Consumers and Markets Group

Economic regulation of Heathrow Airport Limited: policy update and consultation on the early costs of capacity expansion

CAP 1871

Published by the Civil Aviation Authority, 2019

Civil Aviation Authority
Aviation House
Beehive Ring Road
Crawley
West Sussex
RH6 0YR

First published December 2019

Enquiries regarding the content of this publication should be addressed to: Robert.Toal@caa.co.uk

The latest version of this document is available in electronic format at www.caa.co.uk

Contents

About this document

This consultation document provides further information on costs Heathrow Airport Limited ("HAL") expects to incur in advance of obtaining a Development Consent Order under the Planning Act 2008 for the expansion of Heathrow airport. It outlines the approach to spending on these early costs that we consider is in the best interest of consumers and the regulatory arrangements that should apply to this spending.

It follows on from our July 2019 consultation on early costs and our previous policy documents on these matters.[1]

Views invited

We welcome views on all the issues raised in this document including the issues set out in the Executive Summary and those highlighted in chapters 1 to 3.

Please e-mail responses to economicregulation@caa.co.uk by no later than 28th February 2020. 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 Robert.Toal@caa.co.uk.

[1] Details of our previous consultations on early expansion costs are outlined in the Executive Summary.

Executive summary

Introduction

1. Capacity expansion at Heathrow airport is a very large and complex programme and achieving this within the timeframe outlined in the Airports National Policy Statement[2] ("NPS") will be a significant challenge. 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 consumers[3] experiencing higher airfares, reduced choice and lower service quality.

2. In order to deliver capacity expansion in a timely way, HAL will need to incur significant planning costs (which we call "Category B costs") and certain early construction costs (which we call "early Category C costs"). HAL had said that in order to retain a target of 2026 for the opening of the new runway, it would need to bring forward the timing of certain spending and total early costs would need to be about £2.9 billion (in 2014 prices). This includes spending of over £500 million on Category B costs and £2.4 billion (in 2014 prices) on early Category C costs, before it obtains a DCO[4]. Given the increases in its estimates of these costs,[5] and the potentially greater consequences of this spending for airlines and passengers if a DCO were not to be granted, we asked HAL to

[2] For the new runway at Heathrow to be delivered by 2030. The Airports National Policy Statement (NPS) is available at: https://www.gov.uk/government/publications/airports-national-policy-statement

[3] In this consultation, the terms "consumers" and "users" are used interchangeably. See Appendix A.

[4] HAL will apply for planning permission to permit capacity expansion in the form of a "development consent order" (DCO) under the Planning Act 2008 (PA08). HAL is targeting late 2021 for obtaining a DCO. The DCO must meet the requirements of the NPS designated by the Government under PA08.

[5] At the time of publishing our April 2018 consultation, HAL's initial estimate was that it would spend approximately £650 million (2014 prices) on early Category C costs. HAL then provided further information in autumn 2018 as part of its business plan information for the iH7 price control period (2020-2021) which suggested total spending might reach £1.6 billion. See www.caa.co.uk/CAP1819, chapter 2.

consider a range of options for this spending and for the target date for runway opening.

3. In assessing these scenarios, it is important to bear in mind that while there are advantages for consumers in spending that promotes early delivery there is also a risk that these costs could become sunk[6] if HAL's DCO application were not to be successful. This could disadvantage consumers in two ways. To the extent that these sunk costs are recovered through airport charges they could be passed on to passengers through airline fares. Alternatively, to the extent that they are not recovered through airport charges, they would increase the risks that HAL is expected to manage and, in turn, this would tend to increase HAL's financing costs, which would ultimately affect airport charges and passenger fares.

4. In the context of these difficult trade-offs, this consultation summarises the scenarios that HAL has developed and sets out our assessment of which scenario would be best in the interest of consumers. It then explains our proposals to strengthen the regulatory incentives and governance arrangements that apply to early costs, with a view to avoiding any further unexpected increases in these costs. This includes the CAA's policy decision on the regulatory treatment of Category B costs and further consultation on the regulatory treatment of early Category C costs. We also consult on whether we should introduce a new licence condition for HAL in relation to early costs.

5. While the focus of this consultation is around the approach, regulatory treatment and regulatory governance arrangements for early Category C costs, we do not rule out further changes to the treatment of Category B costs if it is appropriate to further align the treatment of these two categories of costs in response to the representations we receive from stakeholders on early Category C costs.

[6] "Sunk" costs can be considered as costs that have been properly incurred in relation to the runway expansion programme, but which would become wasted or could not be recouped by the sale of the assets created by this expenditure if the DCO is not granted due to the output resulting from these costs no longer being required.

6. Our previous policy documents and consultations on these matters include:

- the consultation we issued in July 2019[7] on early costs and the regulatory timetable;
- consultations in July 2016[8], and November 2016[9] on the regulatory treatment of expansion costs;
- the policy statement we issued in February 2017 [10] on Category B costs and December 2017 policy update[11] on such costs;
- guidance we issued to HAL in April 2017 on its price control business plan;[12]
- our April 2018 guidance document[13] and policy update on costs;[14] and
- a consultation in October 2018 that dealt with the regulatory timetable.[15]

7. Planning costs (Category B costs) are those costs which are "directly associated with, and incurred solely for the purpose of, seeking planning permission" for the delivery of new runway capacity at Heathrow airport. The other costs incurred by HAL before the outcome of its DCO application are in

[7] Economic regulation of capacity expansion at Heathrow airport: consultation on early costs and regulatory timetable ("the July 2019 Consultation"): see www.caa.co.uk/CAP1819.

[8] The recovery of costs associated with obtaining planning permission for a new Northwest runway at Heathrow airport: initial proposals ("the July 2016 Consultation"): see www.caa.co.uk/CAP1435.

[9] The recovery of costs associated with obtaining planning permission for a new Northwest runway at Heathrow airport: final proposals ("the November 2016 Consultation"): see www.caa.co.uk/CAP1469.

[10] Policy statement of the recovery of Category B costs ("the Planning Cost Recovery Policy Statement"): see www.caa.co.uk/CAP1513.

[11] Economic regulation of capacity expansion at Heathrow: policy update and consultation ("the December 2017 Consultation"): see www.caa.co.uk/CAP1610.

[12] Guidance for Heathrow Airport Limited in preparing its business plans for the H7 price control ("the April 2017 Consultation"): see www.caa.co.uk/1540.

[13] Guidance on preparation of the annual budget and statement for those costs associated with obtaining planning permission for a new Northwest runway ("the Budget Guidance"): www.caa.co.uk/CAP1651.

[14] Economic regulation of capacity expansion at Heathrow: policy update and consultation ("the April 2018 Consultation"): see www.caa.co.uk/CAP1658.

[15] Economic regulation of capacity expansion at Heathrow: policy update and consultation ("the October 2018 Consultation"): see www.caa.co.uk/CAP1722.

addition to Category B costs[16] and are a subset of HAL's overall construction (Category C) costs for expansion. HAL's most recent estimates of early Category C costs include the costs of relocating certain large commercial/other facilities, community costs (including compensation costs relating to other commercial activities, agricultural activities and residential property) and other enabling costs to prepare for construction.

Main issues raised in this consultation

8. The July 2019 Consultation highlighted that HAL's current estimates suggest that total capital costs (including both Category B and early Category C costs) to facilitate the opening of the new runway will be in the region of £14 billion (in 2014 prices).[17] We recognised the importance of robust forecasts for capital expenditure and that HAL's forecasts remain broadly in line with the cost estimates it produced in 2017, although there have been some important changes to the scope of HAL's programme. Nonetheless, HAL's forecast of the element of these costs that it plans to spend ahead of obtaining a DCO has increased significantly.

9. Following the increases in HAL's forecasts of Category B and early Category C costs, we asked HAL to consider a range of options for this spending and consult with stakeholders on which scenario would be best in the interests of consumers. HAL responded to this request with a report which initially outlined four principal scenarios. It later produced further variations of these scenarios following engagement with airlines.

10. Chapter 1 outlines the broad range of evidence and views from different stakeholders that we considered as part of our assessment of HAL's scenarios. This included assurance work completed by the Independent Fund Surveyor ("IFS") which revealed that HAL's target date of 2026 for runway opening was optimistic, even with the relatively high level of spending that HAL had

[16] And Category A costs which were incurred by HAL during the Airports Commission process, or before Heathrow was named as the preferred location for new runway capacity. See the Planning Cost Recovery Policy Statement for definitions of costs incurred to support capacity expansion at Heathrow.

[17] More information on HAL's expansion programme costs is set out in Appendix B.

proposed. The IFS indicated that an opening date for the new runway between early 2027 and late 2028 would be more realistic for HAL's preferred approach to early spending.

