

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

CAP 1658



Published by the Civil Aviation Authority, 2018

Civil Aviation Authority,
Aviation House,
Gatwick Airport South,
West Sussex,
RH6 0YR.

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First published April 2018

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About this document

This document follows on from our consultations in June and December 2017 on the regulatory framework to support capacity expansion at Heathrow. It consults further on the development of the regulatory framework and includes:

- updates on the development of our thinking in relation to the overall regulatory framework, including our initial and early assessment of the overall affordability and financeability of capacity expansion;
- proposals for Heathrow Airport Limited (“HAL”) to engage further on alternative commercial and delivery arrangements;
- more information on the process we are undertaking to establish the cost of capital for HAL and an explanation of our initial work to integrate our preliminary work on incentives with our approach to assessing the cost of capital and shareholder returns;
- our decisions in relation to a new interim price control that will facilitate the alignment of the regulatory processes for setting price controls with the wider timetable for capacity expansion and better protect the interests of consumers; and
- discussion and further consultation on the regulatory treatment of early construction costs and surface access costs.

It also complements our final report to the Secretary of State (“SoS”) under section 16 of the Civil Aviation Act 1982 reporting on airport-airline engagement, which will be published shortly.

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 7.

Please e-mail responses to economicregulation@caa.co.uk by no later than 29th June 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).

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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 “Northwest runway”. The CAA has consistently stated that additional runway capacity in the south east of England will benefit air passengers and cargo owners. The timely delivery of more aviation capacity is required to prevent future consumers¹ experiencing higher fares, reduced choice and lower service quality.
2. During 2017, we issued consultations on the core elements of the regulatory framework to support capacity expansion at Heathrow. These included:
 - our priorities and timetable for developing the framework for the economic regulation of HAL²; and
 - our initial thinking on core elements of the regulatory framework for HAL, including our approach to incentives³.
3. These consultations stressed the importance of HAL delivering capacity expansion in a way that protects the interests of consumers by ensuring it is delivered in a timely, affordable and commercially financeable manner.
4. We published a further consultation (the “December 2017 Consultation”),⁴ that took into account of the views of respondents to the June 2017 Consultation, and:

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

² See CAP 1510 Economic regulation of the new runway and capacity expansion at Heathrow airport: consultation on CAA priorities and timetable www.caa.co.uk/CAP1510

³ See CAP 1541 Consultation on the core elements of the regulatory framework to support capacity expansion at Heathrow www.caa.co.uk/CAP1541

⁴ See CAP 1610 Economic regulation of capacity expansion at Heathrow: Policy update and consultation www.caa.co.uk/CAP1610

- explained that the existing regulatory framework can complement a wide range of alternative delivery arrangements, including commercially negotiated contracts and competitive processes for the provision of new elements of capacity expansion. We said we expected HAL to stand by its commitment to engage in good faith with airlines and third parties coming forward and wishing to discuss and develop such arrangements;
- consulted on our approach to build an evidence base for our decisions about HAL's cost of capital for capacity expansion. As part of this, we published a report that we had commissioned from PwC that provided an early and preliminary estimate of the range for HAL's cost of capital;
- set out our initial thinking on how we should assess the financeability of HAL's proposals, including the use of notional financial structures, credit metrics and our approach to testing equity financeability;
- considered measures to promote the financial resilience of HAL that would be consistent with HAL's existing financing arrangements and should avoid any undue costs for HAL and/or consumers;
- discussed the treatment of the construction costs that HAL will need to incur before planning consent is granted. It proposed that HAL would need to demonstrate that there were clear benefits to consumers before these costs were incurred and set out further conditions and tests that HAL would need to satisfy before we could agree to them being added to HAL's regulatory asset base ("RAB") and recovered from airlines and consumers by HAL's airport charges; and
- consulted on how best further to extend HAL's current price control, so that the next price control review can be better aligned with the overall programme for capacity expansion.

5. This document builds on the December 2017 Consultation and the responses and sits alongside our work in monitoring and encouraging effective engagement between HAL and airlines on the development of plans for capacity expansion at Heathrow. Our work on airport and airline engagement has been conducted in the context not only of our regulatory oversight of HAL under the Civil Aviation Act 2012 ("CAA12"), but also a request from the SoS under section 16 of the

Civil Aviation Act 1982 that we review and advise him on how well HAL is engaging with, and responding to, the airline community on the appropriate scope, design, and costing of the new runway and capacity at Heathrow.⁵ Our final report under this “Section 16” process is being submitted to the SoS on 30th April 2018 and should be published shortly.

6. The process for airport and airline engagement has allowed airlines to influence HAL’s overall scheme design so that it is fit for purpose (including properly protecting consumers), efficient and affordable. Our reports to date have shown that the process of airport-airline engagement at Heathrow has had significant advantages for consumers, with airlines being able to input into the process for overall scheme design and make clear their priorities and share their expertise. HAL has responded positively by reducing the baseline costs of its draft design by £2.5 billion compared to its submissions to the Airports Commission. Nonetheless, this engagement process has revealed that much remains to be done to secure the delivery of capacity expansion in a way that is in the interests of consumers, is affordable and financeable.
7. Our final Section 16 report includes proposals for enhanced engagement and reporting for the period between now and when HAL makes its development consent order (“DCO”) application under the Planning Act 2008. Our proposals for enhanced engagement and our approach to developing the regulatory framework for HAL reflect the national importance of capacity expansion at Heathrow and the challenges associated with finding an overall scheme design that protects the interests of consumers and is affordable and financeable.
8. HAL’s plans for capacity expansion will develop in more detail with the identification of its “masterplan”, scheduled for the third quarter (Q3) of this year. This will take into account the responses to its first planning consultation as well as its ongoing engagement with airlines.

