

Economic regulation of capacity expansion at Heathrow: policy update and consultation

CAP 1610



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Contents

Contents	3
About this document	6
Views invited	6
Executive summary	7
Introduction	7
Stakeholders' views	9
Developing the regulatory framework	10
Next steps	14
Our duties	15
Structure of this document	15
Chapter 1	16
Themes emerging from stakeholders' comments on the core elements of the regulatory framework and affordability	16
Introduction	16
The regulatory framework	16
Affordability and the profiling of regulatory depreciation	22
Views invited	24
Chapter 2	25
Cost of capital and debt indexation	25
Introduction	25
Responses to the June 2017 Consultation on the cost of capital	26
Process for estimating the cost of capital	27
Main policy issues relating to the cost of capital	29
Responses to the June 2017 Consultation on debt indexation	31
Way forward on debt indexation	32
Views invited	33
Chapter 3	35
Financeability and indexing for inflation	35

Introduction	35
Responses to the June 2017 Consultation	35
Our approach to assessing financeability	37
Assumptions on financial structure	38
Assessing debt financeability and credit metrics	39
Qualitative assessment of debt financeability	41
Assessment of equity financeability	42
Indexing for inflation	43
Views invited	44
Chapter 4	45
Financial resilience and ring fencing	45
Introduction	45
Responses to the June 2017 Consultation	45
Assessment	46
Way forward	48
Views invited	50
Chapter 5	51
The regulatory treatment of early construction costs	51
Introduction	51
The June 2017 Consultation and stakeholders' responses	51
Developing our overall approach to the regulatory treatment of early Category C costs	53
Information to support the assessment of costs	55
The regulatory treatment of early Category C costs	56
Remuneration of early Category C costs	59
Views invited	59
Chapter 6	60
Interim arrangements to extend the Q6 price control	60
Introduction	60
Stakeholders' views	61
Broad approach	61
Options for setting an interim price control	63

Calibrating HAL's revenue allowances	63
Setting the price path	66
Timeline for setting the interim price control	67
Views invited	68
Appendix A	69
Our duties	69
Appendix B	71
Stakeholders' responses on other issues	71
Introduction	71
Business plan financial incentives	71
Environmental impacts	71
Government choice of location and comments on the NPS	72
Government funding, surface access and competition	73
HAL's existing financing arrangements and profitability	73
Independence and conflicts of interest	74
Appendix C	76
PwC's initial estimates for HAL's WACC	76
Main issues	79
Appendix D	84
Cost of Debt Indexation	84
Appendix E	88
Further detail on definitions of financeability measures	88
Appendix F	93
Potential options for financial ring fencing	93
Appendix G	99
Information to be provided by HAL on early Category C costs	99
Appendix H	101
Modelling of interim arrangements to extend the Q6 price control	101

About this document

This document follows on from the June 2017 Consultation on the core elements of the regulatory framework to support capacity expansion at Heathrow. It confirms our approach in respect of key elements of the regulatory framework for Heathrow Airport Limited (“HAL”) and discusses in more detail alternative delivery mechanisms, the cost of capital, financeability, financial resilience, the regulatory treatment of early construction costs and the further extension of the existing “Q6” price control.

Views invited

We welcome views on all the issues raised in this document and, in particular, the issues set out in the Executive Summary and those highlighted in chapters 1 to 6.

Please e-mail responses to economicregulation@caa.co.uk by no later than 2nd March 2018. We cannot commit to take into account representations received after this date.

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. Please note that we have powers and duties with respect to information under section 59 of the Civil Aviation Act 2012 and the Freedom of Information Act 2000.

If you would like to discuss any aspect of this document, please contact Stephen Gifford (stephen.gifford@caa.co.uk).

Executive summary

Introduction

1. In October 2016, the Government announced that its preferred option for the expansion of airport capacity in the south east of England was the Heathrow north west runway. The CAA has consistently stated that additional runway capacity in the south east of England will benefit air passengers and cargo owners. More aviation capacity is required to prevent future consumers¹ experiencing higher fares, reduced choice and lower service quality.
2. In January 2017, we issued a consultation on our priorities and timetable for developing the framework for economic regulation for capacity expansion at Heathrow. This stressed the importance of HAL delivering capacity expansion in a way that is timely (i.e. as soon as practicable, but allowing time for proper consultation with airlines and other stakeholders), affordable and financeable – so as best to protect the interests of consumers.
3. Our June 2017 Consultation² covered our initial thinking on core elements of the regulatory framework for HAL. In developing this regulatory framework, we are seeking to facilitate capacity expansion at Heathrow in a way that will best protect the interests of consumers. This consultation deals with the views of respondents to the June 2017 Consultation and updates our thinking in respect of a number of important areas including:
 - our approach to alternative delivery arrangements;
 - the cost of capital (including a summary of work by PwC that we commissioned to provide an early and preliminary range for HAL's cost of capital);
 - financeability;

¹ In this consultation, the terms “consumers” and “users” are used interchangeably. See Appendix A

² See CAP 1541 Consultation on the core elements of the regulatory framework to support capacity expansion at Heathrow www.caa.co.uk/CAP1541.

- financial resilience;
- the regulatory treatment of early construction costs; and
- further extension to the Q6 price control (so the regulatory framework better aligns with the overall timetable for capacity expansion).