11. In terms of assessing the relative merits of the scenarios, we have considered the trade-offs between higher early Category C costs and later delivery of runway opening. Given the information presently available, we regard HAL's Scenario 2a to be in the best interests of consumers. This scenario involves HAL incurring lower levels of early Category C costs and a modest delay to the opening of the new runway (of around six to eight months) compared to the likely range of dates for HAL's preferred scenario. While we recognise the potential benefit to consumers of the runway opening being as early as possible, we are also mindful of the risks associated with sunk costs and consider that, at this time, Scenario 2a provides an appropriate balance across a broad range of considerations, including:

- HAL has not been able to secure airline support for its preferred scenario;
- in contrast there is a degree of airline support for Scenario 2a;
- the IFS has expressed a number of concerns about HAL's preferred scenario, including whether the early delivery date for the new runway is plausible and the sharp ramp in activities that the scenario implies; and
- there are a number of challenges associated with assessing the efficiency of early costs, such that the costs and timetable for Scenario 2a may be more reasonable and proportionate.

12. Nonetheless, it is important to stress that we also propose to retain a flexible approach, so if important new information emerges that indicates a different approach would better protect consumers, we will consider and discuss with stakeholders how the wider programme plans can be best adapted to take account of this information. Therefore, if there is more certainty about the overall programme at the time of the next main programme "gateway" (due Spring 2020),[18] we can consider whether there is a case for accelerating early

[18] A "gateway" is a term used by HAL to refer to a review conducted at key points during a project's life to ensure

spending. We are also open to HAL and airlines (and/or other stakeholders) considering any new information and making joint representations or proposals to the CAA to change the approach to early spending.

13. We recognise that the approach that the CAA takes to early Category C costs can affect the timetable for delivering capacity expansion. However, this is only one of many factors that affect the timetable and, as noted above, even before our decision on early Category C costs, independent assessment had indicated that HAL's proposed opening date for the third runway was optimistic. While we recognise the importance of timely delivery and the commitment that HAL has shown to the programme, it is also for HAL to manage the overall timetable for capacity expansion in a way that takes account of all relevant factors and builds confidence with stakeholders in the likely target dates for delivery of the new runway.

14. Chapter 2 discusses the regulatory treatment of each of Category B and early Category C costs incurred by HAL. In relation to Category B costs, our policy is largely finalised (but we do not rule out further changes to the treatment of Category B costs if it is appropriate to further align the treatment of these two categories of costs in response to the representations we receive on early Category C costs). Our existing policy (established in 2017) for Category B costs incurred up to £265 million (in 2014 prices) remains unchanged to avoid undermining the stability of the regulatory framework by retrospective action. For costs above this level, we are enhancing the regulatory arrangements to strengthen the governance and regulatory incentives that apply to those costs, in part to recognise the concerns about the increases in HAL's cost estimates, including:

- enhanced reporting arrangements;
- implementing a cap on the total amount of Category B costs that HAL will be allowed to recover; and

that the scope is still on track and has the appropriate management systems in place to ensure successful delivery. The next gateway is M5, which HAL is expected to enter on 17 February 2019.

- allowing HAL a lower allowed return on such costs if HAL is not granted a DCO.

15. Chapter 2 also outlines for consultation our approach to the regulation of early Category C spending. We remain of the view that there are advantages to adopting similar governance and regulatory arrangements for the higher levels of Category B costs and early Category C costs. However, there are some aspects of early Category C costs that warrant different regulatory treatment. For example, the risk sharing arrangements that apply to Category B costs create appropriate incentives for HAL to make a high quality DCO application and so we do not propose to develop similar arrangements for early Category C costs.

16. Following on from the proposal outlined in the July 2019 Consultation, chapter 3 considers whether it is appropriate to develop a modification to HAL's licence that would support stronger and more formal governance arrangements for the preferred programme of early Category C costs. A draft licence modification is also set out in Appendix F for consultation.

Next steps

17. We invite comments from stakeholders on the issues raised in this consultation document by 28th February 2020. We cannot commit to taking account of representations made after this date.

18. Having considered emerging evidence and stakeholders views on our proposals for early Category C costs, we intend to:

- carry out further work to establish the appropriate level at which to set a recovery cap;
- develop further our approach to assessing the efficiency of HAL's construction costs incurred in advance of HAL obtaining a DCO;
- set out our final decisions on the regulatory treatment of early Category C costs through a policy statement in late April 2020 or early May 2020; and

- if we decide that it is appropriate to modify HAL's licence in the light of stakeholders' responses to the issues raised in chapter 3, issue a further statutory consultation on a draft licence condition.

Our duties

19. 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

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

- Chapter 1 sets out our assessment of HAL's early Category C cost scenarios and our present view as to which scenario is likely to be best in the interests of consumers;
- Chapter 2 outlines our policy on the regulatory treatment of Category B costs and consults on our approach to the regulation of early Category C costs;
- Chapter 3 considers whether a modification to HAL's licence to reflect our proposed policy on early Category C costs is appropriate;
- Appendix A summarises our statutory duties;
- Appendix B provides a breakdown of HAL's expansion programme costs and summarises the findings from the expert reviews of these costs;
- Appendix C describes the evidence we have considered in respect of the consumer benefits associated with airport expansion;
- Appendix D explains our approach to setting the recovery cap for HAL's Category B costs;
- Appendix E sets out our proposed treatment of Category B and early Category C costs in HAL's regulatory asset base ("RAB"); and
- Appendix F sets out a draft licence condition on early Category C costs.

Chapter 1

Analysis of scenarios

Introduction

1.1 Following the increases in HAL's forecasts of early costs (the costs of capacity expansion in advance of HAL obtaining a DCO) we asked HAL to set out a range of scenarios for early Category C costs and consult with stakeholders on which scenario would be best for consumers. HAL responded to this request with a report submitted to us on 31 July 2019 ("HAL's Submission"), which outlined four principal scenarios. It then engaged with airlines on the advantages and disadvantages of these scenarios.

1.2 This chapter:

- describes the scenarios and the assurance work carried out by the IFS on each of the scenarios;
- summarises the feedback we have received from stakeholders to date on the scenarios; and
- sets out our assessment of which scenario is likely to be best in the interests of consumers given the information that is currently available.

1.3 By providing guidance on the scenario that is likely to be best in the interests of consumers, we are seeking to avoid a situation where uncertainty about the best approach for consumers could cause unnecessary delays to the overall programme for capacity expansion, which could adversely affect consumers.

1.4 Nonetheless, if new information emerges that suggests a change in approach would be better for the interests of consumers, we will retain the flexibility to revisit the decisions set out in this chapter. In addition, it is open to Heathrow and airlines to discuss and reach agreement on these matters to inform further consideration by the CAA.

1.5 Our assessment of the scenarios should not be construed as setting a budget for early Category C costs, nor are we endorsing particular levels of expenditure or particular construction activities. The regulatory treatment of early costs is discussed in the next chapter.

Description of early Category C scenarios

Scenarios outlined in HAL’s submission

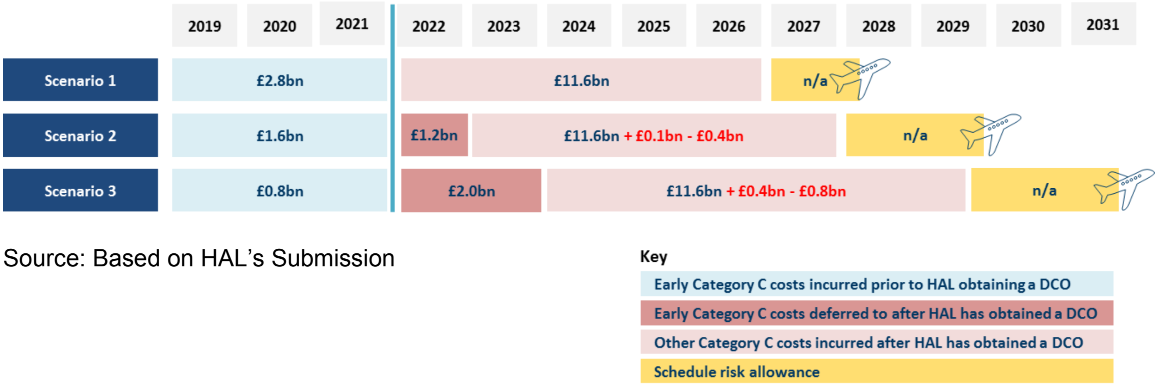
1.6 HAL’s submission included the following four scenarios:

- **Scenario 1** corresponded to HAL's projections at the time that the expansion programme exited the “M4” project gateway, including an estimate of £2.4 billion (in 2014 prices) for early Category C costs and a relatively early target date for runway opening date of the end of 2026;
- **Scenario 2** would involve deferring HAL’s target for runway opening by around a year, with lower levels of early Category C costs;
- **Scenario 3** reflected HAL’s estimate of the minimum amount of early Category C spending that would be necessary to deliver a successful application for development consent to permit expansion; and
- **Scenario 4** was based on HAL immediately halting all activities (including halting preparation of its DCO application).

1.7 We consider that Scenario 4 (halting preparations for HAL’s DCO application) would not be in the interests of consumers as we have consistently said that the timely delivery of more aviation capacity is required to prevent future consumers experiencing higher airfares, reduced choice and lower service quality. As such, this scenario is not considered further in this chapter.