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

9. At the same time, we will continue our work on developing the overall framework for the future regulation of HAL given the context of capacity expansion. The section on next steps below sets out our plans in more detail for 2018 and we are consulting further on key milestones for 2019.
10. HAL will also need to contribute towards developing proposals for the airspace change necessary to deal with increasing congestion in the use of airspace and support capacity expansion at Heathrow. The CAA has two roles in relation to airspace change:
 - making decisions on proposals to change airspace design; and
 - developing a strategy and plan for the use of UK airspace for air navigation up to 2040, including for the modernisation of such airspace.
11. While we do not have any powers to require collaboration between airports to facilitate airspace change, we welcome the clearer guidance on airspace that the Department for Transport (“DfT”) has put in place. The CAA’s airspace plan will be reviewed during 2018, once the position on the designation of the Airports National Policy Statement (“NPS”) is clear. Nonetheless, if it is to be successful, airspace change will require support from NATS, airlines, airports, other stakeholders and the Government.

Main issues raised in this consultation

12. Chapter 1 updates our approach to affordability and financeability in the light of stakeholders’ responses. It explains the importance of both affordability and protecting the interests of consumers, which means a focus on cost efficiency and not necessarily the lowest possible cost approach to capacity expansion. This should not be used as an excuse by HAL to incur unnecessary costs, and airlines should expect to see no more than efficient and appropriate costs reflected in airport charges.
13. Chapter 1 also addresses financeability, clarifying our approach to assessing financeability using a “twin track” approach (including both moderate and higher levels of gearing) to financial structures and updating our views on the debt metrics we intend to use to help inform our assessment. The choice of HAL’s

actual capital structure is the responsibility of HAL and its directors and our proposed approach should not be taken as an endorsement of any particular capital structure. Nonetheless, we expect HAL to retain access to cost efficient investment grade financing and for it to be able to demonstrate that on an ongoing basis it remains financially resilient and robust. As we noted below, we are considering strengthening HAL's financial ring fencing licence conditions to help ensure the delivery of these objectives.

14. Chapter 2 complements our final Section 16 report to the SoS, setting out our initial assessment of the affordability and financeability of the development of new runway capacity at Heathrow airport. While the range of plausible outcomes with respect to airport charges per passenger remains relatively wide, our initial assessment suggests that there are credible scenarios in which capacity expansion can be delivered affordably and financeably, with airport charges per passenger remaining close to current levels in real terms and line with the ambition expressed by the SoS on these matters in 2016.
15. We illustrate a possible scenario based on HAL's assumptions for the costs of its "Westerly Option", combined with a mid-range estimate for the cost of capital based on PwC's early and preliminary work on these matters (which was published alongside the December 2017 Consultation) that gives airport charges per passenger that are broadly consistent with 2016 levels in real terms. This is only initial analysis and is subject to further consultation, assessment, development and change.
16. Of course, this is only one scenario and all stakeholders will need to work constructively together to ensure that capacity expansion is delivered efficiently (and no unnecessary costs are incurred) to support the delivery of affordable levels of airport charges. We will seek to develop and improve our initial assessment of affordability and financeability as further information on the preferred expansion scheme becomes available during 2018 and 2019. We will continue to model scenarios as the scheme is refined and we obviously cannot rule out the need to address scenarios where airport charges per passenger vary significantly from our initial analysis, not least given the considerable uncertainties that relate to HAL's current cost estimates.

17. Chapter 3 deals with the key themes from stakeholders' responses to the December 2017 Consultation in relation to the regulatory framework and financial resilience.⁶ We confirm our support for HAL engaging with an open mind with airlines and other interested parties that have ideas for alternative commercial and delivery arrangements for elements of new capacity, such as terminals, where they can be evidenced to be in the interests of consumers. We also propose new processes and arrangements for HAL's engagement on these matters.
18. To this end, we require that HAL stands by its public commitment to engage on such matters and to do so in a meaningful, constructive and imaginative way. HAL should develop a timely, open minded and effective process for this engagement. We expect all participants in these discussions to act in good faith and in a professional and constructive way, demonstrating the flexibility to find arrangements that will benefit consumers.
19. On 26th April 2018, HAL provided us with an overview of its proposals for engagement on alternative commercial and delivery arrangements. We welcome the initiative that HAL has shown in respect of these matters and will want to understand its approach in more detail. Our initial view is that it will be important that HAL:
- takes airline and other stakeholders along with it in developing these arrangements; and
 - ensures that the arrangements are sufficiently flexible to allow for open minded and genuine dialogue, and for credible alternative proposals to be modified and evolve so that they can be properly evaluated in terms of integrating with wider plans for capacity expansion and protecting consumers.

⁶ Generally, this consultation addresses the main issues raised by stakeholders. To the extent that stakeholders have raised issues that we have dealt with in past consultations, we have not addressed those issues again.