4. This consultation sits alongside our work in monitoring and encouraging effective engagement between HAL and airlines on the development of plans for capacity expansion at Heathrow. The intention is to ensure that airlines have the opportunity to influence HAL's overall scheme design so that it is fit for purpose (including properly protecting consumers), efficient and affordable. In accordance with the terms of reference established under section 16 of the Civil Aviation Act 1982, we report regularly to the Secretary of State for Transport on these matters. Since the June 2017 Consultation, we have published two more progress updates on engagement between HAL and the airlines.³ These have shown that this process has been progressing well in a number of areas, but much work remains to be done in the future to secure that capacity expansion is completed in a way that is timely, affordable and financeable. This will include HAL making substantial further progress, as soon as is reasonably practicable, in producing forecasts of the efficient level of the overall costs of capacity expansion that are reliable and robust.
5. As well as establishing a strong basis for our next price control review for HAL, our current work on the overall regulatory framework supports our Section 16 reporting by ensuring that we can take an early view on overall scheme affordability and financeability, which will be key factors in determining whether capacity expansion at Heathrow will be successful. As the Government's procedure for designating the airports National Policy Statement ("NPS") is now (subject to consultation and Parliamentary procedure) planned to be completed in 2018, our final report to the Secretary of State will now be delivered in April 2018.

³ Our work in this area is referred to in this consultation by reference to "Section 16". The terms of reference for this work and the CAA's reports to the Secretary of State are available on the CAA's website at: <http://www.caa.co.uk/Commercial-industry/Airports/Economic-regulation/Licensing-and-price-control/Heathrow-price-control-review-H7/>

6. As 2018 progresses, HAL's plans for capacity expansion will develop in more detail and we will start the second stage of our work, which will be the review of HAL's price control. This will build on our thinking on the regulatory framework and will lead to specific proposals for HAL's price control for the period that we expect to cover the most significant parts of the construction programme for the expanded airport. This second stage will commence with HAL developing and issuing its initial business plan ("IBP") for the operation of the existing assets and capacity expansion (which should be published at the end of 2018). The price control review will focus on supporting capacity expansion and ensuring that consumers' interests are properly protected. This will include:
- developing incentives for HAL⁴ to invest in a timely and efficient way; and
 - working with HAL and other stakeholders to ensure the evolution of the existing approach to quality of service regulation so that it appropriately reflects the outcomes that passengers most value.
7. We remain open to considering commercial or regulatory arrangements (or commitments) with a longer duration than a traditional five year price control if these would best protect the interests of consumers. This could include HAL and airlines bringing forward commercially negotiated arrangements that would deliver a longer term path of prices consistent with both affordability and financeability.

Stakeholders' views

8. We received responses to the June 2017 Consultation from 16 stakeholders and these have been published on the CAA's website.⁵ Chapter 1 sets out the overall themes emerging from those responses in relation to the regulatory framework and, in particular, alternative delivery arrangements, and updates our assessment of these issues. Responses on the cost of capital, financeability,

⁴ Incentives for HAL to produce an efficient business plan were raised in our "Guidance for Heathrow Airport Limited in preparing its business plans for the H7 price control" and are dealt with in Appendix B to this document. That Guidance is available on the CAA's website at: www.caa.co.uk/CAP1540

⁵ See: <http://www.caa.co.uk/Commercial-industry/Airports/Economic-regulation/Licensing-and-price-control/Heathrow-price-control-review-H7/>

financial resilience, the regulatory treatment of early construction costs and the further extension of HAL's existing price control are addressed in turn in each of the following five chapters.

9. Respondents' views on issues such as incentives and surface access will be dealt with our next regulatory update due in April 2018, when we will update our thinking in respect of these matters. There were also a number of comments by respondents on other issues that were outside the scope of the June 2017 Consultation, either because they cannot be addressed by the CAA, or because they are issues which we will need to address later in the regulatory process. The comments on these other issues are addressed in Appendix B.

Developing the regulatory framework

10. In chapter 1, we explain that the existing regulatory framework (which includes a Regulatory Asset base ("RAB") and price control calculations based on a single till) can complement a wide range of alternative delivery arrangements. These could include commercially negotiated contracts and competitive processes for the provision of new elements of capacity expansion. Although the CAA does not have the power to require HAL to enter into specific commercial arrangements, we expect HAL to stand by the comments it made in its response to the June 2017 Consultation and that it will engage in good faith with airlines and third parties coming forward and wishing to discuss and develop such arrangements.
11. We will expect HAL to address how it has engaged with potential third party providers in its initial and final business plans and, if particular opportunities are not followed up by it, we will expect HAL to be able to demonstrate that its preferred approach better serves the interests of consumers. If evidence were to emerge showing that HAL had acted inconsistently with these expectations, this might indicate inefficiency and, where we have evidence indicating inefficient expenditures, we would seek to guard against the recovery of these costs from consumers.
12. We will also maintain our focus on affordability and continue to recognise and support the aspirations of stakeholders to ensure that there is no real increase in

airport charges. Nonetheless, we also need to ensure that plans for capacity expansion are in the interests of consumers and are financeable.