1.8 HAL carried out a risk assessment on each scenario to reflect the impact of potential delays to key milestones. HAL’s scenarios and “risk adjusted” envelope for the timetable to deliver the new runway are summarised in Figure 1.1.

Figure 1.1: Summary of HAL risk-adjusted scenarios (in 2018 prices)



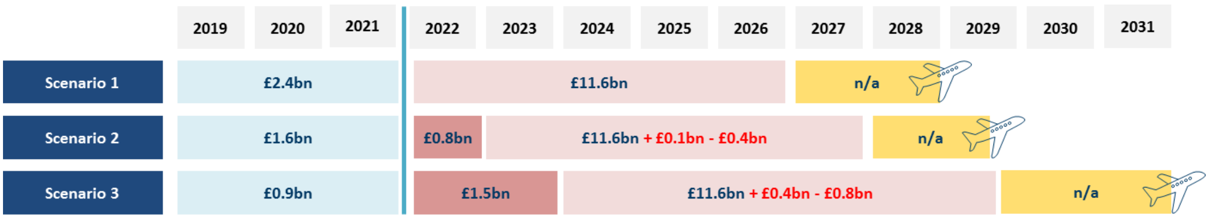
Source: Based on HAL's Submission

1.9 HAL's risk analysis suggested that Scenario 3 could plausibly result in a runway opening date considerably later than the 2030 deadline specified in the NPS.

IFS assessment of scenarios presented in HAL's Submission

1.10 In a report dated 6th September 2019, the IFS provided a high level assessment of HAL's scenarios. The report commented on the reasonableness and internal consistency of the cost forecasts and timescales underpinning each scenario. The results of the IFS's assessment are shown in Figure 1.2.

Figure 1.2: Summary of IFS adjusted scenarios (in 2018 prices)[19],[20]



Source: Based on IFS report, 6 September 2019

1.11 The principal adjustments made by the IFS related to Scenario 1. Specifically, the IFS recommended a greater risk adjustment to the Scenario 1 timescales with an opening date for the new runway between early 2027 and late 2028, and a reduction of around £400 million in the forecast early costs. The IFS also

[19] Both HAL and the IFS used the same nominal cost information for each scenario. However, the IFS assumed slightly different forecast inflation than HAL, to convert the costs for each scenario to 2018 prices. This led to slightly higher forecast costs in some scenarios. The IFS is not, for example, proposing higher real early Category C costs in Scenario 3.

[20] The reduction in the cost figures in the red boxes in Figure 1.2 compared to Figure 1.1 is due to the lower early cost estimates provided by the IFS under Scenario 1 compared to HAL's unadjusted early cost estimates.

characterised Scenario 1 as an "*aggressive schedule that requires the maximum activity prior to DCO Consent*"[21] and has subsequently expressed concerns regarding the deliverability of runway opening in 2026. For example, the IFS stated that, "*Scenario 1 is, in all likelihood, too aggressive and, whilst useful as a target to drive progress and performance toward the earliest runway operational date, it is unlikely that all identified pre DCO phase planned activities can be achieved.*"[22]

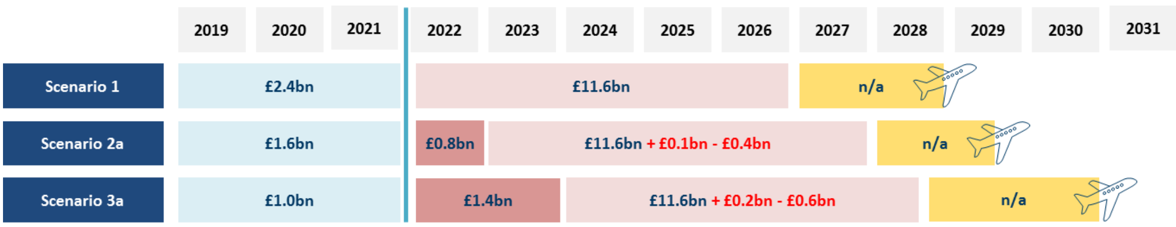
Additional HAL scenarios

1.12 After receiving feedback from airlines through its working groups with them, HAL developed two additional scenarios:

- **Scenario 2a**, reflecting an "optimised" version of Scenario 2, in which cost forecasts were brought in line with the IFS's estimates and some changes made to the underlying activities (but with the retention of Scenario 2 timescales); and
- **Scenario 3a**, in which the forecasts of additional early Category C costs and total scheme costs have been adjusted to be consistent with runway opening by 2030 (the deadline specified in the NPS).

1.13 These are summarised in Figure 1.3.

Figure 1.3: HAL's revised scenarios (in 2018 prices)



Source: Based on IFS report, 4 October 2019 and minutes prepared by HAL for its Costs and Benefits Working Group meeting with airlines on 26th September 2019

[21] IFS (2019), "HAL Expansion – Pre-Consent Category C Spend and Schedule Scenarios", Section 1.3.1.
[22] IFS (2019), "HAL Expansion – Pre-Consent Category C Spend and Schedule Scenarios", Section 1.4.

1.14 The IFS has provided an addendum to its earlier report, which provided its commentary and views on these additional scenarios.[23] The IFS did not propose amendments to the costs or timescales set out by HAL for the additional scenarios, although it noted that opportunities exist for further refinement of scenarios. Nonetheless, the IFS also noted that "*evaluation of these further scenarios is high level yet sufficient for strategic direction setting*".

Stakeholder views

1.15 We have strongly encouraged HAL and airlines (collectively and individually) to discuss the scenarios put forward by HAL with a view to reaching a consensus on the best option for consumers. The feedback we have received to date suggests that the views of stakeholders diverge significantly.

1.16 HAL has consistently maintained that earlier delivery of capacity expansion is in consumers' interests and provided a report by Frontier Economics that quantified the possible impact on consumers of delays to runway opening. By contrast, IAG has consistently supported an approach that minimises spending on early Category C costs, highlighting the risks that HAL's DCO application might not be successful and that in these circumstances early Category C expenditure would have been wasted and would provide no benefits for consumers. Other airlines have emphasised the importance of cost effective delivery, but also acknowledged the importance of not unduly delaying capacity expansion.

1.17 In response to the July 2019 Consultation, Heathrow West said that the escalation in HAL's forecast costs is deeply alarming and provided evidence that HAL will be unable to implement airport expansion efficiently and effectively. It therefore suggested that the CAA should put an immediate stop to any Category C expenditure by HAL.

[23] IFS (2019), "Heathrow Expansion Programme Pre-DCO Category C Expenditure Scenarios: IFS Supplementary Paper – Scenarios 2a and 3a", October 2019.

Scenario 1

1.18 HAL's Submission indicated that Scenario 1 would deliver the greatest consumer value. It has subsequently:

- acknowledged that Scenario 1 is a challenging schedule which requires notable pace and momentum; and
- highlighted that this scenario has been developed to unlock the benefits of the scheme at the earliest opportunity.

1.19 Scenario 1 has been vigorously opposed by IAG, which has raised significant concerns around the scale of sunk costs under this scenario.

Scenarios 2 and 2a

1.20 HAL prefers Scenario 1 to Scenario 2 or 2a on the basis that Scenario 1 would deliver new capacity sooner. Airlines presented mixed views on Scenarios 2 and 2a. IAG said that Scenario 2 includes an unacceptable amount of early Category C spending. Other airlines said that Scenario 2a represented a realistic and achievable schedule. They considered this would deliver capacity expansion as soon as practicable, with a realistic programme schedule that does not distort decision making and expectations.

Scenarios 3 and 3a

1.21 HAL did not support Scenario 3 and noted that the risk adjusted delivery dates would jeopardise delivery by the end of 2030 and that this may not be consistent with the requirements of the NPS. Airlines also noted this and requested the development of Scenario 3a, which modified Scenario 3 by allowing higher levels of early Category C costs, consistent with allowing for delivery before the end of 2030.

1.22 IAG supported a scenario akin to Scenario 3a as it considered that this was the only approach proposed by HAL that minimised early Category C costs. IAG highlighted the risks and disadvantages associated with sunk costs. Nonetheless, it also said that Scenario 3a implied a rapid increase of activity later in the programme, which could entail additional risk. To address this concern, IAG suggested that a better approach might be to substantially revise

Scenario 2 and seek further efficiencies in early Category C spending, while maintaining a measured approach to construction activities and the timetable.

CAA analysis and assessment

1.23 We have been presented with a broad range of evidence and views from a range of stakeholders on the scenarios for early Category C costs. To help inform our judgment on which scenario would be best for consumers, we have developed an analytical framework to inform, along with other considerations, an assessment of the relative merits of the scenarios.

