways
Building blocks	Price control building blocks, including passenger numbers, operating costs, capital expenditure and commercial revenues
CAA ("us"/"we")	The Civil Aviation Authority
Capex	Capital Expenditure
HAL	Heathrow Airport Limited, the licence holder and operator of Heathrow airport.
LACC	London (Heathrow) Airline Consultative Committee, set up by IATA to implement a collaborative consultation framework for Heathrow airport.
Opex	Operational Expenditure

Acronym / term	Description
ORCs	Other Regulated Charges, which are for specified services and facilities that are collected separately from the general regulated airport charges and are, in general, levied on a “user-pays” basis).
Price Control Model	The financial model developed by the CAA to calculate HAL’s revenue requirements for H7.
RAB	Regulatory Asset Base
RBPUpdate2	HAL’s publication, Updated Revised Business Plan submitted to the CAA in December 2021.
Shock factor	A downward adjustment to volume forecasts to address the asymmetry of risks.
WACC	Weighted average cost of capital

APPENDIX C

Further detail of the verification of the shock factor calculation

C1 This Appendix provides further details in respect of HAL's choices of starting and ending dates for the events that form the basis of its shock factor calculation.

C2 These events and the respective starting and ending dates assumed by HAL are set out in Table C.1 below:

Table C.1: Start and end dates of "shock" events considered by HAL

Desert Storm	January 1991	December 1991[82]
Bovine spongiform encephalopathy (BSE), "mad cow" disease	March 1996	May 1996
Millennium bug	December 1999	January 2000
Foot and Mouth	February 2001	May 2001[83]
9/11	September 2001	January 2002
SARS	March 2003	September 2003
London bombs and Wider Heathrow industrial action	July 2005	October 2005
Liquid bombs and security tightening	August 2006	December 2006
Volcanic Ash	March 2010	June 2010
Snow	December 2010	December 2010
Olympics	July 2012	August 2012
Snow	December 2015	December 2015
Brexit referendum	August 2016	October 2016
Wider Heathrow industrial action	September 2019	September 2019

82 HAL assumes that there was a period between September and October 1991 when passenger traffic was not materially affected by Operation Desert Storm.

83 HAL assume that August 2001 was also affected by a shock. This is presumably a continuation of the foot and mouth epidemic.

C3 These dates should correspond to the period over which the shock had a significant adverse impact on passenger numbers. This is inherently difficult to determine, given that counterfactual passenger numbers in the absence of a shock are unobservable. However, the events considered by HAL broadly overlapped with the period assumed by HAL to have affected passenger traffic, based on our high level research set out in Table C.2 below.

Table C.2: Summary of our high level research of "shock" events

Event	Date	Source
Desert Storm	16 January 1991 to 28 February 1991	https://www.britannica.com/event/Persian-Gulf-War
Bovine spongiform encephalopathy (BSE), "mad cow" disease	20 March 1996[84]	https://web.archive.org/web/20190712151720/https://navigator.health.org.uk/content/government-acknowledged-possible-link-between-bse-cows-and-cjd-humans
Millennium bug	December 2019/January 2000	https://www.britannica.com/technology/Y2K-bug
Foot and Mouth	February 2001 to September 2001[85]	https://www.nao.org.uk/wp-content/uploads/2002/06/0102939.pdf
9/11	September 2001	https://www.britannica.com/event/September-11-attacks
SARS	March 2003[86] to March 2004[87]	https://web.archive.org/web/20200212205529/https://www.who.int/csr/don/2004_05_18a/en/

[84] Although BSE had been in existence in the UK since the 1980s, it was not until 20 March 1996 that Stephen Dorrell, the Secretary of State for Health announced that vCJD was linked to eating BSE-infected meat.

[85] This date corresponds to the last known new case of the disease in the UK.

[86] This date corresponds to the Global Alert issued by the World Health Organisation.

[87] This date corresponds to the declaration of the end of the pandemic by the World Health Organisation.