13. Chapter 2 discusses the process and work programmes we should use to estimate HAL's cost of capital (i.e. costs HAL will need to incur in financing future investment, including that relating to capacity expansion). In the June 2017 Consultation, we said that we would publish the report that we had commissioned from PwC to provide an early and preliminary range for HAL's cost of capital. This report has been published alongside this document (as a separate technical appendix) and the results of PwC's analysis are summarised in Appendix C. The publication of the PwC report represents the start of our substantive work on the cost of capital for capacity expansion.
14. The PwC report indicates that there has been a general market wide reduction in the cost of capital since the last price control was set, but that specific factors linked to capacity expansion may offset some of this reduction. Much work needs to be done before we can reach final views on these matters, and we will wish to consider a wide range of evidence before reaching final decisions on estimates to be used in HAL's next price control. This work will include taking a balanced view of the regulatory incentives that will be appropriate, including those in respect of construction, cost efficiency and traffic volumes, and ensuring that our views on (and determination of) HAL's weighted average cost of capital ("WACC") take into account the risks that HAL will face in respect of these matters.
15. In due course, the above process will allow us to formulate our preferred range for the cost of capital, which is likely to be different from the early and preliminary range identified by PwC. We will also be open to HAL considering whether there might be market mechanisms that could help reveal the cost of equity, such as a competition for the provision of some of the new equity that might be needed to support HAL's financing in the circumstances of capacity expansion.
16. Our work on the cost of capital should help inform the further update on the regulatory framework that we intend to publish in April 2018 and our final Section 16 report to the Secretary of State. We will then further modify and/or refine this

range and establish our view on the appropriate WACC for use in the decisions on HAL's main price control, with this process running through 2019 and 2020.

17. Chapter 3 deals with issues relating to how we should assess the financeability of HAL's proposals for capacity expansion. These include:
 - whether we should test financeability on the basis of notionally efficient and notionally securitised financial structures;
 - what credit metrics we should use to test for debt financeability; and
 - as capacity expansion is likely to require a significant injection of new equity, whether and how we should consider, and test for, equity financeability.
18. In chapter 4, we explore whether there are additional measures we could take that would promote the financial resilience of HAL given the likely challenges associated with financing capacity expansion. As we indicated in the June 2017 Consultation, we are seeking to develop a proportionate approach that would be consistent with HAL's existing financing arrangements. This should ensure that new measures, or the strengthening of existing measures, should not create undue costs for HAL and/or consumers. Chapter 4 provides more details of this approach, and sets out our early thinking on some licence conditions to promote financial resilience.
19. Chapter 5 addresses the regulatory treatment of early construction costs. A number of the responses from airlines to the June 2017 Consultation suggested that, if HAL wanted to proceed with these expenditures, it should bear the risks from a failure of HAL to secure planning permission for capacity expansion. We have already provided an incentive for HAL in respect of these matters in our proposals for the regulation of planning costs. We clarify that, for early construction costs, a basic test for efficient early spending should be that there are clear benefits to consumers (rather than HAL) in these costs being incurred.
20. Bearing this in mind, we set out further conditions and tests that HAL would need to satisfy before we would agree to the recovery of these costs. These include HAL providing further evidence on efficiency and involving airlines in the governance of these costs. If HAL can provide evidence that gives comfort on all

of the above and that the costs that it incurs are efficient, these costs should be added to HAL's RAB and recovered from consumers in due course.

21. In chapter 6, we consider how best further to extend HAL's current price control, so that the next main price control review can better support capacity expansion and protect the interests of consumers. We focus on how best to calibrate a further one year extension to the price control as this would better align the timetable for developing the framework for economic regulation with the overall programme for capacity expansion. Nonetheless, as the timetable for the wider programme is not yet certain, we also consider a two year extension, with final decisions on duration and the approach to calibration to be made later in 2018, when the overall timetable should be more mature.
22. We are seeking to find a proportionate and targeted approach to the price control extension that will not create an undue distraction for stakeholders from the very important matters associated with capacity expansion. This will involve considering how best to roll forward or update the existing price control in a way that avoids the complexity of a full review, but still protects consumers appropriately. We are also seeking to manage any short term uncertainty by consulting on two simple options for the path of prices, and will be making final decisions on these matters in April 2018. The first of these options is Retail Price Index ("RPI")-0% (consistent with airlines' aspirations for no real increase in charges over the longer term) and the second is RPI-1.5% (consistent with the current price control).
23. Any further adjustments to regulated revenue deriving from our final decisions on the approach to calibrating the further extension of the price control will be made by adjusting regulatory depreciation. For instance, if the calibration of underlying revenue were to suggest a lower revenue allowance than implied by RPI-0%, we would increase regulatory depreciation. Doing so would have the effect of reducing the RAB when the full price control for capacity expansion is set and will, therefore, ensure airport charges are lower in future years than they otherwise would have been. Given the likely pressures on future price levels that may be created by capacity expansion, our preferred approach at this stage is RPI-0%. Taken in the round, with the approach to adjusting regulatory

depreciation this should ensure that the interests of present and future consumers are properly protected over time.