1.24 HAL's scenarios represent different trade-offs between higher early Category C costs on the one hand, and likely later delivery of the runway opening on the other. We have consistently said that the timely delivery of capacity expansion is required to prevent future consumers experiencing higher airfares, reduced choice and lower service quality. Later delivery of runway expansion would, therefore, imply that consumer benefits will be lower in the medium term as the benefits of expansion will not accrue to passengers until later. On the other hand, a greater level of spending on early Category C costs (which, other things being equal, would promote more timely delivery) risks there being substantial sunk costs if HAL is not able to obtain a DCO. HAL is seeking comfort that it can recover its early Category C costs through airport charges and airlines would seek to recover these costs from consumers in setting airfares, thereby creating a risk for consumers.

1.25 It would be more straightforward to assess the relative merits of the scenarios if we knew the probability of a successful DCO application. However, given wider uncertainties and the nature of the decision-making process, it is not practicable for us to develop a robust estimate of this probability. Therefore, rather than attempt to estimate an explicit probability that HAL's DCO application will be successful, we have estimated "break even" probabilities. These are the probability of a successful DCO application that would mean consumers would be (in terms of this stylised analysis) indifferent between the different scenarios for early Category C costs. We commissioned FTI Consulting to support us in developing this analysis.

Consumer benefits associated with expansion

1.26 A key input to this assessment is the consumer benefits associated with expansion. We acknowledge the inherent difficulty in precisely quantifying the value of consumer benefits. Nonetheless, a number of potential reference points exist (as summarised in Appendix C) and our assessment of this information has led us to conclude that, although the magnitude of benefits is uncertain, they are likely to be significant.

1.27 Bearing in mind the uncertainty of these estimates (and the desirability of avoiding sunk costs), we have focused on lower quartile estimates of consumer benefits. Nonetheless, this still implies estimates of consumer benefit in the range £0.9 billion to £2.5 billion per year (2018 prices). We consider that these represent relatively conservative estimates given the range of plausible estimates that have been put forward.

Analytical framework to inform our assessment

1.28 For the purposes of this stylised analysis we have used Scenario 1 as a baseline and expressed “break even” probabilities by reference to this scenario. This break even probability represents the probability of a successful DCO application that would make consumers indifferent between the choice of Scenario 1 and the scenario under consideration. With all other things being equal, a lower break even probability implies that Scenario 1 is more attractive.

1.29 The breakeven probability for a particular scenario, p*, is estimated using the following formula:

$$\frac{-\Delta C_1}{\Delta(C_1 + C_2) + \Delta B}$$

Where:

$-\Delta C_1$ is the difference in early Category C costs between this scenario and Scenario 1;

$\Delta(C_1 + C_2)$ is the difference in total Category C costs between this scenario and Scenario 1; and

ΔB is the difference in consumer benefits associated with expansion between this scenario and Scenario 1.

1.30 While this analysis takes account of both the benefits to consumers of early delivery and the possibility of sunk costs, it has a number of very significant limitations. These include:

- it assumes all sunk costs are passed to consumers, even if in practice some of these costs might be absorbed by airlines;
- it assumes that the timetable for delivery of the runway under each scenario is broadly equally likely to be achieved, while there is some evidence to suggest already that there are very significant challenges associated with meeting the timetable under some scenarios;
- it assumes that the costs incurred under each scenario would be efficiently incurred. However, scenarios implying a much quicker increase in spending may be more likely to raise concerns about the efficiency of the expenditure;
- it does not take account of the value of being able to take account of new information that may emerge between now and the decision on HAL's DCO application. In particular, if information were to emerge increasing confidence in the overall programme, it would be appropriate to consider whether early spending should be increased or, if information emerged reducing confidence in overall programme, spending could be curtailed (beyond what has already been incurred) or halted;
- as noted above, it provides no additional information on the probability that HAL will be granted a DCO and will proceed with the expansion programme.

1.31 Nonetheless, the analysis suggests the following breakeven probabilities set out in Table 1.1.

Table 1.1: Summary of the breakeven probabilities for different estimates of foregone consumer benefit per annum: IFS adjusted scenarios

	Early Category C costs	Risk adjusted opening date	Scenario preferred to S1 at P*			
			Foregone consumer benefit p.a. = £0.9bn		Foregone consumer benefit p.a. = £2.5bn	
			Min	Max	Min	Max
S1: base	£2.4bn	Dec-28				
S2a: base + 1yr	£1.6bn	Aug-29	32%	52%	16%	33%
S3a: 2030	£1.0bn	Aug-30	0%	32%	0%	16%

Source: CAA analysis

1.32 This analysis implies that, under reasonable assumptions for consumer benefits, Scenario 1 (high early spend) would be preferred by consumers, where the probability of success is greater than the range 33%-52%, but subject to the limitations discussed above.

1.33 Table 1.2 below summarises the CAA's assessment of the advantages and disadvantages of each scenario in terms of the stylized analysis discussed above.

Table 1.2: CAA assessment of scenarios

	Advantages	**Disadvantages**
Scenario 1	Estimated to deliver the highest consumer net benefits where the probability of a successful DCO application exceeds 33%-52%.	Concerns raised by the IFS regarding deliverability of 2026 target date. Presents significant challenges regarding efficiency assessment of relatively large quantum of early Category C costs.
Scenario 2a	The IFS notes that this scenario supports a reduced risk to the schedule for the delivery of	Preferred by consumers only when there is significant uncertainty with respect to HAL's DCO application.

	Advantages	Disadvantages
	expansion compared to other scenarios. May be a more proportionate approach than Scenario 1 given efficiency challenges.	
Scenario 3	Lowest risk of consumers being exposed to sunk costs among all the scenarios considered.	Does not comply with the NPS 2030 deadline once the risk to the schedule for the delivery of expansion is considered and so not clear it is in the interests of consumers.
Scenario 3a	Improves on Scenario 3 by ensuring compliance with NPS 2030 deadline. Lower risk of consumers being exposed to sunk costs than all scenarios other than Scenario 3.	Would only be consistent with the interests of consumers if the probability of a successful DCO application were very low.

Source: CAA analysis

CAA conclusions on the preferred scenario

1.34 Bearing in mind the limitations on our analysis discussed above, it is appropriate to consider all the information that is available to inform our decision on which scenario that would be best in the interests of cosumers. Also, given that:

- we cannot at this stage know the probability of HAL making a successful DCO application;
- the current level of uncertainty generally; and
- the ability to adjust the chosen scenario in due course

it is also appropriate to retain signficant flexibility for the future. So, any scenario that we choose at this stage is a choice designed to guide the programme over the coming months rather than an attempt artificially to constrain the appropriate approach to capacity expansion over the next two years.

1.35 While there are advantages in an approach that seeks to maximise momentum in the programme for the delivery of expansion, there are a number of factors that suggest a more balanced approach taking account of other factors would be appropriate. These include:

- while Scenario 1 is preferred to Scenario 2a if the probability of a successful DCO application is relatively high, there remains uncertainty with respect to these matters;
- if there is greater certainty about the programme later (for instance after the next programme gateway (“M5”)), issues of timing and spending can be revisited;
- HAL has not been able to secure airline support for Scenario 1 and airlines have expressed concerns about the difficulties with Scenario 1 identified by the IFS. By contrast, there is some support for Scenario 2a from airline stakeholders (although IAG would prefer Scenario 3a);
- while HAL has said that Scenario 1 will lead to the lowest overall costs, it is not clear that this suggestion is consistent with IFS concerns about the sharp increase in activity that is associated with Scenario 1. A more measured approach to spending may promote more efficient outcomes;
- Scenario 2a is expected to deliver capacity expansion only eight months later than Scenario 1, in return for an expected reduction in early Category C costs, and associated risk, of about £800 million; and
- given the inherent challenges associated with assessing the efficiency of early Category C costs discussed in detail in Chapter 2, Scenario 2a may be a more proportionate approach than Scenario 1.

1.36 Our analytical approach indicates that Scenario 2a would also currently be preferred by consumers to each of Scenario 3 and Scenario 3a unless the probability of HAL being granted a DCO were to be very low. On balance, we consider that Scenarios 3/3a are unlikely to be in the interests of consumers given the additional delay to the delivery of capacity expansion implied by them.

1.37 We also note (as shown in Table 1.3) that HAL’s spending projections under Scenario 2 for the first half of 2020 (the period including the M5 programme gateway) only represent a relatively modest increase over the projections of spending for Scenario 3. While HAL has not provided the corresponding data for

Scenarios 2a and 3a, we do not expect that the pattern of spending would be substantially different during the first half of 2020. A programme of early costs corresponding to Scenario 2a should therefore result in only modest additional expenditure during the first half of 2020, during which new information should emerge from HAL's next main programme gateway (M5).

Table 1.3: Summary of HAL's projections of spending in 2020

		Q1 2020	Q2 2020	Q3 2020	Q4 2020
S1 HAL	**Costs**	90	125	240	250
	Contingency	225			
	Total	930			
S2 HAL	**Costs**	35	40	55	60
	Contingency	60			
	Total	250			
S3 HAL	**Costs**	30	30	30	30
	Contingency	45			
	Total	165			

Source: Information provided by HAL.