Event	Date	Source
		https://www.taipeitimes.com/News/front/archives/2003/07/05/2003058087
London bombs and Wider Heathrow industrial action	July 2005 August 2005	https://www.btp.police.uk/police-forces/british-transport-police/areas/about-us/about-us/our-history/london-bombings-of-2005/ http://news.bbc.co.uk/2/hi/uk_news/england/london/4144386.stm
Liquid bombs and security tightening	August 2006	http://news.bbc.co.uk/2/hi/uk_news/4778575.stm
Volcanic Ash Snow	April 2010 – May 2010 December 2010	https://www.caa.co.uk/safety-initiatives-and-resources/safety-projects/volcanic-ash/a-history-of-ash-and-aviation/ https://www.london.gov.uk/who-we-are/what-london-assembly-does/questions-mayor/find-an-answer/closure-heathrow-december-2010-due-snow
Olympics	July 2012 – August 2012	https://www.bbc.co.uk/news/uk-17599477
Snow	March 2016	https://www.bbc.co.uk/news/uk-england-35909651
Brexit referendum	June 2016	https://www.britannica.com/place/United-Kingdom/The-Brexit-referendum
Wider Heathrow industrial action	September 2019	https://www.bbc.co.uk/news/uk-50807348

C4 In principle, it is conceivable that passenger traffic was affected beyond the end of certain events, or equally that the effect on passenger traffic had abated

before the end of the event. As such, the fact that the period over which passenger traffic was affected does not precisely coincide with the duration of the events themselves does not necessarily imply that the former is inaccurate. Nor is it obvious that alternative dates would produce a materially different or more accurate value of the shock factor.

C5 In the absence of a superior means of determining the duration of the impact of specific events on passenger numbers, we therefore consider that HAL's assumptions are broadly reasonable.

APPENDIX D

Further detail on the calculation of the AK_t and $H7_t$ adjustments

D1 Table D.1 sets out how we have recalculated the value of AK in £ million, 2020 CPI-real prices in the manner described in chapter 8 (Implementation)

Table D.1: Total adjustment amount

£ million, 2020 CPI-real prices	2020	2021	Total
Original calculation			
Original Dt ("A")	-40	-89	**-129**
Original BRt ("B")	-35	-40	**-74**
Original Pax mix ("C")	-17	-33	**-50**
Original AK factor ("D"=A+B+C)	-91	-162	**-253**
Passenger figures used to recalibrate D_t and BR_t			
Forecast passenger volume (million) ("E")	81.5	82.0	
Outturn passenger volume (million) ("F")	22.1	19.4	
Outturn passenger volume as a percentage of forecast passenger volume (%) ("G"= F/E)	27.1%	23.6%	
Recalculation of AK factor			
Recalculated Dt ("H"= A x G)	-11	-21	**-32**
Recalculated BRt ("I" = B x G)	-9	-9	**-19**
Recalculated Pax mix ("J" = C x 50%)	-8	-17	**-25**
Recalculated AK factor ("AK" = H + I + J)	-29	-47	**-76**

Source: CAA calculation. Numbers may not add up due to rounding

D2 Table D.2 sets out how we have rebased the AK adjustment into current year prices for 2025 and 2026 using ONS inflation data and the recalculated WACC in accordance with our proposals in chapter 2 (Premium applied to index-linked debt costs). This table sets out how we have translated this adjustment into an estimate of the change in the per passenger allowed price cap using the passenger forecast used in the Final Decision.

Table D.2: AK_t: Estimated changes to the allowed price cap to account for inflation, the WACC and the H7 passenger forecast

1.		2020	2021	2025	2026	Total
	Inflation, WACC and passenger forecast inputs					
2	ONS CPI index (D7BT index) ("L")	108.75	111.56			
3.	ONS RPI index (CHAW index) ("M")[88]	293.14	305.00	381.25	384.94	
4.	Pre-tax real WACC (%) ("N")					4.01%
5.	H7 forecast passengers (million) ("P")			80.70	81.30	
6.						
7.	**Calculation**					
8.	Recalculated AK factor (£ million CPI-2020) (applying CPI inflation uplift to "AK" from Table 1 above) – for detail, see paragraph D3 below	29	48			77
9.						
10.	2020 allowed revenues adjustment (reduction) in 2025 and 2026 (£ million nominal) ("Q" calculated in accordance with paragraph D4 below)			22.63	23.76	46.39
11.	2021 allowed revenues adjustment (reduction) in 2025 and 2026 (£ million nominal) ("R" calculated in accordance with paragraph D5 below)			35.30	37.07	72.37
12.	Changes (reduction) to allowed price cap in 2025 and 2026 (£ per passenger) ("S" = (Q + R) / P)			0.718	0.748	

Source: CAA calculation. Numbers may not add up due to rounding.