Next steps

24. During the first part of 2018, the main focus of our work will be finalising our advice under Section 16 to the Secretary of State. To this end, we will issue a further interim Section 16 report in February 2018, followed by our final Section 16 report in April 2018. Consistent with the Terms of Reference, these reports will focus on how well HAL has engaged with, and responded to, the airline community on the appropriate scope, design and costing of new runway capacity at Heathrow. They will also include an assessment of the response of airlines to the revised scheme design, and our initial assessment of affordability and financeability.
25. To support our Section 16 work, we will be continuing to develop the regulatory framework for capacity expansion. We intend to issue our next consultation in April 2018, alongside making our final Section 16 report to the Secretary of State. This next update on the regulatory framework will take into account responses we receive to this consultation, and will provide updates to our thinking on incentives for efficiency, surface access, the cost of capital, financeability, affordability and the approach to the further extension of the Q6 price control. We will also consider how best we can continue to support airport/airline engagement following the end of our Section 16 reporting.
26. Assuming that the current timetable for the wider programme of capacity expansion remains in place, we envisage taking the following steps in 2018, 2019 and 2020:
 - April 2018: our final Section 16 report to the Secretary of State and the publication of next update on the regulatory framework;
 - summer 2018: final update on the regulatory framework ahead of HAL's IBP;
 - December 2018: HAL produces its IBP, and constructive engagement with airlines on the plan commences;
 - August 2019: HAL produces its final business plan ("FBP");

- September/October 2019: CAA proposals to modify HAL's licence to put into effect our proposals further to extend HAL's Q6 price control;
- December 2019: CAA initial proposals for HAL's next main price control;
- May 2020: CAA update on its proposals;
- September 2020: CAA final proposals; and
- November 2020: CAA decision to modify HAL's licence to put the new price control into effect from 1 January 2021.

27. However, should circumstances change, for example, by reference to the Government's wider timetable, we may review our approach. For example, if the NPS or development consent order ("DCO") is substantially delayed and it becomes clear in 2018 or 2019 that a 2 year (or longer) extension of HAL's current price control would be required, we would need to review the above timetable.

Our duties

28. In developing this consultation, we have had full regard to our statutory duties under the Civil Aviation Act 2012 ("CAA12"), which are set out more fully in Appendix A.

Structure of this document

29. The structure of this consultation document is as follows:
- chapter 1 deals with the overall regulatory framework and, in particular, issues relating to alternative delivery arrangements;
 - chapter 2 deals with the cost of capital;
 - chapter 3 discusses financeability;
 - chapter 4 explores financial resilience;
 - chapter 5 discusses the regulatory treatment of early construction costs; and
 - chapter 6 sets out our latest views on the further extension of the existing Q6 price control.

Chapter 1

Themes emerging from stakeholders' comments on the core elements of the regulatory framework and affordability

Introduction

- 1.1 This chapter identifies key themes from stakeholders' responses to the June 2017 Consultation in relation to the overall regulatory framework and affordability, and sets out the CAA's latest position on these matters. Other core elements of the regulatory framework (such as the cost of capital and financeability) are dealt with in the later chapters of this document.

The regulatory framework

The RAB, single till and alternative delivery models

- 1.2 There was broad support for continued use of a RAB-based approach and single till for HAL, but with some respondents saying that there should be important changes in the way these arrangements are implemented. In particular, these respondents were concerned that the approach to the RAB and single till explained in the June 2017 Consultation would not provide sufficient support for alternative commercial arrangements that could better deliver important elements of capacity expansion.
- 1.3 Airlines and others also expressed concerns over the scope and transparency of the RAB, and were concerned that the existing arrangements do not encourage cost reflective charging arrangements, might encourage inefficient spending by HAL and inappropriately pass risks to users.
- 1.4 On the single till, views from other parties included that:

- separate profit centres for retail, surface access and parking revenues should be created to increase transparency, even if those revenues continued to contribute to the single till; and
- the use of the single till may depress airport charges, but this may not be reflected in lower air fares, and it may be better to use some commercial revenue to invest directly in capacity expansion.

1.5 HAL did not respond in detail on alternative delivery models, but stated it was willing to engage with the airline community to explore the possibility of entering into collective and/or individual agreements and that the CAA should not be prescriptive, allowing time for agreements to develop.

1.6 Airline representatives explained that at each stage of capacity expansion the governance arrangements should allow for as much competition as possible. Further, their view was that the CAA should ensure a level playing field for third parties in the design, development, delivery, operation and ownership of expansion. They requested that the CAA explore more options for encouraging the development of competition and cited the Irish Government's recent consideration of having a third party developer at Dublin Airport.

1.7 Another respondent said that the CAA should:

- have competition as an additional objective and not assume that HAL would be the sole delivery agent for expansion;
- keep an open mind over what a future regulatory framework might look like, subject to appropriate governance;
- ensure a level playing field for third parties in the design, development, delivery, operation and ownership of expansion; and
- facilitate airlines working with other suppliers, especially if this supports affordability.

1.8 One airline also wanted the CAA to explore the scope for competition further and made wide ranging proposals in relation to these matters. It said that the CAA should:

- audit and, as soon as practicable, publish, a detailed make up of HAL's RAB and its costing of capacity expansion;
- consider splitting the RAB into "utility" assets (such as runways and taxiways) and "commercial" assets (such as terminals). Third parties could then develop competitive commercial proposals for customers, jointly with HAL or potentially, in limited areas, as a competitor to HAL, possibly backed by joint venture vehicles;
- force HAL to allow third party participation in competitive processes for infrastructure development at Heathrow and grant a licence to a third party if its proposals for development were in the best interests of passengers;
- take competitive parts of the airport (most likely terminals) out of the scope of regulation, with the aim of promoting more efficient and customer focused investment, more diverse funding arrangements, and a move away from whole business securitisation (which the CAA should not have permitted in any case); and
- consider any failure on HAL's part to consider credible joint venture proposals from third parties as strong evidence that it is able to manage the risks associated with capacity expansion. If this were the case, it should be reflected in a lower cost of equity for HAL than would otherwise be the case;
- nonetheless, retain a strong focus on affordability and, if airport charges are capped so they do not increase in real terms, HAL should be rewarded if it delivers capacity expansion at price levels below this cap; and
- require that HAL should divest its Heathrow Express assets as these are (with competition from Crossrail) no longer a core asset needed to further the interests of passengers, and make a downward adjustment to HAL's RAB to take account of any such divestment.