1.38 Taken in the round, the assessment and analysis above suggests that Scenario 2a is currently the best approach in the interest of consumers. Nonetheless, setting this initial direction for the envelope of early Category C costs does not preclude us from revising this view as further information becomes available. Our policy proposals in chapter 2 outline our plans for governance arrangements that will allow us to take account of any significant new information that emerges, where this indicates that a change in the broad approach to early costs would be in the interests of consumers.

Views invited

1.39 Views are invited on any of the issues raised in this chapter and, in particular, our conclusion that given the information currently available Scenario 2a is likely to result in the best outcome for consumers, but that we should retain the flexibility to review this decision if important new information emerges in relation to these matters.

Chapter 2

Regulatory treatment of HAL's early costs

Introduction

2.1 The July 2019 Consultation explained that the increases in HAL's estimates of Category B and early Category C costs meant that it was appropriate for us to review the regulatory treatment of each of these categories of costs. In chapter 1, we have explained that there are advantages for consumers in HAL pursuing a programme of work that will limit HAL's expenditure to some extent, in advance of the outcome of its DCO application. Nonetheless, this more limited programme includes a forecast level of Category B costs of about £0.5 billion[24] and early category C costs of about £1.6 billion, giving a total of about £2.1 billion. In these circumstances, it remains appropriate for us to continue with our review of the regulatory treatment of these costs.

2.2 Building on our previous consultations on the treatment of early costs, the July 2019 Consultation set out our proposal for the regulatory treatment of the increased level of Category B costs (above £265 million[25]) and our initial thinking on the regulation of early Category C costs.

2.3 This chapter sets out:

- a brief summary of the July 2019 Consultation and respondents' views;
- our near final decision on the regulation of Category B costs;[26] and
- for consultation, our proposals on the regulatory treatment of early Category C costs in the context of the broad programme of early Category

[24] All figures in this paragraph are presented in 2018 prices. HAL's recent forecasts are sourced from HAL's Submission.

[25] This figure of £265 million is expressed in 2014 prices. This equates to £298 million in nominal prices. Throughout this consultation, all references to £265 million in respect of our existing Category B cost policy relate to 2014 prices.

[26] This is chapter sets out our final policy statement for Category B costs and supplements our Category B policy which we outlined in The Planning Cost Recovery Statement (2017).

C spending that we consider is in the best interests of consumers (as outlined in chapter 1).

2.4 While we have reached a broadly settled view on the regulatory treatment of Category B costs, we remain of the view that it is important to have a reasonable degree of consistency between our approach for Category B and early Category C costs. Therefore, we are still inviting views on these proposals, particularly to consider the interactions with the proposed regulatory treatment of early Category C costs.

The July 2019 Consultation

Our proposal for Category B costs

2.5 The July 2019 Consultation noted the advantages of not reopening the treatment of expenditure already agreed and so focused on strengthening the regulatory treatment of Category B costs above £265 million. It consulted on:

- **improved scrutiny and better governance** through enhancing the role of the IPCR, enhancing reporting requirements and establishing a recovery cap (so that costs above this cap would be recoverable only if approved through a governance process involving HAL, airlines and the CAA);
- **revised risk sharing arrangements** to limit the extra rewards HAL would receive in the event that it obtains a DCO for capacity expansion; and
- the possible **tightening of regulatory incentives**, by reducing the return that HAL should be allowed to recover on costs incurred before the outcome of HAL's DCO application is known.

2.6 In respect of risk sharing, we also said that if HAL's DCO application is unsuccessful:

- HAL would only be allowed to recover 85% of its efficient Category B costs, unless it can demonstrate that it had used appropriate endeavours to obtain consent. We invited views on whether it would be best to adopt a "reasonable" or "best" endeavours test in respect of these matters; and

- we would reserve the right to decide whether HAL should recover less than 85% of its Category B spending if there is clear and compelling evidence that HAL has unilaterally withdrawn from the planning process.[27]

2.7 We did not propose any change to the regulatory treatment of Category B costs below £265 million, because we considered that such a retrospective change was not good regulatory practice.

Our initial views on early Category C costs

2.8 In relation to early Category C costs, the July 2019 Consultation explored:

- how governance arrangements should work;
- what risks might be best allocated to HAL; and
- the development of regulatory incentives and how these might encourage efficiency.

2.9 We suggested that:

- appropriate and efficient costs incurred by HAL should be added to the RAB and recovered from airport charges; and
- these costs should be regulated in a similar way to Category B costs[28] where practical, including allowances for financing costs.

Stakeholder views

2.10 Stakeholders generally supported the broad alignment of regulatory arrangements for Category B and early Category C costs, noting the advantages of avoiding perverse incentives on HAL to change the allocation of costs.

Views on Category B costs

2.11 Stakeholders broadly agreed with our proposal not to change our existing policy for Category B costs up to £265 million. However, VAA suggested that, given the

[27] We noted that this would apply only in certain limited circumstances and that we would not expect to reduce recovery below 85% where HAL could demonstrate that it had used all reasonable endeavours to continue with the capacity expansion programme.

[28] Except for any risk sharing mechanism which we proposed should only apply to Category B costs.

escalation of planning costs, we should reopen our decision on cost recovery. It suggested that we allow HAL's actual cost of new debt, rather than the return allowed under the current ("Q6") price control for the recovery of these costs. Airline representatives also suggested that we should revisit our policy that allows HAL automatically to recover the first £10 million of Category B costs incurred in each year through higher airport charges.[29]

2.12 Airlines and other stakeholders welcomed our proposal to review the treatment of costs above £265 million. HAL said that any change to our Category B policy could lead to counterproductive complexity and investment risk.

Scrutiny and reporting

2.13 HAL agreed that it should provide more regular updates to stakeholders but proposed biannual reporting of forecast costs. Airlines preferred the quarterly reporting approach that we had proposed. VAA noted the importance of improving the quality of information that is reported and that it should be provided in a timely manner, but that HAL should not be allowed to recover any costs of additional governance. This respondent also suggested that HAL should develop a template for budgeting and reporting to be agreed by all relevant parties, and stringent reporting deadlines with penalties if these are breached.

2.14 Stakeholders acknowledged the specific challenges of assessing the efficiency of Category B costs. Nonetheless, several airlines said that our proposal to scrutinise the efficiency of costs further did not go far enough and should be strengthened. Heathrow West suggested that reported costs should be made publicly available. It also suggested that the cost of its own DCO application could be used to benchmark HAL's Category B costs.

Recovery cap

2.15 HAL disagreed with our proposal to introduce a recovery cap, instead suggesting a "reporting" cap against which it would report Category B costs. It said that this would provide airlines and the CAA an opportunity to interrogate the latest forecasts and consider whether any changes to the expansion programme would

[29] One respondent thought that we had proposed to remove this mechanism.

affect HAL's planning costs. It said that, alongside the existing reviews and governance process, this would provide a further incentive to deliver a planning application efficiently.

2.16 By contrast, airlines and some other stakeholders supported the introduction of a recovery cap but recognised the challenges of setting the cap at an appropriate level. Some airlines criticised the element of our proposal that would give HAL the opportunity to justify further costs above the cap. Some respondents suggested that no costs should be recoverable above £265 million.

Risk sharing arrangements

2.17 HAL did not support our proposal to remove the 5% reward on Category B costs above £265 million if it obtains a DCO. It suggested that, unless the penalty for a failure to obtain a DCO were also removed, this approach would be asymmetrical[30] and not consistent with the "fair bet" principle previously used by the Competition and Markets Authority (CMA) to assess incentive arrangements.

2.18 Some airlines proposed that HAL should only recover up to 75% of costs if its DCO application fails, while Heathrow West suggested that HAL should not be allowed to recover any Category B costs if this happens. An airline representative noted that tightening the incentive structure for Category B costs may lead HAL to reclassify these costs as early Category C costs.[31]

2.19 Airlines did not support our proposal to allow HAL to recover more than 85% of its costs in the event of its DCO application being unsuccessful, even if it could demonstrate that it had used appropriate endeavours to secure planning consent.

---

[30] Under our proposal outlined in the July 2019 Consultation, HAL would only recover up to 85% of Category B costs in the event that its DCO application fails.

[31] Under our proposal for early Category C costs outlined in the July 2019 Consultation, HAL would bear no risk in relation to those costs in the event that its DCO application fails.

Recovery of Category B costs

2.20 Highways England was concerned that any proposals to restrict Category B costs could undermine HAL's flexibility to meet Highways England's requirements for changes to the M25 motorway.

2.21 HAL disagreed with our proposal for a lower return on costs above £265 million and questioned whether it would be proportionate to introduce this level of complexity. Airlines agreed with our proposal to strengthen incentives so that HAL receives a lower return on costs above £265 million (compared to the Q6 allowed return of 5.35%) but presented different views on the level of return. IAG suggested that any further Category B costs should be recovered at the experienced cost of new debt, while VAA suggested that an updated allowed return based on current market conditions should be applied.