D3 We have used the inflation figures set out in Table D.2 to re-base the recalculated AK factor in 2020 CPI-real prices to current prices as follows (see line 8 of Table D.2):[89]

$$\mathrm{AK'}_{2020} = \mathrm{AK}_{2020} \times \frac{\mathrm{L}_{2020}}{\mathrm{L}_{2020}} = 29\mathrm{m} \times \frac{108.75}{108.75} = 29\mathrm{m}$$

$$\mathrm{AK'}_{2021} = \mathrm{AK}_{2021} \times \frac{\mathrm{L}_{2021}}{\mathrm{L}_{2020}} = 47\mathrm{m} \times \frac{111.56}{108.75} = 48\mathrm{m}$$

88 See paragraphs 12.40-12.41 of our Final Decision (CAP 2524D) for a discussion of why we use both RPI and CPI in different parts of the H7 price control.

89 The term L has the meaning shown in the tables in this Appendix

D4 Adopting the calculation steps described in paragraph 8.14 of chapter 8 (Implementation) we have calculated the AK adjustment in respect of 2020 allowed revenues to be applied in 2025 and 2026 (see line 10 of Table D.2):[90]

$$Q_{2025}$$

$$= \text{Recalculated AK factor (rebased) for } 2025 \times 50\% \times \frac{\text{RPI index for } 2025}{\text{RPI index for } 2020} \times (1 + \text{WACC})^{(2025-2020)}$$

$$= K'_{2020} \times 50\% \times \frac{M_{2025}}{M_{2020}} \times (1 + N)^{(2025-2020)}$$

$$= 29\text{m} \times 50\% \times \frac{381.25}{293.14} \times (1 + 4.01\%)^5$$

$$= 22.63\text{m}$$

$$Q_{2026}$$

$$= \text{Recalculated AK factor (rebased) for } 2026 \times 50\% \times \frac{\text{RPI index for } 2026}{\text{RPI index for } 2020} \times (1 + \text{WACC})^{(2026-2020)}$$

$$= K'_{2020} \times 50\% \times \frac{M_{2026}}{M_{2020}} \times (1 + N)^{(2026-2020)}$$

$$= 29\text{m} \times 50\% \times \frac{384.94}{293.14} \times (1 + 4.01\%)^6$$

$$= 23.76\text{m}$$

D5 By adopting the same calculation steps, we have calculated the AK adjustment in respect of 2021 allowed revenues to be applied in 2025 and 2026 (see line 11 of Table D.2):

$$R_{2025} = 48\text{m} \times 50\% \times \frac{381.25}{305.00} \times (1 + 4.01\%)^5 = 35.30\text{m}$$

$$R_{2026} = 48\text{m} \times 50\% \times \frac{384.94}{305.00} \times (1 + 4.01\%)^6 = 37.07\text{m}$$

H7t factor

D6 For calculating the H7t adjustment, as discussed in chapter 8 (Implementation), we employed the PCM to work out what the allowed revenues over each year of the H7 period should have been and compared them to the amounts we used for the Final Decision to determine the difference. These differences are set out in Table D.3 below.

Table D.3 Total amount of adjustment for the H7t factor

£m, 2020 CPI-real prices	2024	2025	2026	Total
Removal of the index linked debt premium (“T”)	-8.19	-8.37	-8.44	-24.99
Changing PDRC allowance (“U”)	-28.25	-28.88	-29.12	-86.26

90 The terms M and N have the meanings shown in the tables in this Appendix

Changing pod parking allowance ("V")	+1.31	+1.33	+1.35	+3.99
Total $H7_t$ adjustment ("W" = T + U + V)	-35.13	-35.92	-36.21	-107.27

Source: CAA calculation. Numbers may not add up due to rounding.