20. Chapter 3 also addresses respondents' comments on new licence conditions, including in relation to delivery and financial resilience, albeit that these will be dealt with in more detail in a consultation and update paper later this year.
21. Chapter 4 discusses our approach to the assessment of HAL's cost of capital and confirms that we will take into account the impact of incentive arrangements and risks on the cost of capital and shareholder returns. It summarises our initial work on calibrating the possible impact of incentives on the regulated return on equity. In due course, we will need to develop a balanced package of price control incentives, including incentives for the timely delivery of capacity expansion by HAL.
22. Chapter 5 deals with the arrangements that we will need to put in place at the end of the current ("Q6") price control, and explains our proposal to implement a two year interim price control to apply from January 2020 (subject to there being no significant changes to the forward work programme for capacity expansion). This approach has the advantages of aligning the regulatory and planning processes, will more likely result in HAL producing a high quality business plan and provide sufficient time to allow the exploration of appropriate alternative commercial and delivery arrangements.
23. Stakeholders have expressed strong support for our view that the approach to setting the interim price control should be proportionate and straightforward to implement, given that consumers' interests are best served by not unnecessarily distracting attention and resources away from supporting capacity expansion.
24. We intend to retain the RPI-1.5% price path from the current price control for 2019/20 (which will provide the immediate benefits to airlines of a real terms reduction for two years their charges), and complement this by testing for financeability in 2020/21 to determine whether a further RPI-1.5% price reduction is appropriate.
25. To ensure that consumers can share appropriately in the benefits of HAL's performance, we propose to review the assumptions on (i) passenger numbers, (ii) operational expenditure and (iii) commercial revenues to reflect forecasts as well as updating the weighted average cost of capital ("WACC") in relation to

new debt costs and the rate of corporation tax. These should be relatively straightforward to review using “top down” assumptions and a streamlined process so as not to provide an undue distraction from the work on capacity expansion.

26. The benefits of any outperformance will be shared with airlines and consumers in the longer term by adjusting regulatory depreciation by an amount representing the difference between (i) the price path we set and (ii) underlying revenue allowances calculated by reference to our updated assumptions.⁷
27. This chapter also consults on proposals for certain aspects of the timetable for both an interim price control and the main price control, in order to help ensure that we develop arrangements for the next main price control in the best way practicable.
28. Chapter 6 deals with the regulatory treatment of early “Category C” costs, being pre-DCO construction costs and including certain compensation costs arising from the acquisition of the commercial property necessary to allow for capacity expansion. We remain of the view that properly justified efficient early Category C costs incurred in a way that is clearly in consumers’ interests should be recoverable by HAL. To this end, we set out a process for determining how these costs should be added to HAL’s RAB and recovered from airlines and consumers. We will involve airlines in our assessment of costs, and test that any expenditure has been incurred in a way that is consistent with the interests of consumers. Underpinning this approach, our assumption is that HAL will incur costs efficiently and will be actively pursuing a commercially financeable plan for capacity expansion (and we will consider these factors in our testing of HAL’s costs).
29. Chapter 7 sets out the main principles of our current surface access policy (especially the “user pays” principle and that consumers’ interests are unlikely to be furthered by funding surface access projects that are not strictly necessary for airport operation/expansion). This chapter explains our view that these principles

⁷ This is similar to making a revenue ‘smoothing’ adjustment.

remain appropriate as they are focused on efficiency and providing appropriate protection for the interests of consumers. Nonetheless, in response to the views of respondents to the June 2017 Consultation, we explain a number of areas where policy could be clarified and/or further developed.

Next steps

30. During the remainder of this year, our work will transition from our initial work on developing the regulatory framework for HAL to focus the setting of the interim and next main price control for HAL. This will reflect developments in the wider programme, including progress made on developing alternative commercial and delivery arrangements, HAL's plans for a masterplan in Q3 2018 and its next planning consultation in Q1 2019. We will provide an update on affordability, financeability and the cost of capital in November 2018, building on our work in this consultation, the representations we have received on the costs of capital, and the information in HAL's masterplan. Chapter 5 consults further on the precise timing of HAL's initial price control business plan, but this is expected to be published during the second half of 2019.

31. In support of our work on the main price control (that will come into effect at the start of 2022 following the two year interim price control), we intend to publish in:

- May 2018: working papers on the cost of capital and incentives;
- September 2018: a further update and consultation on licensing issues; and
- November 2018: an update on engagement and affordability and financeability following the publication of HAL's masterplan in Q3 2018.

We are also consulting on how to best align HAL's price control business plans with the wider process in 2019 and will update our timetable for developing the regulatory framework for the remainder of the price review in the light of this consultation.

32. In support of our work on the interim price control we intend to publish in:

- September 2018: a working paper on the approach to setting the interim price control;

- Q1 2019: a further consultation on the interim price control arrangements that we will put in place for the start of 2021;
- Q3 2019: final consultation on the interim price control; and
- Q4 2019: the licence modifications to implement the interim price control.

33. Should circumstances change significantly, for example, by reference to the Government's wider timetable, we may review our timetable. For example, if the NPS or DCO is substantially delayed, we could review our timetable and take whatever steps were appropriate to protect consumers, which could include bringing forward the main review of HAL's price control or setting a longer interim control on the basis reopening more of the underlying assumptions supporting the price control.

Our duties

34. In developing this consultation, we have had full regard to our statutory duties under the CAA12, which are set out more fully in Appendix A.

Structure of this document

35. The structure of this consultation document is as follows:

- chapter 1 clarifies and updates our approach to assessing financeability;
- chapter 2 sets out our initial assessment of affordability and financeability for airport charges in the light of plans for capacity expansion, to complement our final Section 16 report;
- chapter 3 deals with developments to the regulatory framework, including alternative commercial and delivery arrangements and financial ring fencing;
- chapter 4 explores issues relating to the cost of capital;
- chapter 5 sets out our proposals for an interim price control to apply from the end of 2019;
- chapter 6 discusses the regulatory treatment of early Category C costs; and
- chapter 7 updates our thinking on surface access issues.