Views on early Category C costs

Governance arrangements

2.22 HAL said that it has worked with airlines to develop a governance process which follows the principles of the established "core" and "development" capital expenditure governance framework, which involves seeking agreement with airlines for each six month cycle of spending. The arrangements are underpinned by the Enhanced Engagement protocol and could be delivered through the existing expansion airport-airline engagement forums. HAL emphasised that, under this approach, the CAA would not have to define in advance a total amount of early Category C expenditure. Rather, the CAA could set a general intent for the programme and rely upon the established governance framework for specific decision making and incentives.[32]

2.23 Airlines wanted a meaningful role in the governance process with the ability to veto spending by HAL if necessary. Heathrow West expressed concern that the proposed governance arrangements would not be effective in ensuring control over costs.

[32] HAL's proposal includes scrutiny of spending by airport-airline engagement groups, supported by the IFS, which will undertake a review of actual and forecast early Category C spending. It also includes at an *ex post* efficiency review by a CAA appointed expert.

Scrutiny and reporting

2.24 HAL and airlines expressed similar views to their views on Category B costs on the scrutiny and reporting of early Category C costs, which are summarised above.

Recovery cap

2.25 IAG proposed setting a ceiling on the level of early Category C costs that HAL can recover. Other airlines said that establishing a recovery cap for early Category C costs is complicated because the cost estimates are not yet suitably mature. VAA suggested an approach in line with the existing Q6 core and development capital expenditure ("capex") arrangements because it would allow some flexibility for legitimate changes in costs for those projects that are still in the early stages of development, while providing a binding limit for more mature costs.

2.26 Other stakeholders representing local authorities and community groups noted that any restriction or reduction in early Category C spending should not lead to a delay, or a reduction in the quality of mitigation measures that HAL has proposed for the natural environment and local communities.

Risk sharing arrangements if HAL's DCO application is unsuccessful

2.27 HAL did not consider that risk sharing arrangements should be applied if its DCO application is unsuccessful but proposed several measures to reduce the risk of stranded costs. For example, it said it would develop a plan for realising the value from any stranded assets which would immediately be returned to consumers. HAL also said that it would like to explore further options to address stranded costs where the asset value cannot be realised (including exploring annuitising these costs at a lower cost of finance).

2.28 Other stakeholders presented mixed views. IAG said that an unregulated business would take on the risk of new investment itself and that, in the event of a failed DCO application, HAL should not be able to recover all its costs. IAG said that there should be a limit to the level of early Category C costs that should be recoverable if HAL's DCO application fails. Heathrow West said that costs should only be recovered (in total or in part) in the event of HAL obtaining a DCO because it said that allowing HAL to recover these costs places potential competitors at a disadvantage.

Recovery of early Category C costs

2.29 Stakeholders presented different views on both the timing of recovery and the rate of return earned on early Category C costs incurred before a decision on HAL's DCO application is made, including:

- HAL proposed that efficiently incurred spending should be added to the RAB as it is invested and remunerated at the relevant allowed return for HAL's RAB at any given time (i.e. the Q6 allowed return until the start of the H7 price control period);
- IAG proposed that costs should be recovered at HAL's cost of new debt; and
- VAA proposed that if HAL's DCO application is successful, costs incurred during 2020 and 2021 should attract an updated allowed return to reflect current market conditions. But it also said that if HAL's DCO application fails, as a result of circumstances within its control, it should receive its cost of debt and costs should be recovered over an extended period to reduce the impact on individual consumers.

Category B costs: our policy decision

Retaining our existing policy for Category B costs

2.30 Our policy for Category B costs incurred up to £265 million[33] will remain unchanged to avoid undermining the stability of the regulatory framework by retrospective action, which would have the disadvantage of increasing uncertainty and putting upward pressure on HAL's cost of finance.

[33] As set out in the Planning Cost Recovery Policy Statement and our supplementary guidance on reporting costs associated with obtaining planning permission, published in April 2018: see www.caa.co.uk/CAP1651

Scrutiny and reporting of Category B costs above £265 million

2.31 We acknowledge some of HAL's concerns around quarterly reporting (particularly in relation to the provision of revised forecasts) but consider that the reporting of Category B costs can reasonably be subject to the following arrangements, in part because of previous concerns that HAL was not monitoring these costs closely enough:

- at quarterly intervals, and within one month of each quarter end,[34] HAL will provide an update on the actual Category B costs incurred to date, compared to both its original budget[35] and subsequent forecasts, with commentary;[36]
- at six monthly intervals, HAL will provide an updated forecast of total Category B costs, including a breakdown of the amount it expects to spend on a month-by-month basis until the DCO process is complete, with commentary;[37] and
- we also expect HAL to continue to separately identify Category B costs incurred in its regulatory accounts.

2.32 We will continue to appoint an IPCR to conduct annual reviews of Category B costs to scrutinise and advise the CAA on the inclusion of these costs in the RAB.[38]

[34] On this basis, HAL's actual costs for Q1 (January-March) 2020 would need to be reported before the end of April 2020.

[35] This is the budget for Category B costs as set out in December 2018, which has been subject to review by the IFS.

[36] Actual costs incurred should be shared using a cost reporting template which should be agreed with the airlines. This should include detailed commentary, including both analysis of the differences between actual spending and both the original budget and subsequent forecasts and details of the actual deliverables completed during the period against those planned.

[37] Category B forecast updates should include details of any differences between the original Category B budget and the last forecast, including commentary explaining those differences. It should also set out planned deliverables on a quarter-by-quarter basis.

[38] The IPCR review will include all Category B costs incurred during each year. Given the scale of Category B costs being incurred, these would be unlikely ever to fall below the £10 million per year recovered by HAL through the current price control. Hence, it seems highly unlikely that the £10 million per annum recovered in this manner would ever result in an over recovery of Category B costs. In the event that this were to occur,

Recovery cap for Category B costs

2.33 We acknowledge the challenges raised by stakeholders in setting a recovery cap. We also note HAL's alternative suggestion of a reporting cap but we consider that this would not provide a sufficient incentive for HAL to control costs.

2.34 While noting airlines' preference for any recovery cap to be a "fixed" cap beyond which no recovery of costs will be allowed, we consider this would unreasonably expose HAL to risks that may be outside of its control (for example, a delay in the outcome of the decision on whether or not to grant a DCO) which could put upward pressure on its cost of finance. Retaining scope to adjust the recovery cap should address some of HAL's legitimate concerns about the recovery cap and would be in the interests of consumers.

2.35 Appendix D summarises the findings of a high level review which suggests initially setting the recovery cap at £500 million. We do not expect to change the level of the cap unless there is a material change in circumstances that suggests a compelling reason for change and where HAL can demonstrate that increasing expenditure is both efficient and in the interests of consumers.

2.36 Any request to adjust the recovery cap should be made directly to the CAA, allowing sufficient time for the CAA to consider the request. Each of HAL and airlines should have the opportunity to make representations on whether the recovery cap should be adjusted and should have discussed these matters bilaterally before making representations to the CAA. We will make the final decision on any adjustment to the recovery cap.

Risk sharing arrangements for Category B costs above £265 million

2.37 The risk sharing mechanism for costs up to £265 million was initially implemented to encourage HAL to develop a high quality DCO application. It provides HAL with a 5% reward on efficiently incurred planning costs if its DCO application is successful but imposes a 15% disallowance of costs if the

---

however, any issues could be dealt with by means of a "truing up" calculation at the subsequent price control review.

application were to be unsuccessful. In the July 2019 Consultation, we proposed to maintain the disallowance but remove the 5% reward on HAL's planning costs above £265 million in the event that HAL's DCO application is successful.

2.38 On further reflection, we have decided that a better approach would be to align the treatment of these costs with the treatment of early Category C costs, for which we are now proposing a lower rate of return if HAL is not able to obtain a DCO. This should provide better overall protection for consumers. The detail of this revised approach is dealt with later in this chapter.[39]

2.39 However, as proposed in the July 2019 Consultation, if there is clear and compelling evidence that HAL has unilaterally withdrawn from the planning process, we reserve the right to decide whether HAL should be able to recover less than 85% of its efficiently incurred Category B costs.[40]

Recovery of Category B costs

2.40 As set out in our previous policy on Category B costs (and the November 2019 notice of licence modifications[41]) the first £10 million of Category B costs incurred each year will be recovered through an adjustment to airport charges through the "per passenger correction factor" in HAL's price control.

2.41 For efficient Category B costs above £10 million per annum, the CAA will make a final decision on the efficient costs to be added to the RAB, following the outcome of the DCO process. Therefore, to the extent HAL recognises these costs in its reporting of the RAB in its regulatory accounts ahead of our final decisions, it should be prepared to accept that we may make appropriate adjustments to these reported figures in setting its next main price control. Further, the recovery through airport charges of the Category B costs in HAL's

---

[39] Risk sharing of 105/85 in the event of a successful/unsuccessful DCO application will remain for of costs up to £265 million.

[40] This will include costs above £265 million. We would not expect to reduce cost recovery below 85% where HAL could demonstrate that it had used all reasonable endeavours to continue with the capacity expansion programme.