D7 Table D.4 sets out how we have rebased the $H7_t$ adjustment into current year prices for 2025 and 2026 using ONS inflation data and the recalculated WACC in accordance with our proposals in chapter 2 (Premium applied to index-linked debt costs). This table sets out how we have translated this adjustment into an estimate of the change in the per passenger allowed price cap using the passenger forecast used in the Final Decision.

Table D.4: $H7_t$: Estimated changes to the allowed price cap to account for inflation, the WACC and the H7 passenger forecast

	2022	2023	2024	2025	2026	Total
Inflation, WACC and passenger forecast inputs						
ONS CPI index (D7BT index) ("L")	340.49	376.96	382.60	381.25	384.94	
Pre-tax real WACC (%) ("N")						4.01%
H7 forecast passengers (million) ("P")				80.70	81.30	
Calculation (all in current year prices)						
Present value of change as at 2022 ("X" calculated in accordance with paragraph D8 below)			-31.22	-30.69	-29.75	-91.67
NPV (as at 2022) to be recovered ("Y") = X_{total} x 50%				-45.83	-45.83	-91.67
Nominal amount to be recovered (£ million) ("Z" calculated in accordance with paragraph D9 below)				-64.379	-67.076	
Changes to allowed price cap in 2025 and 2026 (£ per passenger) AA = Z / P) (see paragraph D10 below)				-0.798	-0.825	

Source: CAA calculation. Numbers may not add up due to rounding.

D8 We have calculated the net present value of the required changes to the allowed price cap as follows:[91]

$$\text{Net present value} = \frac{\text{present value of change}_{2024}}{(1+\text{WACC})^3} + \frac{\text{present value of change}_{2025}}{(1+\text{WACC})^4} + \frac{\text{present value of change}_{2026}}{(1+\text{WACC})^5}$$

$$\text{X}_{\text{total}} = \frac{\text{W}_{2024}}{(1+\text{N})^3} + \frac{\text{W}_{2025}}{(1+\text{N})^4} + \frac{\text{W}_{2026}}{(1+\text{N})^5} = \frac{-35.13}{(1+4.01\%)^3} + \frac{-35.92}{(1+4.01\%)^4} + \frac{-36.21}{(1+4.01\%)^5} = -91.67$$

D9 We have calculated the estimates of the nominal amount as follows:[92]

[91] The terms W,X and N have the meanings shown in the tables in this Appendix

[92] The terms Z, Y and N have the meanings shown in the tables in this Appendix

$$\text{Nominal amount}_{2025} = \text{NPV to be recovered}_{2025} \times \frac{\text{RPI index for 2025}}{\text{RPI index for 2020}} \times (1 + \text{WACC})^4$$

$$Z_{2025} = Y_{2025} \times \frac{L_{2025}}{L_{2020}} \times (1 + N)^4 = -45.83 \times \frac{381.25}{293.14} \times (1 + 4.01\%)^4 = -64.379$$

$$Z_{2026} = Y_{2026} \times \frac{L_{2026}}{L_{2020}} \times (1 + N)^5 = -45.83 \times \frac{384.94}{293.14} \times (1 + 4.01\%)^5 = -67.076$$

D10 Taking the above analysis together, we set out in Table D.5 the estimated overall impact on the allowed price cap.

Table D.5: Estimated overall impact on the allowed price cap

£ per passenger, current year	**2025**	**2026**
AK_t	-0.718	-0.748
$H7_t$	-0.798	-0.825
Total	-1.516	-1.573

APPENDIX E

Notice under section 22(2) of the Civil Aviation Act 2012 ("CAA12") that the CAA proposes to modify the Licence

Introduction

E1 This Appendix constitutes a notice under section 22(2) of the Civil Aviation Act 2012 ("CAA12") ("Notice") that the CAA proposes to modify the licence granted to HAL by the CAA under section 15 CAA12 on 13 February 2014 ("the Licence") to implement the policy proposals set out in chapters 1 to 7 of this consultation. These proposed modifications will address the issues which:

- the CMA remitted to the CAA as part of its Final Determination; and
- the CAA left outstanding in the Final Decision.

E2 The proposed modifications are set out below and are mostly set out in full in "tracked change" format in red compared to the current version of the Licence, which took effect on 1 May 2023.