Chapter 1

Approach to Affordability and Financeability

Introduction

- 1.1 The December 2017 Consultation explained the importance of making sure that capacity expansion is affordable and noted the support given by HAL, airlines and the SoS for making sure that airport charges are maintained as close as practicable to current levels. The engagement process between HAL and airlines has a central role in the development of proposals for capacity expansion that are in the interests of consumers and are both affordable and financeable.
- 1.2 In this context, the December 2017 Consultation also explained our approach to assessing financeability, particularly in relation to financial structures, credit metrics and other factors important to debt financeability, and our approach to equity financeability.
- 1.3 This chapter summarises stakeholders' responses in relation to affordability and financeability and updates our approach to these matters. The next chapter sets out our initial assessment of the affordability and financeability of capacity expansion.

Stakeholder views

Affordability

- 1.4 HAL said that it understands stakeholders' concerns over affordability, is committed to trying to deliver capacity expansion with airport charges remaining close to current levels in real terms, and has made affordable charges a key criterion for developing its expansion masterplan.
- 1.5 In HAL's view, affordability is about the interests of consumers who will face higher fares and reduced choice without additional runway capacity. Citing comments from the CAA's Consumer Panel, it considered that the CAA should

explicitly define affordability and quantify the value of expanding Heathrow for passengers.

- 1.6 HAL provided a report by Frontier Economics in support of its response to the December 2017 Consultation. This report estimates the congestion premium paid by passengers because of capacity constraints at Heathrow. Using econometric analysis of 2016 outbound fare data for flights from Heathrow and from other airports, it estimates that outbound fares from Heathrow are, on average, 23% higher than from other London airports and 24% higher than from other European hub airports. The report says that passengers are paying approximately £2 billion (“bn”) more in airfares per year because of capacity constraints at Heathrow.
- 1.7 HAL said that the CAA needs to understand the magnitude of costs imposed on consumers through this congestion premium so that it properly takes account of consumer affordability and can assess the costs of delays to the programme. Without this assessment of consumer affordability HAL said the CAA would not be judging its regulatory decisions with an appropriate “consumer yardstick”, and would not be able to take balanced decisions on the regulatory framework. HAL explained that this consumer affordability does not have the same meaning as affordability as expressed by the SoS and airlines, but nonetheless consumer affordability should help guide the development of the regulatory framework.
- 1.8 Airline representatives took the view that affordability was central to the CAA discharging its primary duty and higher charges could undermine the business case for capacity expansion. They said that their views on affordability should be aligned with the CAA’s position, on the basis that airlines have a commercial incentive to meet passengers’ needs, which they said is similar to the CAA’s primary duty to protect consumers.
- 1.9 They also said that passengers should only have to pay for a project designed to meet their needs in the most efficient and cost effective way possible and that expansion must be delivered with no increase in charges in real terms from today’s prices. One airline took the view that this meant charges should be less than or equal to the level of airport charges at the end of the current price control period.

- 1.10 Airline representatives also wanted clarity over the CAA's approach to consumer willingness to pay being part of the process of developing the business plan for expansion. Airlines considered the CAA may be placing significant expectations on consumer outcomes research, which may have associated methodological issues. They said that while willingness to pay research is useful in prioritising choices, it is not sufficiently robust for establishing preferences about prices for facilities, or airport charges.
- 1.11 Airline representatives said there might be a case for delaying capacity expansion if this would facilitate efficient and affordable delivery by a third party developer.

Financeability

- 1.12 HAL welcomed the CAA's approach to developing the framework for capacity expansion in a way that reflects the importance of financeability. It suggested that the following approach to setting the price control would further promote financeability:
- targeting credit metrics that are consistent with a strong (rather than threshold) credit rating;
 - ensuring that in modelling credit metrics they achieve the target levels in all periods;
 - conducting the quantitative financeability assessment on a purely notional basis without considering the creditor protections in HAL's securitised structure (even though the credit rating agencies draw comfort from these protections when assessing ratings);
 - using sensitivity analysis to establish that credit metrics are robust to reasonable downsides; and
 - being explicit about the credit rating level that the CAA is targeting, and ensuring that any indices used in a cost of debt indexation mechanism are consistent with this rating.
- 1.13 HAL agreed that the ratios selected by the CAA appeared in general to be appropriate, but cautioned against "cherry picking" the least restrictive ratios

used by credit rating agencies and provided a detailed technical commentary on the ratios we set out in the December 2017 Consultation. It also noted that there is less depth in debt markets for debt issues below an A- credit rating and suggested that the CAA should assess this depth of this market segment if it were to target these credit ratings.

- 1.14 For assessing equity financeability, HAL suggested that metrics, including dividend yields, extending beyond a five year period should be considered in recognition of the long term nature of investment in capacity expansion. It also supported the use of return on regulatory equity to assess equity financeability.
- 1.15 Airline representatives said HAL's responsibilities should be clear in relation to the capital structure and, to the extent that the capital structure is HAL's responsibility, it should bear both the upsides and downsides associated with its choices. One airline said the CAA should continue to assume a notional capital structure, with assumptions of a more highly geared structure only being appropriate if they created benefits for consumers. It also questioned why a qualitative assessment would be needed to supplement the quantitative assessment of the credit metrics.
- 1.16 Another respondent expressed doubt about whether no real increase in per passenger charges could be consistent with a financeable price control settlement and noted the need to consider the phasing of passenger volume increases when assessing financeability.