1.9 Another airline explained that commercial arrangements between HAL and airlines may not be in the best interests of passengers, as HAL is likely to retain significant market power and continuing regulatory oversight would be required.

- 1.10 Other respondents raised potential difficulties with alternative delivery arrangements, considering that one body should be responsible for coordinating development and noting that competition might reduce contributions to the single till.

CAA Response

- 1.11 We consider that the regulatory regime under CAA12 is flexible enough to accommodate a wide range of commercial structures at Heathrow and, as we have previously stated, we are in favour of such arrangements where they can be shown to benefit consumers. Nonetheless, as we have also previously stated, the CAA does not have the power, directly or indirectly, to impose, or force HAL to enter into, particular commercial solutions to promote competition. Furthermore, we do not have the power either to issue a licence to a new market participant under CAA12 (unless we first made a Market Power Determination and such a determination were to indicate that a licence would be appropriate), or to force HAL to divest assets.
- 1.12 This means that a number of the suggestions made by those respondents that are strong supporters of competitive arrangements are not possible or practicable ways forward. Even where other legal means might be found to achieve some of these objectives, such as an Enterprise Act 2002 investigation, these would be lengthy procedures and the outcome would be highly uncertain, particularly as those respondents supporting more radical options for forcing the introduction of competition have provided only limited evidence in support of their arguments. Any delays to capacity expansion resulting from uncertainty over the regulatory framework would also have significant costs to consumers in terms of less choice, poorer service levels and higher fares. For the avoidance of doubt, we do not consider that the use of the markets provisions of the Enterprise Act 2002 would be either relevant, or justifiable, at this stage.
- 1.13 Bearing the above in mind, we are seeking to identify what we can best do in practice reasonably to support and encourage the introduction of more competitive arrangements, consistent with the interests of consumers. In selecting the way forward, we also need to consider how to ensure that any

initiatives are properly targeted and focused best to support the affordable and financeable development of new capacity.

- 1.14 For instance, there are suggestions that we should audit HAL's RAB and then hypothecate the RAB to specific parts of the Heathrow campus. What is hard for us to understand is how this would directly help the development of competitive arrangements for capacity expansion. The RAB relates to the unamortised portion of the *existing* regulated assets (which is not necessarily the same as their commercial value) and not the costs of the *new* assets required for capacity expansion. In the absence of understanding a specific commercial proposition and/or proposal, we are not clear how useful an exercise it would be further to analyse HAL's RAB.
- 1.15 There is information to suggest that potential third party developers might be interested in supporting the development of new capacity at Heathrow. To this end, we expect that HAL will stand by the comments it made in its response to the June 2017 Consultation and that it will engage in good faith with airlines and third parties coming forward wishing to develop commercial agreements. Another approach might be for HAL and airlines to bring forward commercially negotiated arrangements that would deliver a longer term path of prices consistent with both affordability and financeability.
- 1.16 If a party has a specific proposal under development and wants to discuss the operation of the framework for economic regulation, or the provision of information that might better facilitate finalising its proposal, we continue to be open to discussions on these matters. Nonetheless, we would expect that any proposal would be sufficiently developed to:
- allow for meaningful discussions of key issues (including consumer benefits);
 - include a description of the means by which their plans can come to fruition through commercial negotiation and discussion, and the planning and other consenting processes; and
 - allow us to come to a clear understanding of any additional information that might reasonably be required to progress the proposal further.

- 1.17 We share the aspirations of stakeholders for bringing transparency to the costs of capacity expansion, and will seek to ensure that there are properly transparent forecasts of all the capital and operating expenditures necessary to support the efficient expansion and operation of Heathrow in the future. This should allow consideration of whether HAL's forecasts of costs are:
- reasonable and efficient; and
 - provide sufficient information to allow stakeholders to consider whether alternative commercial arrangements might provide benefits for consumers.
- 1.18 We will expect HAL to address how it has engaged with potential third party providers in its IBP and FBP. If particular opportunities are not followed up by it, we will expect HAL to be able, in justifying its proposed costs, to demonstrate that its preferred approach better serves the interests of consumers and provides better value for money than the alternative.
- 1.19 As we said in the June 2017 Consultation, we will guard against the recovery of inefficient expenditure. As such, we are also in agreement with stakeholders that, if there is evidence that HAL has not reasonably followed up opportunities for appropriate commercial and/or competitive arrangements, this may provide evidence of inefficiency.
- 1.20 There may also be merit in introducing a relatively simple condition into HAL's licence that would require it to operate, maintain and develop Heathrow in an economical and efficient and timely manner so as to satisfy the reasonable requirements of users regarding the quality and capacity of the airport. The precise drafting of any such condition would require further consultation but could specifically refer to the importance of exploring appropriate commercial and competitive opportunities to further the interests of consumers. Any proposal for a licence modification would require discussion and consultation and so would take time to put in place. Bearing this in mind, we will also consider whether there are other more timely and effective steps we might take to facilitate appropriate commercial/competitive arrangements.