E3 Where the reasons for, and effects of, the modifications set out in this Notice are set out in other chapters of this consultation, the reasons for, and effects of the proposed modifications set out in those other chapters are deemed to be incorporated in this Notice. This notice sets out where those reasons and effects are to be found.

What the modifications cover

E4 Key areas that are addressed by the proposed modifications set out below are:

- the CAA's approach to setting the level of the additional correction factor ("AK_t") that reflects the difference between HAL's outturn and allowed revenues per passenger in 2020 and 2021 (see chapter 1 (The AK adjustment factor));
- whether the CAA should have included an uplift for index-linked debt in the calculation of the cost of debt used for the WACC for H7 (see chapter 2 (Premium applied to index-linked debt costs));
- the appropriate contributions to the opex allowance "building block" used in the H7 price control for "PDRCs (see chapter 4 (Opex allowance in respect of Pension Deficit Repair Costs in H7));

- the appropriate treatment of HAL's revenues from its commercial "Pod parking" service (see chapter 6 (HAL's commercial revenues, "Pod parking" and the single till)); and
- addressing the manifest error the CAA has identified in the drafting of the Licence modifications that the CAA used to implement the Final Decision (see chapter 7 (Other issues arising from the Final Decision)).

E5 These proposals set out in this consultation do not require extensive licence modifications. The most significant substantive changes are addressed through:

- the modification of the "AK_t" term used in the formula for the price control set out in Condition C1.5 and defined in Condition C1.22. While the CMA quashed our previous decision to introduce an AK term, it remitted these issues to us for reconsideration and did not rule out the use of such a term in the circumstances where we had considered further the appropriate approach to these matters and the calibration of the term. As explained in more detail in chapter 1 (The AK adjustment factor) and chapter 8 (Implementation)), we have now completed our reassessment of these matters and decided that an AK term remains appropriate, albeit at a significantly reduced level than that implied by our Final Decision. The modification is shown is a track change version of the licence as modified in 2023, although we are in effect reintroducing a modified version of the AK term following the CMA's decision to quash and remit these matters to us for further consideration;
- the introduction of a new "$H7_t$" term into the formula for the price control set out in Condition C1.5 and defined in Condition C1.23 to implement the adjustments to the Price Control in respect of
  - (i) the removal of the index linked debt premium from the calculation of the WACC (the reasons for and effects of which are discussed in chapter 2 (Premium applied to index-linked debt costs));
  - (ii) the adjustment in respect of PDRCs in H7 (the reasons for and effects of which are discussed in chapter 4 (Opex allowance in respect of Pension Deficit Repair Costs in H7) and 8 (Implementation)); and
  - (iii) the adjustment in respect of Pod parking (the reasons for and effects of which are discussed in chapter 6 (HAL's commercial revenues, "Pod parking" and the single till) and 8 (Implementation)).

E6 These modifications are set out in turn below.

Modification of the price control formula in Condition C1.5

E7 The CAA proposes to modify Condition C1.5 in the manner set out below to introduce a new "$H7_t$" adjustment term:

"C1.5 On each occasion on which the Licensee fixes the amounts to be levied by it by way of airport charges in respect of relevant air transport services in each of the subsequent Regulatory Years starting on 1 January 2025 and ending on 31 December 2026, the Licensee shall fix those charges at the levels best calculated to secure that, in each Regulatory Year, total revenue at the Airport from such charges divided by the total number of passengers using the Airport does not exceed the amount set in accordance with the formula below:

$$M_t = Y_{t-1} \times (1 + CPI_t + X_t + B_{t-2}) + \frac{AC_t}{Q_t} - \frac{T_t}{Q_t} + \frac{TDO_t}{Q_t} + \frac{TRS_t}{Q_t} - AK_t + H7_t - K_t$$

where:

(a) M_t is the maximum revenue yield per passenger using the Airport in Regulatory Year t expressed in pounds sterling;

(b) Y_{t-1} is the average revenue yield per passenger in Regulatory Year $t-1$, as defined in Condition C1.6;

(c) CPI_t is the percentage change between:

(i) the average value of the Office for National Statistics monthly D7BT Consumer Price Index over Regulatory Year t; and