Our approach to assessing affordability

- 1.17 We understand the importance to airlines of affordability and their continued focus on these matters. To the extent practicable, we support the ambition set out by the SoS in 2016, of keeping charges close to current levels in real terms. Nonetheless, we also need to act in a way consistent with our statutory duties to protect the interests of consumers. As a result, airlines will need to accept that our assessment of cost efficiency and the consumer interest may not always align with a cost profile that produces the lowest possible charges, since

developing passenger facilities of an appropriate quality, and ensuring a resilient airport are also important objectives for consumers.⁸

- 1.18 We are taking steps to ensure that the independent Consumer Challenge Board (“CCB”) is involved in scrutinising HAL’s plans for capacity expansion, and expect HAL properly to reflect the interests of consumers in the plans that it develops. We are also asking our technical consultants (Arcadis) to advise us on the steps that HAL is taking to ensure consumers’ interests have been properly considered in developing its masterplan, which is due later in 2018.
- 1.19 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 consumers experiencing higher airfares, reduced choice and lower service quality. We understand that there would be substantial costs for consumers associated with significant delays to capacity expansion. Even so, these costs should not be used as an excuse by HAL for inaction in relation to matters such as alternative commercial and delivery arrangements.⁹ Airlines and consumers should expect to see no more than efficient costs reflected in airport charges and HAL should seek to win the confidence of stakeholders by thoroughly exploring all reasonable approaches to delivery.

Our approach to assessing financeability

Overall approach

- 1.20 We intend to retain a “twin track” approach to assessing financeability, considering a notional approach but also assessing scenarios with higher levels of gearing. The notional approach has extensive regulatory precedent across a range of sectors and focuses on HAL having continued access to relatively low cost investment grade debt finance. As our work on the price control review

⁸ More generally there may be cases where higher prices are in consumers’ interests if those higher prices result from costs that are less than the associated benefits.

⁹ See chapter 3 for a discussion of our expectations on HAL in relation to alternative delivery mechanisms.

progresses, we may choose to focus on a particular level of gearing, but would consult further to inform the development of such an approach.

Assumptions on financial structure

- 1.21 For the purposes of the analysis set out in the next chapter, we have conducted our modelling on the basis of HAL notionally being 65% debt financed at the start of the period, in keeping with widely observed regulatory precedent.¹⁰ We consider that this approach is appropriate given the relatively early stages of programme development and in the absence of any more detailed information from HAL on how it intends to finance capacity expansion. Alongside this, we are assuming a broadly symmetrical position on risk allocation and, at this early stage, do not expect regulatory incentives to create a situation where HAL would bear significantly more upside risk than downside risk, or vice versa.
- 1.22 We recognise that this notional structure is materially different from HAL's actual financial structure. As we indicated in the December 2017 Consultation, to address this and understand the consequences of this difference in financial structure, we intend to supplement our notional assessment with an analysis of the impacts of a more highly geared structure. We consider that this will both aid our understanding of the trade offs involved in choosing a capital structure, and allow us better to assess how the benefits from particular capital structures might be shared with customers.
- 1.23 For the avoidance of doubt, we remain very firmly of the view that the choice of HAL's actual capital structure is the responsibility of its directors and our proposed approach should not be taken as an endorsement of any particular capital structure. Nonetheless, we would expect HAL to retain access to cost efficient and efficient investment grade financing and that it should be able to demonstrate on an ongoing basis that the business remains financially resilient and robust. As we note in chapter 3, we are considering strengthening HAL's financial ring fencing licence conditions to help ensure the delivery of these

¹⁰ See Appendix C for further details of our modelling assumptions and chapter 4 for further detail of our analysis of the cost of capital

objectives, for example by requiring HAL to maintain an investment grade credit rating.

Debt financeability and debt metrics

- 1.24 We intend to maintain the use of the credit metrics used by credit rating agencies to assist in our assessment of debt financeability. This approach has broad support from stakeholders, although we intend to refine it in the light of their comments. The rationale for using credit rating agency metrics to aid assessment of debt financeability is that this reflects, to a degree, how debt investors assess potential investments and whether debt is investment grade.
- 1.25 Ratings of Baa3 or BBB- or above are considered investment grade with more highly rated debt being seen as less risky and consequently less costly than lower rated debt. Sub-investment grade debt is particularly costly for borrowers. Higher credit ratings generally also increase a borrower's ability to raise debt as more investors are willing to lend to high quality borrowers. This is likely to be a relevant consideration in the context of the main ("H7") price control review given the large amount of debt likely to be needed to fund capacity expansion.
- 1.26 In response to stakeholders comments, we have recategorised some of the metrics between "core" and "secondary" and revisited the specifics of how certain ratios are calculated. Our updated view of the credit metrics is set out in Table 1.1 below. We will continue to engage with stakeholders on these matters and refine our approach as appropriate.

Table 1.1: CAA updated view of credit metrics

Credit metrics	Used in the Q6 review	Notes
Core metrics		
FFO interest cover	Yes	Moody's version of this metric to be used as Moody's regard it as a core metric while S&P see it as supplementary.
Adjusted cash interest cover (ACICR)	Yes	This is considered by Moody's to be an important metric due to Heathrow's financial structure even though this metric is not a standard core metric in its airport rating methodology.
FFO to gross debt	No	Moody's typically uses gross debt, although may also look at net debt when cash balances are material (as they are likely to be during the construction period).
Regulatory gearing	Yes	Considered by Moody's to be an important metric due to Heathrow's financial structure even though this metric is not a standard core metric in its airport rating methodology.
FFO to net debt	Yes	Core ratio for S&P, similar to FFO to gross debt. As noted above Moody's consider this ratio more relevant when large amounts of cash present on the balance sheet.
Secondary metrics		
Interest cover ratio ("ICR")	Yes	Part of Heathrow's financing covenants, but it typically achieves levels with significant headroom to covenant levels.
Net debt to EBITDA	Yes	Secondary ratio for S&P, core for Fitch
Post maintenance	Yes	Core ratio for Fitch, similar to ACICR

interest cover ratio ("PMICR")		
Debt service coverage ratio	No	Core ratio for Moody's, used to assess the ability to pay debts over their remaining term
Retained cash flow to Gross Debt	No	Core ratio for Moody's, similar to S&P supplementary ratio