- 1.21 In the light of all of the above, we would welcome further suggestions from stakeholders on whether there are additional practical steps that we can take to support the development of competitive solutions and commercial arrangements that would best protect the interests of consumers.

Affordability and the profiling of regulatory depreciation

Stakeholders' views

- 1.22 Stakeholders have said that HAL's proposals for capacity expansion should be both affordable and financeable. Airline representations focused particularly on the following issues:
- that there should be no real increase in today's prices;
 - that expansion will only be in users' interests if it is affordable;
 - linking affordability and financeability on the grounds that if charges were not affordable, airlines will not use the expanded airport sufficiently to enable it to be financed;
 - the importance of cost efficiency and an appropriate estimate of the cost of capital to support affordability;
 - the scope for increasing competition in the delivery of new infrastructure at Heathrow and the potential for this to drive more efficient and affordable solutions; and
 - the lack of progress in agreeing an affordability protocol with HAL.
- 1.23 On the meaning of affordability, HAL said that it should be framed around consumers, not airlines, through taking into account cost and value for consumers and the value created for consumers both now and in future. It took the view that this does not contradict there being value for money and opportunities for airlines. It said the CAA should set its price control determination through assessment of these factors and not "back solve" for a specific price level.
- 1.24 By contrast, an airline was particularly firm in disagreeing with the CAA's proposal to assess passengers' willingness to pay, considering that, as they

cannot pass costs on to passengers, higher charges would reduce passenger choice as airlines concentrate on higher yielding routes. Another respondent provided a significant volume of material on how it considered that expansion would not be financeable without increased airport charges at Heathrow.

- 1.25 On the suggestions in the June 2017 Consultation that the profiling of regulatory depreciation should be used to help find the appropriate balance between affordability and financeability, respondents were generally open to the possibility of a more flexible approach than that used in the past. HAL, however, expressed a concern that the undue flexing of regulatory depreciation could stretch its financeability ratios and have an impact on creditor confidence and investment funding. An airline suggested adopting unitised regulatory depreciation, so that every passenger would contribute equally to capacity over its lifetime. Concerns were also expressed that only efficient investment should qualify for inclusion in the RAB and depreciation allowances.

CAA Response

- 1.26 We understand the importance of the support given by HAL, the airlines and the Secretary of State for making sure that airport charges are maintained as closely as practicable to current levels during and after the capacity expansion programme.
- 1.27 The current engagement process between HAL and airlines is designed to help HAL to develop an appropriate scope, design and costing of new capacity at Heathrow, and we will continue to monitor the progress of this process in 2018. We see this as being an important part of developing proposals for both the existing and expanded airport so that its overall business plan is affordable and financeable. It is important that consumers are protected by this process. The assessment of consumers' willingness to pay should be part of this process and may inform decisions on how best to proceed with specific aspects of capacity expansion, but within overall envelopes that also deliver wider objectives relating to affordability and financeability.
- 1.28 We accept that the profiling of regulatory depreciation is only useful to the extent it promotes an overall solution that is both affordable and financeable. We do not

intend to pursue concepts such as unitised depreciation, as such a relatively mechanistic approach could be inconsistent with affordability and/or financeability. We also accept that issues such as cost efficiency are important to both affordability and financeability.

Views invited

- 1.29 Views are invited on any aspect of the issues raised in this chapter and, in particular, on any further suggestions stakeholders may have on whether there are additional practical and practicable steps that we could take to support the development of competitive solutions and commercial arrangements, which would best protect the interests of consumers.

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Chapter 2

Cost of capital and debt indexation

Introduction

- 2.1 Capacity expansion will require the financing of significant amounts of capital expenditure. The cost of financing this investment will be very important to determining the overall level of airport charges. The cost of financing is a key component in the calculation of HAL's price control revenue and is important to determining its overall financeability.
- 2.2 In setting HAL's price control, we take account of the costs of financing by estimating its cost of capital. In this context the cost of capital is the minimum expected return required by the financial markets to provide financial capital to HAL given the level of expected overall risk. The June 2017 Consultation explained that we calculate the WACC based on the cost of equity, the cost of debt, and the relative proportion of equity and debt.
- 2.3 Under HAL's Q6 price control, the revenue associated with the WACC represents approximately £0.8 billion per year of HAL's total revenues (or around 50% of airport charges).⁶ The impact of changes to the WACC can be illustrated by the fact that a one percentage point change to the WACC would translate into a change of around 10% (or £2 per passenger) in airport charges.
- 2.4 We said in the June 2017 Consultation that we would publish the report that we had commissioned PwC to produce to provide an early and preliminary range for HAL's WACC. This report has been published alongside this document (as a separate technical appendix) and the results of the PwC analysis are summarised in Appendix C. The publication of the PwC report represents the start of our substantive work on the cost of capital for capacity expansion. In

⁶ Based on a closing RAB of £15.2 billion as at 31 December 2016 and CAA forecast revenues of £1,601 million for year ended 31st December: see Section 1, Heathrow (SP) Limited Regulatory Accounts (2016): https://www.heathrow.com/file_source/Company/Static/PDF/Investorcentre/Heathrow-Limited-2016-regulatory-accounts.pdf.

developing our work on the WACC, it will be important to consider carefully the PwC report, the views of respondents and the evidence that they provide in relation to these matters, as well as continuing with our own analysis on the cost of capital.