[41] Economic regulation of Heathrow Airport Limited from January 2020: notice of licence modifications: see www.caa.co.uk/cap1852

RAB (in terms of the recovery of allowances for returns and regulatory depreciation) will not commence until after the start of HAL's next main price control. In deciding on any adjustments to the level of Category B costs to be recovered following the decision on HAL's DCO application, we will take into account all available information, including further advice from the IPCR (in addition to the existing arrangements for annual reporting) and any other information and evidence available on cost efficiency. The level of return to be allowed on Category B costs is discussed below.

Interest during construction for Category B costs

2.42 Responses from stakeholders suggested that there may have been some confusion over what we meant when we referred to the allowed rate of return on Category B costs.

2.43 To clarify this further, we now refer to the return added to Category B and early Category C costs before the start of HAL's next main price control as the "Interest During Construction" ("IDC"). In general, an IDC that declines as the level of costs incurred increases will provide an incentive for HAL to manage its expenditure efficiently. Given this, our decision is to set a different IDC for Category B costs depending on the timing and quantum of the costs being incurred and whether HAL's DCO application is successful. Category B costs will earn an IDC consistent with Table 2.1[42] below.

[42] IDC will only be earned on efficient Category B costs to be added to the RAB. It will not be earned on the £10 million per annum recovered through airport charges.

Table 2.1: IDC earned on efficient Category B costs from the date the costs are incurred until the date they are finalised in the RAB

Timing/quantum of efficient Category B costs incurred	IDC	
	DCO application is successful	**DCO application is unsuccessful**
Up to the end of 2019	5.35%	5.35%
From the start of 2020, up to a recovery cap of £500 million	4.83%	From 2022 lower financing cost / H7 cost of new debt (subject to early costs being financeable)
Above £500 million recovery cap but below any adjusted recovery cap (if such an adjusted cap is agreed by the CAA)	H7 cost of new debt	
Above any recovery cap	No IDC	No IDC

Source: CAA

2.44 We have decided to extend the application of the Q6 allowed return to costs up to the end of 2019 (rather than up to £265 million), to be consistent with our approach of avoiding retrospective changes to the regulatory framework.

2.45 In April 2018, we proposed a 4.83% pre-tax, real allowed return for the interim price control period (2020 and 2021), updated for simple and observable changes to the cost of new debt and corporation tax rates[43]. We consider this is a better reflection of HAL's current cost of capital, not least given the time that has elapsed since the Q6 price control was set and that approach responds, at least in part, to stakeholder concerns that the allowed return used for Q6 would over remunerate HAL. We also consider that this approach is more transparent and provides more regulatory certainty than an alternative of applying the allowed return that we will develop for the next main H7 price control (which has not yet been calculated).

2.46 If we were to decide to allow an increase in the recovery cap we will provide a further incentive on HAL to control its planning costs by allowing a return capped at the cost of new debt finance on any additional costs incurred up to the

[43] Our April 2018 Consultation see www.caa.co.uk/CAP1658 Appendix D, paragraph 14.

adjusted cap. Any costs incurred above the recovery cap (or any adjusted recovery cap) would not be allowed a return or added to HAL's RAB.

2.47 If HAL is unsuccessful in its DCO application, we would also cap returns at a lower level for Category B costs above £265 million. One option would be to use the cost of new debt finance, but subject to this approach being consistent with HAL's early costs being reasonably financeable. This might involve exploring with HAL special debt financing arrangements, for instance creating a special purpose vehicle that would compensate HAL for the value of these costs and would simultaneously arrange separate debt based financing (on the basis of a guaranteed stream of revenue from airport charges).

2.48 Our policy in relation to Category B costs is summarised in Figure 2.1.

Figure 2.1: Summary of our final decision on the treatment of Category B costs

Final Category B Costs Policy

Scrutiny of Costs

Reporting and IPCR

HAL will provide the following information to airlines and the CAA using a cost reporting template to be agreed with the airlines:

- at quarterly intervals, and within one month of each quarter end, HAL will provide an update on the actual Category B costs incurred to date, compared to both its original budget and subsequent forecasts, with commentary;
- at six monthly intervals, HAL will provide an updated forecast of the total Category B costs, including a breakdown of the amount it expects to spend on a month-by-month basis until the DCO process is complete, with commentary.

Costs are subject to annual review and scrutiny by IPCR which will include whether there is evidence to support the costs, whether costs have been appropriately categorised as Category B costs and whether costs have been efficiently incurred.

We will also consider appointing the IPCR to conduct an overarching review of total Category B costs incurred, following the outcome of the DCO process.

The CAA will make the final decision on the level of efficient costs to be added to the RAB, taking into account all available information, including the advice of the IPCR.

Governance protocol

The Planning Cost Recovery Policy Statement specified that HAL should develop a governance protocol. HAL developed and agreed this protocol with the airline community which was finalised in September 2018 in line with the procedures set out in the Planning Cost Recovery Policy Statement.

Risk Sharing

Risk Sharing based on DCO outcome

Category B costs **over £10 million per year and up to £265 million (2014 prices)** are subject to risk sharing. The risk sharing factors will be **105/85** based on the success or failure of the DCO application. If HAL is successful with its DCO application, it will recover 105% of its efficient costs. If unsuccessful it will recover only up to 85% of its efficient costs.

The risk sharing mechanism **will not apply to Category B costs above £265 million (in 2014 prices).**

As Category B costs reached the £265 million threshold in 2019, the risk sharing arrangements result in £38.7 million of Category B costs being at risk (being 15% of £298 million (nominal prices) less £10 million of costs recovered in year in each of 2016, 2017, 2018 and 2019).

Risk sharing in event of HAL Unilateral Withdrawal

If there is clear and compelling evidence that HAL has unilaterally withdrawn from the planning process, we reserve the right to decide whether HAL will be able to recover less than 85% of all of its Category B costs (including those costs in excess of £265 million).

We would not expect to reduce recovery below 85% where HAL could demonstrate that it had used all reasonable endeavours to continue with the capacity expansion

Recovery Mechanism

Treatment of Costs and Recovery Period

First £10 million per year: Recovered through an adjustment to airport charges via the per passenger correction factor in the Price Control Condition in HAL's licence.This will be a total of £60 million, being 6 x £10 million (2016, 2017, 2018, 2019, 2020 and 2021).

Above £10 million per year up to the recovery cap: The level of efficiently incurred Category B costs above £10 million per year in the RAB will be finalised after the outcome of the DCO application is known (with final decisions being made by the CAA), with the profile of regulatory depreciation taking account of our broader approach to affordability and financeability. The recovery of Category B costs will not commence until after the start of HAL's next main price control.

Category B costs must be transparently identified and separately reported in the regulatory accounts.

Recovery Cap

Recovery Cap set at £500m and applies to total Category B costs incurred. Costs incurred above the recovery cap will not enter the RAB.

Should there be a material change in circumstances and where HAL can demonstrate that increasing expenditure is both efficient and in the interest of consumers, the CAA will consider a request to adjust the recovery cap. Each of HAL and airlines should have the opportunity to make representations that the recovery cap should be adjusted and should have discussed these matters bilaterally before making representations to the CAA. The CAA will make the final decision on any adjustment to the recovery cap. We will call this the adjusted recovery cap.

Interest During Construction ("IDC")

Efficient Category B costs to be added to the RAB will earn IDC from the date that they are incurred until the date they are finalised in the RAB at the following rates:

Timing/quantum of efficient Category B costs incurred	IDC	
	DCO application is successful	DCO application is unsuccessful
Up to the end of 2019	5.35%	5.35%
From the start of 2020, up to a recovery cap of £500 million	4.83%	From 2022 lower financing costs / H7 cost of new debt*
Above £500 million recovery cap but below any adjusted recovery cap (if agreed by the CAA)	H7 cost of new debt	
Above any recovery cap	No IDC	No IDC

***Subject to early costs being financeable**

Early Category C costs: our policy proposals

2.49 We remain of the view that there are advantages to adopting similar governance and regulatory arrangements for each category of costs incurred in advance of HAL obtaining a DCO. This is particularly because elements of early Category C cost will be closely related to Category B planning costs, and it is appropriate to minimise any risk of creating incentives at the margin that affect how costs are classified. However, in some cases, early Category C costs warrant different treatment. Where this is the case, we have outlined the rationale for our approach below.

Scrutiny and reporting of early Category C costs

2.50 We expect that the reporting arrangements for early Category C costs should be aligned with the enhanced reporting arrangements we have outlined above for Category B costs, including the combination of quarterly and six monthly reporting discussed in paragraph 2.31. The quarterly reporting of early Category C costs will also need to be sufficiently detailed to support the work of the expert reviewers discussed below. The six monthly report should also include details of expenditure where HAL expects a significant proportion of the costs can be recovered (for example, through the resale of assets) in the event of an unsuccessful DCO application.

2.51 We acknowledge the issues raised by airlines that our scrutiny of HAL's early Category C costs needs further consideration. In response to these concerns, we plan to do further work on developing our approach to assessing the efficiency of these costs. This, in part, reflects the challenges of scrutinising the efficiency of HAL's early Category C cost forecasts where there is a lack of maturity in important elements of the estimates. HAL will be required to demonstrate that its early Category C costs are efficient, and we expect that our assessment of HAL's efficiency will include annual *ex post* reviews of the spending that it incurs, as happens for Category B costs.