Source: CAA

- 1.27 We note the importance to effective debt indexation of ensuring consistency between the credit rating targeted by the credit metrics used in our modelling and the credit rating of the indices used for any debt indexation mechanism. We will continue to be mindful of this need for consistency as we develop our approach to financeability and consider further the possibility of debt indexation.
- 1.28 We also recognise the distinction between the threshold level of a metric required for a particular credit rating and the level within that metric that sits halfway between the downgrade and upgrade thresholds for that rating. We will continue to be mindful of this distinction as we further develop our financeability policy with the aim of ensuring that our assumptions in respect of what constitutes a financeable settlement broadly align with those of relevant stakeholders such as credit rating agencies.
- 1.29 We intend to maintain the approach set out in the December 2017 Consultation of assessing trends in ratios as well as the absolute level of those ratios in each year. This reflects the approach taken by the credit rating agencies under which ratios falling below threshold levels by small amounts in isolated periods do not necessarily cause a rating downgrade. We recognise that a large or sustained failure to achieve threshold ratings would not be likely to be consistent with maintaining the credit rating in question and we intend to take this into consideration when assessing financeability.

Qualitative assessment of debt financeability

- 1.30 The December 2017 Consultation explained that we intended to supplement our use of credit metrics with a qualitative assessment of the wider regulatory framework and the business environment within which HAL operates. Relevant factors include cost, construction and volume risks, and their treatment in the regulatory framework. By taking account of the extent to which HAL faces these and other risks, we will appropriately reflect the risk profile of the regulatory settlement in our financeability assessment.
- 1.31 While HAL suggested that we should include the cost of debt as a material change in risk arising from capacity expansion, we may be able to deal with this through our approach to setting the cost of debt and debt indexation. In any event, we would expect the overall price control settlement to be a balanced package such that the risks that HAL bears are properly reflected in the cost of capital and its overall revenue package.

Consideration of equity financeability

- 1.32 Given the potential importance of additional equity finance to the capacity expansion programme, we propose to continue with the broad approach set out in the December 2017 Consultation in respect of the assessment of equity financeability. This will include consideration of equity metrics extending beyond the H7 price control period to recognise the long term view typically taken by infrastructure equity investors.

Views invited

- 1.33 Views are invited on any matters relating to our approach to affordability and financeability.

Chapter 2

Initial assessment of affordability and financeability

Introduction

- 2.1 This chapter sets out our initial assessment of the affordability and financeability of the development of new runway capacity at Heathrow. This assessment complements our final Section 16 report to the SoS on the airport-airline engagement process.¹¹
- 2.2 Stakeholders have consistently said that capacity expansion should be both affordable and financeable. Airlines have retained a sharp focus on affordability and regard it as a key indicator of success for the airport-airline process and our Section 16 reporting.
- 2.3 The Transport Select Committee also recently concluded that it “would like to see evidence to demonstrate that the Northwest Runway scheme is both affordable and deliverable and that steps are being taken to address the valid concerns we heard in evidence about the high cost of the scheme and the significant risk that costs will rise”, ahead of designation of the NPS.¹²
- 2.4 Airlines have welcomed our development of a financial model designed to illuminate issues of affordability and financeability. We have used this model to undertake an initial assessment of the affordability and financeability of capacity expansion at Heathrow.
- 2.5 Nonetheless, this modelling, like any other, relies on the quality and accuracy of the input data, including, in this case, forecasts of costs, the assumed cost of capital, commercial revenues and passenger traffic. At this relatively early stage

¹¹ Our provisional assessment has already been published as CAP 1638 Provisional assessment of airport-airline engagement on new runway capacity at Heathrow airport. See:

<http://publicapps.caa.co.uk/docs/33/CAP1638.pdf>

¹² House of Commons, Transport Committee, “Airports National Policy Statement, Third Report of Session 2017-2019, 23 March 2018. See <https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/548/548.pdf>

of programme development, these drivers remain uncertain and so our modelling outputs span a relatively wide range of plausible scenarios and outcomes.

- 2.6 As the programme moves forward, these uncertainties should reduce and, in due course, we aim to establish a single path of prices for the next main price control (the “H7 price control”). But beyond the H7 price control, the level of uncertainty is likely to be sufficiently large that we will only be able to make projections of the range of likely price levels.

Our approach to developing scenarios

- 2.7 In defining scenarios for our assessment, we considered suitable forecasts for six key inputs that, together, will determine the future level of airport charges and financeability. These are the key assumptions that drive the forecasts of airport charges and financeability and are:

- passenger numbers;
- capital expenditure (or “capex”), to determine additions to the RAB and cash flows;
- regulatory depreciation;
- the allowed rate of return on the RAB (the WACC);
- operating expenditure (or “opex”); and
- non-aeronautical revenues.

- 2.8 In discussion with HAL and airlines we have developed four illustrative scenarios for capacity expansion, which are summarised below and in the following table:

- **HAL’s “Westerly Option”¹³**: as developed by HAL in 2017 for engagement with stakeholders and using a notional WACC based on the work completed by the Airports Commission of 6%;
- **the Westerly Option with a lower cost of capital**: there is a range of evidence to suggest that the pre-tax cost of capital assumed by the

¹³ The background to this assumption is explained in more detail in our final Section 16 report.