- 2.5 This chapter summarises the views of respondents to the June 2017 Consultation on matters relating to the cost of capital, describes the process that we intend to use in refining the early and preliminary range for HAL's WACC, and identifies issues for further consideration.
- 2.6 An important part of the WACC is the cost of debt. The June 2017 Consultation explained there could be advantages in moving away from a fixed allowance for the cost of debt in setting the price control. The problem with using fixed allowances is that they do not take into account market movements during the price control period that are outside of the control of HAL's management. As a result, fixed allowances could increase the risks of windfall gains/losses for investors and this uncertainty might lead to higher costs for consumers. We also explained that there might be advantages in moving to an approach based on debt indexation, and this chapter explores these matters further.

Responses to the June 2017 Consultation on the cost of capital

- 2.7 Although the June 2017 Consultation highlighted the importance of the cost of capital as an issue, it did not set out a detailed assessment of the WACC. This is reflected in the views of respondents, with comments on the cost of capital being limited to high level observations on the WACC.
- 2.8 HAL said that the CAA should explore options to ensure that the enhanced risks associated with capacity expansion would be properly rewarded over the life of the project (or at least over the next 15 to 20 years).
- 2.9 Airlines said that the CAA should take into account the availability of significant amounts of relatively cheap debt finance in determining the WACC. They also said that the competitive provision of infrastructure at Heathrow through alternative commercial arrangements and delivery mechanisms could help reduce risks and financing costs.

Process for estimating the cost of capital

The process for estimating HAL's WACC

- 2.10 As we have explained above, we commissioned PwC to provide an early and preliminary estimate of the range for the WACC. They have done this on the basis of both HAL's existing business (operating a two runway airport or "as is" scenario) and taking into account the impacts of capacity expansion and a third runway (the "with R3" scenario).
- 2.11 We will need to consider carefully the views of respondents on the PwC report, any additional evidence that respondents wish to provide in relation to the WACC and their suggestions for further work that we should undertake in relation to these matters.
- 2.12 In addition to this, we are consulting a group of senior expert advisors on our approach to the WACC and the areas of additional focus for future consideration. We also intend to have regard to determinations on the WACC made by other economic regulators, while recognising that airport financing and risk, especially given the context of capacity expansion, may warrant additional considerations.
- 2.13 This work will help to inform the initial range for the WACC for the further update on the regulatory framework for HAL that we intend to publish in April 2018. It should also facilitate our final report to the Secretary of State on Section 16, which will report on the success of airport/airline engagement on capacity expansion, particularly in terms of progress in identifying a scheme that is both affordable and financeable.
- 2.14 We will then further refine this range and consider how best to identify the point estimate of the WACC for use in the decisions on HAL's main price control, with this process running through 2019 and 2020.⁷ To be clear, this means that the early analysis produced by PwC is one input into our wider decision making process, and our final range and final determination of the WACC could be

⁷ This assumes that there is a further one year extension to the Q6 price control. For more detail on the regulatory timetable, see chapter 6.

different from PwC's early and preliminary range. In undertaking the process to reach our final decisions, we will take into account a range of factors, including:

- views of respondents to our consultations and, in particular, the evidence that they provide in relation to HAL's WACC;
- the further analysis we will undertake and/or commission from external consultants;
- the latest evidence on market conditions and parameters, taking account of structural changes in parameters (e.g. to RPI);
- relevant regulatory determinations;
- our proposals for HAL's price control, including incentive arrangements and the risks associated with these. This will include an assessment of the material changes in risks as a result of capacity expansion and our regulatory framework. We would expect this work to focus on: (i) cost and construction risks (we would also take into account the opportunities available to HAL to use its supply chain better to share risks, and the scope for HAL to use novel commercial arrangements better to manage cost risks); and (ii) volume risks (which would cover expected levels of volatility, the treatment of demand risk in the regulatory framework and any commercial opportunities for HAL to partner with airlines to reduce volume risks);
- further detail that should, by then, be available on the expenditure programmes necessary to support capacity expansion;
- the results of our financial modelling of HAL and the risk profile associated with the results of this modelling; and
- any proposals that HAL might develop to establish market mechanisms that would help reveal the cost of equity, such as a competition for the provision of some of the new equity that might be needed to support HAL's financing in the circumstances of capacity expansion.

2.15 This process will allow us to form views on a credible range for HAL's WACC and we will then need to exercise judgement on how to best determine the point estimate to be used in setting HAL's final price control. In doing so, we will be

guided by our statutory duties, the general duty being to further the interests of present and future consumers.