(ii) the average value of the Office for National Statistics monthly D7BT Consumer Price Index over Regulatory Year $t-1$;

(d) X_t = 0;

(e) B_{t-2} is the bonus factor in Regulatory Year t, based on the Licensee's service quality performance in Regulatory Year $t-2$, as defined in Condition C1.9;

(f) AC_t is the Licensee's allowed capex adjustment in the Regulatory Year t, as defined in Condition C1.10 to C1.15;

(g) Q_t is the number of passengers using the Airport in the Regulatory Year t;

(h) T_t is the capital trigger factor in the Regulatory Year t, as defined in Condition C1.16 to C1.17;

(i) TDO_t is the terminal drop-off charge factor in Regulatory Year t, as defined in Condition C1.18 to C1.19;

(j) TRS_t is the traffic risk sharing factor in Regulatory Year t, as defined in

Condition C1.20 to C1.21;

(k) AK_t is the additional correction factor for Regulatory Year t, as defined in Condition C1.22 ~~to C1.23~~; ~~and~~

(l) $H7_t$ is the H7 factor for Regulatory Year t, as defined in Condition C1.23; and

(m)~~(l)~~ K_t is the correction factor in Regulatory Year t, as defined in Condition C1.24."

Modification of the price control formula in Condition C1.6

E8 The CAA proposes to modify Condition C1.6 in the manner set out below to remove the manifest error in the formula discussed in chapter 7 (Other issues arising from the Final Decision) by inserting "-1" after "X_t" as follows:

"Average revenue yield per passenger Y_{t-1}

C1.6 Y_{t-1} is the average revenue yield per passenger in Regulatory Year $t-1$ calculated in accordance with the following formula:

$$Y_{t-1} = Y_{t-2} \times (1 + CPI_{t-1} + X_{t-1}) + S_{t-1}$$

where:

(a) $Y_{2023} = £31.570 + S_{2023}$

(b) CPI_{t-1} is the percentage change between:

(i) the average value of the Office for National Statistics monthly D7BT Consumer Price Index over Regulatory Year $t-1$; and

(ii) the average value of the Office for National Statistics monthly D7BT Consumer Price Index over Regulatory Year $t-2$;

(c) X_t has the same value as in Condition C1.5(d), except that in respect of Regulatory Year 2024, X_{2024} has the same value as in Condition C1.4(d); and

(d) S_{t-1} is the allowable security and/or health and safety cost per passenger in Regulatory Year $t-1$, as defined in Condition C1.7 to C1.8."

Modification of the definition of the WACC in Condition C1.10(a)

E9 The CAA proposes to modify the definition of the WACC set out in Condition C1.10(c) in the manner set out below to implement the recalibration of the WACC as discussed in chapter 2 (Premium applied to index-linked debt costs):

"(c) RWACC is the pre-tax RPI-real weighted average cost of capital which shall have a value of 4.01%~~4.04%~~"

Modification of the definition of the AK_t in Condition C1.22

E10 The CAA proposes to modify the definition of the AK_t factor set out in Condition C1.22 in the manner set out below to implement the recalibration of the WACC as discussed in chapter 2 (Premium applied to index-linked debt costs) and chapter 8 (Implementation).

"Additional correction factor $\mathbf{AK_t}$

C1.22 $\mathrm{AK_t}$ is the additional correction factor to be made in Regulatory Year t to return in full during Regulatory Years 2025~~2024~~ to 2026 the Licensee's over recovery of revenue from airport charges compared with $\mathrm{M_{2020}}$ and $\mathrm{M_{2021}}$. $\mathrm{AK_t}$ is calculated as follows:

$$\mathrm{AK_t} = \frac{0.5\text{~~1~~}}{\mathrm{Q_t}} \times \left[\mathrm{OR_{2020}}\text{~~wR2020}_t \times (\mathrm{R_{2020}} - \mathrm{Q_{2020}} \times \mathrm{M_{2020}}) \times \frac{\mathrm{P_t}}{\mathrm{P_{2020}}} \times (1 + \mathrm{RWACC})^{t-2020} + \mathrm{OR_{2021}}\text{~~wR2021}_t \times (\mathrm{R_{2021}} - \mathrm{Q_{2021}} \times \mathrm{M_{2021}}) \times \frac{\mathrm{P_t}}{\mathrm{P_{2021}}} \times (1 + \mathrm{RWACC})^{t-2021} \right]$$

where:

(a) $\mathrm{Q_t}$ bears the same meaning as in Condition C1.5(g);

(b) $\mathrm{OR_t}$ is the over-recovered airport charges revenue and has the following values:

(i) $\mathrm{OR_{2020}}$ is equal to £29 million in 2020 RPI-real prices; and

(ii) $\mathrm{OR_{2021}}$ is equal to £48 million in 2021 RPI-real prices;

~~(b) $\mathrm{wR2020_t}$ is the proportion of the Licensee's over-recovery of revenue from airport charges in Regulatory Year 2020 to be included in the adjustment of the maximum allowable yield for Regulatory Year t and shall be subject to:~~

~~$$\sum_{t=2024}^{t=2026} \mathrm{wR2020_t} = 1$$~~

~~$0 \leq wR2020_{2024} \leq 1$~~

~~$0 \leq wR2020_{2025} \leq 1$~~

~~$0 \leq wR2020_{2026} \leq 1$~~

~~(i) The Licensee shall publish the value of $wR2020_t$ in the annual consultation for setting charges for Regulatory Year t.~~

~~(c) $wR2021_t$ is the proportion of the Licensee's over-recovery of revenue from airport charges in Regulatory Year 2021 to be included in the adjustment of the maximum allowable yield for Regulatory Year t and shall be subject to:~~

~~$\sum_{t=2024}^{t=2026} wR2021_t = 1$~~

~~$0 \leq wR2021_{2024} \leq 1$~~

~~$0 \leq wR2021_{2025} \leq 1$~~

~~$0 \leq wR2021_{2026} \leq 1$~~

~~(i) The Licensee shall publish the value of $wR2021_t$ in the annual consultation for setting charges for Regulatory Year t.~~

~~(d) R_t is the total revenue from airport charges in respect of relevant air transport services levied at the Airport in Regulatory Year t expressed in pounds sterling;~~

~~(e) M_t bears the same meaning as in Condition C1.5(b);~~

(c)~~(f)~~ P_t bears the same meaning as in Condition C1.10(a);

(d)~~(g)~~ P_{2020} is the average value of the Office for National Statistics monthly CHAW Retail Price Index over Regulatory Year 2020 and is equal to 293.14;

(e)~~(h)~~ P_{2021} is the average value of the Office for National Statistics monthly CHAW Retail Price Index over Regulatory Year 2021 and is equal to 305.00; and

(f)~~(i)~~ RWACC bears the same meaning as in Condition C1.10(c).

Inserting the definition of the H7t factor at Condition C1.23

E11 As a result of the modification to the text of Condition C1.22, the text currently set out at Condition C1.23 would no longer be required. The CAA proposed to delete that text and replace it with the text set out below. This text inserts the

definition of the factor as ConditionC1.23 to implement adjustments discussed in chapter 2 (Premium applied to index-linked debt costs), chapter 4 (Opex allowance in respect of Pension Deficit Repair Costs in H7) and chapter 6 (HAL's commercial revenues, "Pod parking" and the single till) in the manner discussed in chapter 8 (Implementation).

"H7 adjustment factor $H7_t$

C1.23 $H7_t$ is the H7 adjustment factor to be made in Regulatory Year t to adjust in full during Regulatory Years 2025 to 2026 the Licensee's allowed revenue to reflect the CAA's decisions in 2024 on the exclusion of the index-linked debt premium from the calculation of the weighted average cost of capital, and the revisions to the Licensee's revenues in relation to pension deficit repair costs and pod parking revenues. $H7_t$ has the following values:

(a) *for 2025,* $\mathrm{H7}_{2025} = -0.798$; and

(b) *for 2026,* $\mathrm{H7}_{2026} = -0.825$.

~~For the purposes of Condition C1.22, the values of R_t, Q_t and M_t shall be calculated in accordance with the price control conditions applicable to the Licensee in this licence as they were in each of the Regulatory Years 2020 and 2021.~~"