Airports Commission might overestimate the expected cost of capital.¹⁴ We therefore considered scenarios with a lower value for the cost of capital (4.57%, real, vanilla) based on analysis completed by PwC for the CAA in 2017, combined with updates to the cost of debt to reflect an increasing share of new debt over time;

- **slower build and higher costs:** this reflects downsides given the uncertainty associated with both the timing and costs of developing and running the airport in the future. This scenario could reflect possible legal, environmental, contractor or construction challenges. It assumes two years' delay to capex and capacity associated with terminal T5X and T2A phases 2 and 3¹⁵, a 45% uplift to expansion capex in the H7 price control period,¹⁶ higher than expected opex associated with the increase in capex, and lower than expected non-aeronautical revenues;
- **faster build and lower costs:** this reflects analysis that shows a significant level of unserved demand for air travel in London and the south east¹⁷ and that therefore there are better opportunities to meet consumers' needs through earlier delivery of new capacity. This scenario assumes advancement by two years of capex and capacity associated with terminal T5X and T2A phases 2 and 3,¹⁸ a 25% reduction to capex,¹⁹ lower than expected opex associated with the reduction in capex, and higher than expected non-aeronautical revenues. We have assumed that the earlier available capacity is filled in line with passenger forecasts.²⁰

¹⁴ For example, since the Airports Commission submission, market returns and costs of debt have generally fallen, and HAL has outperformed the allowed return in the CAA's Q6 final proposals.

¹⁵ We also model the effect of capacity delays on opex and non-aeronautical revenues.

¹⁶ The 45% uplift is taken from the HAL expansion cost timetable, see Appendix 2 of CAP 1638, *op. cit.*

¹⁷ "UK Aviation Forecasts", Department for Transport, October 2017. See https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/674749/uk-aviation-forecasts-2017.pdf.

¹⁸ We also model the effect on opex and non-aeronautical revenues of capacity coming online earlier.

¹⁹ The 25% reduction is taken from the HAL expansion cost timetable, see Appendix 2 of CAP 1638, *op. cit.*

²⁰ See UK Aviation Forecasts, *op. cit.*

Table 2.1: Summary of scenarios^{21 22}

Parameter	Updated Westerly Option	Updated Westerly Option with lower WACC	Faster build and lower costs	Slower build and higher costs
Passengers	As per Westerly Option		Passenger forecasts constrained by a capacity profile in which some expansion capacity is delivered two years early	HAL's illustrative forecast constrained by a capacity profile in which certain expansion capacity is delivered two years late
Capex	Capex profile provided by HAL		Assumes certain expansion capex brought forward by two years and that capex spend during the H7 period is reduced by 25%	Assumes a two year delay to certain expansion capex and that capex spend during the H7 period is increased by 45%
Non-aeronautical revenues	CAA analysis based on elasticities in order to broadly replicate the Westerly Option profile		Flexed in line with passenger volumes and assumes 0.3% per annum increase	Flexed in line with passenger volumes and assumes 0.3% per annum reduction
Operating expenditure	CAA analysis based on elasticities in order to broadly replicate the Westerly Option profile		Flexed in line with passenger volumes and assumes 0.3% per annum reduction	Flexed in line with passenger volumes and assumes 0.3% per annum increase
Depreciation	Pro-rated in line with capex relative to the Westerly Option capex figures			

²¹ The elements of expansion capex assumed to be delivered earlier or later are T5X and T2A phases 2 and 3.

²² The 0.3% figure is a CAA assumption to produce a credible variation in opex and non-aeronautical revenues over time.

Source: CAA

2.10 These are not the only plausible scenarios that might be expected for the development of new capacity, but we consider these provide a reasonable range of scenarios from which to make our initial assessment of the affordability and financeability of capacity expansion. We will seek to develop and improve our assessment as further information becomes available.

Affordability

2.11 For each of the scenarios above, we have modelled the forecast profile of airport charges per passenger from 2018 to 2049 (in 2014 prices): airport charges range from reaching a peak of just over £20 per passenger in 2025 under the faster and cheaper scenario to reaching a peak of about £30 per passenger in 2025 under the slower build out with higher costs scenario. As a benchmark, the Airports Commission assumed that charges at Heathrow might need to rise to £29 (2014

prices)²⁴ per passenger to help fund capacity expansion and the estimated maximum allowable yield for 2017 is £21.90.²⁵