Main policy issues relating to the cost of capital

Market wide estimates of the cost of equity and debt

- 2.16 PwC's report provides evidence that the market wide real cost of equity and real cost of debt has fallen significantly since the Q6 price control review. This puts significant downward pressure on its estimates of HAL's WACC.
- 2.17 The assumptions we make on these matters have the potential to have a significant impact on our estimates of HAL's WACC and, as indicated above, it will be important to consider a wide range of evidence before we reach final views on these matters.
- 2.18 The WACC range, parameter estimates and evidence from PwC's analysis are summarised in Appendix C and the full report has been published alongside this consultation.⁸

Additional risks associated with capacity expansion

- 2.19 As well as considering evidence on market wide parameters and evidence on the other factors determining the WACC for HAL's present business activities, PwC has also started to analyse, using a case study approach, the impact of capacity expansion on HAL's WACC. Although it is very early in the process for developing the detail of the regulatory framework for capacity expansion, PwC has produced a very initial range for any additional premium that might be required to take account of the additional risks associated with capacity expansion.
- 2.20 In general, these very initial estimates are not sufficient to offset the reductions that they have identified resulting from the market wide conditions discussed above. As a result, PwC consider that, currently, the overall WACC would be somewhat lower than the range identified for HAL's WACC at the Q6 price

⁸ Estimating the cost of capital for H7: A report prepared for the Civil Aviation Authority (CAA) PwC Economics. See: www.caa.co.uk/CAP1611

control. Further details of PwC's assessment are summarised in Appendix C and set out in the separate technical appendix. These are very much initial estimates and final calibration of any such premium requires further work and assessment.

- 2.21 We note HAL's view that it might be appropriate to spread additional "rewards" for capacity expansion over a period of at least 15 to 20 years. While we do not rule this out, we would expect important elements of the additional risks, especially those relating to construction and passenger volumes, will be concentrated in the 10 years following the start of construction, because construction (and associated cost) and passenger traffic risks are likely to be most acute during this period. We will also need to consider to what extent these additional risks are related to wider market risks and whether they are best dealt with by adjustments to the cost of capital.

Assumptions on the level of gearing (or the proportion of debt finance)

- 2.22 A number of respondents have said that it is important that the CAA takes into account the availability of relatively cheap debt finance in assessing the appropriate WACC for capacity expansion. They note that HAL's present levels of gearing are significantly above the assumption of 60% gearing made in setting the Q6 price control. As part of its work, PwC has assessed a sensitivity using an assumption of 80% rather than 60% gearing. Using the standard approaches to estimating a WACC means that this has relatively little impact on the overall cost of capital, as a greater proportion of debt finance means that the remaining equity is considered more risky and so requires a higher return. We will need to consider these matters further, including the views of the corporate finance community on the appropriate cost of equity and any market based evidence on these matters. It is also important that we consider the impact of higher levels of debt finance on allowances for corporation tax. These matters are discussed further below.

Tax

- 2.23 The June 2017 Consultation also raised the issue of the treatment of corporation tax and noted the possible advantages of moving away from the approach used at Q6 (that was based on a simple assumption of standard tax rates applying to

equity funding) to an approach reflecting forecasts of actual corporation tax payments.

2.24 HAL said that, given the uncertainties associated with capacity expansion:

- a simple approach may be more flexible;
- it would not be straightforward to forecast gearing levels; and
- in any case, it would experience significant disadvantages given recent changes in corporation tax arrangements and the removal of industrial building allowances.

2.25 We remain of the view that we should consider the treatment of corporation tax further. Consistent with the approach adopted in other sectors subject to economic regulation, there remains a relatively strong case for ensuring consumers benefit from funding no more than the level of corporation tax that would be associated with a tax efficient structure.

Responses to the June 2017 Consultation on debt indexation

2.26 HAL indicated that it would be open to discussions on developing debt indexation options, but took the view that debt indexation will not meaningfully reduce the risk of variance between forecast and actual debt, citing issues around financial market disruption, and political and regulatory risk. It also said that if debt indexation were to be adopted, it should only be applied to new debt, as the periodic resetting of the cost of embedded debt helps support financeability.

2.27 It also stressed the importance of careful consultation on the implementation of any such arrangements, including in relation to:

- the specific debt index to be utilised;
- the treatment of inflation;
- true-up mechanisms;⁹ and

⁹ True-up mechanisms in this context could be used to reconcile the differences between assumptions used to set the price control and outturn performance/costs.

- how best to take into account the particular characteristics of HAL's debt portfolio.
- 2.28 One of the airlines commented in detail on debt indexation and noted its support for this approach as it had the potential to reflect better the actual cost of debt and provide a more equitable solution between HAL and consumers. Nonetheless, it also noted that debt indexation would not create any additional incentives for HAL to reduce its debt costs.

Way forward on debt indexation

- 2.29 We remain of the view that there are advantages in debt indexation and it has the potential to reduce variances between forecast and actual debt costs. That said, we also share HAL's view that the implementation issues would require consultation and careful consideration.
- 2.30 We have assessed two high level options for debt indexation:
- Option 1: indexation of new debt only, with the retention of a fixed allowance for embedded debt (i.e. "part indexation"); and
 - Option 2: indexation of both embedded and new debt costs, either on an ongoing basis, or at the end of the price control period (i.e. "full indexation").
- 2.31 We consider that Option 1 provides a better balance of risks than either Option 2 (full indexation) or our previous approach of making fixed allowances.
- 2.32 Our approach at the Q6 price control review involved making a projection of the cost of debt for the period of the new price control. This approach can result in significant forecasting errors and both Options 1 and 2 would reduce these forecasting risks. While indexation means customers face more of the risk of movements in the cost of new debt, this also means that consumers will gain from falls in the market cost of debt. At the same time, HAL will face lower overall risks, which should help put downward pressure on its cost of capital. Moreover, both options maintain strong incentives on HAL to reduce debt costs below the market benchmark, to the longer term benefit of users.