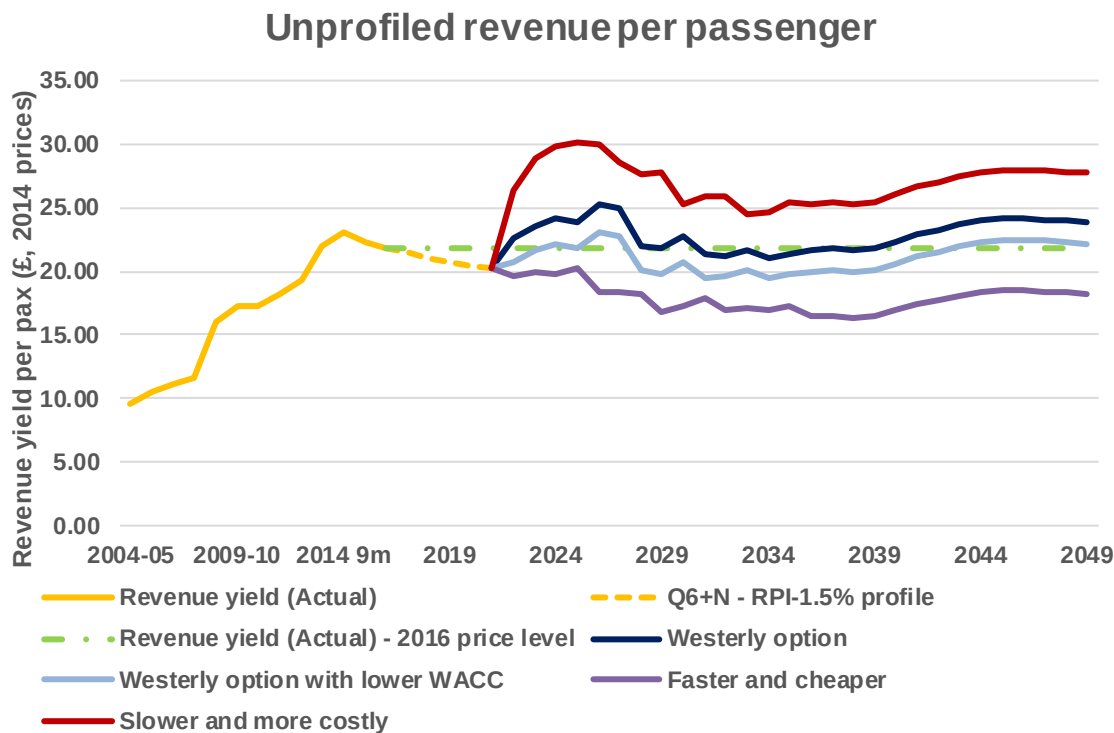
- 2.12 While the range of plausible outcomes remains wide, our initial assessment, based on current information, is that there are credible assumptions that could lead to a path of prices that is broadly affordable. For instance, Figure 2.1 illustrates a possible scenario based on HAL's assumptions for the costs of the Westerly Option, combined with a mid range estimate based on PwC's early and preliminary work on HAL's cost of capital (which was published alongside the December 2017 Consultation) that gives airport charges per passenger that are broadly consistent with 2016 levels in real terms. This is only initial analysis and is subject to further consultation, assessment, development and change.
- 2.13 In the slower build out with higher costs scenario, charges are significantly higher than today's levels, reaching a peak of £30 per passenger in 2025. However, we would expect that a number of mitigations could be deployed to avoid these higher airport charges materialising that have not been considered here, including:
- management action to mitigate the risk of capex and opex increases;
 - appropriately incentivising HAL to mitigate the risk of delay and manage cost risk; and
 - further possible re-phasing of capex in response to slower than expected passenger growth.
- 2.14 We should not unduly rely on results of this early modelling and all stakeholders and will need to work together to ensure that capacity expansion is delivered efficiently (and no unnecessary costs are incurred) to support the delivery of affordable levels of airport charges. We will seek to develop and improve this initial assessment as further information on the preferred expansion scheme becomes available during 2018 and 2019 and, as this further information

²⁴ Table 11.4 of the Airports Commission Final Report, July 2015. See https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/440316/airports-commission-final-report.pdf

²⁵ See Appendix A of [HAL's 2017 regulatory accounts](#)

becomes available, we cannot rule out the need to address scenarios where airport charges per passenger vary significantly from our initial analysis.

Figure 2.1 – Airport charges from range of scenarios



Source: CAA

Note: all prices in the chart above are in 2014 prices (using an RPI deflator).

Financeability

- 2.15 To protect consumers' interests, it is important that capacity expansion is efficiently financed. This requires us to be able to demonstrate that the regulatory framework supports financeability such that HAL can continue to access cost effective investment grade debt finance. Our initial approach to financeability focuses on the credit metrics described in chapter 1. These provide a high level view of how investors and credit rating agencies will perceive the financeability of capacity expansion. It is also based on notional gearing and we will need to have regard to other scenarios as discussed in chapter 1.
- 2.16 Our initial results for financeability appear to show results broadly consistent with investment grade debt financing for HAL. Under most scenarios, shown in

Figures 2.2 to 2.5, the credit metrics are forecast to meet or exceed the levels necessary to achieve a comfortable investment grade credit rating.²⁶

- 2.17 As noted above, these are initial modelling results which are intended to indicate a range of credible scenarios given the uncertainty at this stage of the process in material input assumptions. Correspondingly the results shown in Figures 2.2 to 2.5 indicate a range of outcomes for each of credit metrics and provide some indication of the amount of headroom.²⁷
- 2.18 Where there is little or no headroom (e.g. the adjusted interest cover ratio in 2023), this situation is only temporary. As noted in the December 2017 Consultation, we focus more on trends and long term movements in credit ratings rather than individual years (and further mitigating actions may be available to resolve issues in individual years).
- 2.19 As with affordability, stakeholders should not rely unduly on these very early results. Capacity expansion will require very significant amounts of new financing and financeability will remain a key issue throughout the H7 price control review. Further details on our assumptions for assessment of financeability are set out in Appendix C.

²⁶ See Appendix B for a summary of the sources used to inform our choice of benchmarks for credit metrics.

²⁷ We note that the results in Figures 2.2 to 2.5 are based on scenarios in which cost upsides and downsides are anticipated and factored into the calculation of allowed revenues. In practice cost out- and under-performance that is not anticipated can arise and this can also impact on credit metrics. We expect that as we develop our approach to financeability assessment we will conduct further analysis that looks at the impact of such unanticipated out- and under-performances.