2.52 It is likely that several expert reviewers will be needed, given the different types of costs that fall within this category. For example, we are in the process of appointing a property expert to review HAL's spending on residential compensation schemes, major and other commercial acquisitions. We intend to provide further detail on our appointment of expert reviewers in due course. We will consider evidence from expert reviewers to inform our final decision on the efficient level of early Category C costs be added to HAL's RAB.

2.53 We will also set a recovery cap for early Category C costs as discussed below.

Recovery cap for early Category C costs

2.54 In order to inform our judgements on the level of the recovery cap for early Category C costs, we intend to commission an independent assessment of these costs in line with our approach to determining the recovery cap for Category B costs. Nonetheless, our expectation is that the recovery cap will be set at a level that is broadly aligned to the cost forecast under scenario 2a discussed in chapter 1. We intend to confirm the level of this recovery cap in our final policy statement on early Category C costs.

2.55 We note the concerns expressed by some stakeholders that setting recovery caps may drive HAL to reduce its planned expenditure on costs which may be perceived as optional, specifically on mitigations to the environmental impact of expansion. However, it is for the planning process to determine whether such mitigations are required, and we would not expect the introduction of recovery caps (which are not caps on the total costs of expansion) to determine whether such expenditure is incurred following the grant of any DCO. At the same time, we intend to engage with PINS to ensure that it understands the benefits to consumers of such costs being incurred efficiently.

2.56 As with Category B costs:

- should there be a material change in circumstances that suggests a compelling reason for change; and
- where HAL can demonstrate that increasing expenditure is both efficient and in the interest of consumers

the CAA will consider requests to adjust the recovery cap (consistent with the approach set out above for Category B costs). Each of HAL and airlines should have the opportunity to make representations that the recovery cap should be adjusted and should have discussed these matters bilaterally before making representations to the CAA. The CAA will make the final decision on any adjustment to the recovery cap. We will call this the adjusted recovery cap.

Wider governance arrangements

2.57 The July 2019 Consultation summarised what we had said in our December 2017 and April 2018 Consultations on governance arrangements for early Category C costs. We said we would need to consider how best to develop these arrangements in the light of our evolving policy on Category B and early Category C costs. Given the challenges in developing regulatory incentives for efficiency, it is also important to consider how best to lever on existing airport and airline governance arrangements for the benefit of consumers.

2.58 We expect HAL to provide high quality information in response to both regulatory reporting requirements and as part of the airport-airline engagement process. If the quality of HAL's reporting raises concerns for airlines, we will review and consider whether we should provide further reporting guidance to HAL.

2.59 If either this information, or the discussions that are part of wider airport / airline governance arrangements, highlights projects or items of expenditure that are of particular concern to airlines, we will have the discretion to consider these projects and/or costs further. In considering matters that are referred to us through airport / airline governance arrangements, we will take into account both:

- the guidance we have issued on the preferred scenario for spending set out in chapter 1; and
- our wider policy on the treatment of early Category C costs set out in figure 2.2.

For example, we are unlikely to object to efficient spending where it is both consistent with our preferred scenario for early Category C costs, and HAL can reasonably demonstrate is on the critical path for capacity expansion or otherwise is in the interests of consumers.

2.60 We also understand that HAL has also been working with airlines to develop a specific protocol for early Category C costs. This protocol builds on existing governance arrangements[44] involving HAL, airlines and the IFS for capital investment projects, including those related to the expansion programme as required under condition F1.2 of HAL's licence.[45] The draft protocol has been agreed in principle, but the detail of the protocol remains subject to final agreement by the airlines.

2.61 We strongly encourage HAL and airlines to agree the protocol in a timely way. Nonetheless, if necessary, we could consult stakeholders under condition F1.4 of HAL's licence on guidance issued under condition F1.3[46] on issues that we expect HAL and airlines to include in the protocol on early Category C costs.

Risk sharing arrangements for early Category C costs

2.62 The July 2019 Consultation explained that, if we develop regulatory arrangements that allocate all the risk of failure to obtain planning consent to HAL, this would require investors to be compensated for the risks HAL would face, which would lead to higher airport charges and so would not be in the interest of consumers.

2.63 Nonetheless, as we explained in our discussion of Category B costs, it is important to consider incentives and how consumers might be best protected in the circumstances that HAL is not granted a DCO. In these circumstances, allowing a lower return (for instance at the cost of debt) should provide greater longer term protection for consumers than risk sharing arrangements. Nonetheless, as with Category B costs it will be important that HAL's early Category c costs are reasonably financeable.

[44] The Heathrow Airport Enhanced Engagement and Governance Protocol (2018) was jointly developed by HAL and airlines and describes the approach to airport-airline governance, and how consultation, discussions and decisions will take place regarding emerging proposals, long term development activities and delivery activities.

[45] Under condition F1.1 in HAL's licence, it is required to consult relevant parties on (i) its proposals for future investment in the short, medium and long term that have the potential to affect those parties; (ii) its proposals for the development and delivery of key capital projects identified in its future investment proposals.

[46] Under condition F1.3, any protocols that HAL consults on under Condition F1.1 shall include those elements as set out in any relevant guidance issued by the CAA.

2.64 In line with our final policy for Category B costs, we have considered whether HAL should be permitted to recover early Category C costs where there is clear and compelling evidence that HAL has unilaterally withdrawn from the planning process. We consider that the option of disallowing the recovery of a proportion of Category B costs provides an appropriate incentive for HAL to act consistently with the interests of consumers. This is particularly so now that Category B costs are forecast to be about £500 million. Bearing these arrangements in mind, we are not proposing similar arrangements for early Category C costs.

Recovery of early Category C costs

2.65 Where expenditure has been efficiently incurred it will be added to HAL's RAB along with the appropriate IDC. Our approach to these matters is set out in more detail in Appendix E. In deciding whether spending is efficient, we will consider the information that HAL will have provided as part of the governance processes. We will also consider any evidence that spending has not been:

- categorised properly (to guard against the double counting of costs);
- is inefficient; or
- not in the interests of consumers

which might justify excluding the recovery of expenditure through the RAB. We expect to complete this assessment once the Secretary of State (or designated government minister) has made a decision on HAL's DCO application. Therefore, to the extent HAL recognises these costs in its reporting of the RAB in its regulatory accounts ahead of our final decisions, it should be prepared to accept that we may make appropriate adjustments to these reported figures. The level of return to be allowed on early Category C costs is discussed below.

2.66 Once it has been added to HAL's RAB, the profile of regulatory depreciation for these costs will take account of the CAA's broader approach to affordability and financeability.

Interest during construction for early Category C costs

2.67 We propose that efficient early Category C costs will earn an IDC from the date incurred until the costs are finalised in HAL's RAB in accordance with Table 2.2.

Consistent with our policy for Category B costs, we intend to set a different IDC for early Category C costs to help incentivise efficiency.

Table 2.2: Proposed IDC earned on efficient early Category C costs from the date the costs are incurred until the date they are finalised in the RAB

<table>
<tr><th rowspan="2">Timing/quantum of efficient early Category C costs incurred</th><th colspan="2">IDC</th></tr>
<tr><th>DCO application is successful</th><th>DCO application is unsuccessful</th></tr>
<tr><td>Up to the end of 2019</td><td>5.35%</td><td>5.35%</td></tr>
<tr><td>From the start of 2020, up to the recovery cap</td><td>4.83%</td><td rowspan="2">From 2022 lower financing cost / H7 cost of new debt (subject to early costs being financeable)</td></tr>
<tr><td>Above the recovery cap but below any adjusted recovery cap (if such an adjusted cap is agreed by the CAA)</td><td>H7 cost of new debt</td></tr>
<tr><td>Above any recovery cap</td><td>No IDC</td><td>No IDC</td></tr>
</table>

Source: CAA

2.68 Early Category C costs incurred in 2019 will earn an IDC equivalent to the Q6 allowed return, to be consistent with our approach of avoiding retrospective changes to the regulatory framework. If the DCO is granted, early Category C costs incurred from the start of 2020 will earn an IDC equivalent to the allowed return proposed in our April 2018 Consultation (4.83%). We consider this is a better reflection of HAL's current cost of capital and that this approach is more transparent and provides more regulatory certainty than applying the allowed return that we will develop for the next main H7 price control.

2.69 If we were to decide to allow an adjustment to the recovery cap we will provide a further incentive on HAL to control its early Category C costs by allowing a return capped at the cost of new debt finance on any additional costs incurred up to the adjusted cap. Any costs incurred above the recovery cap (or any adjusted recovery cap) would not be allowed a return or added to HAL's RAB. If HAL is unsuccessful in its DCO application, we would also cap returns at a lower cost of finance for early Category C costs incurred after the start of 2020, bearing in mind the same considerations as explained above in relation to category B spending and the importance of insuring early category C spending is reasonably financeable.

2.70 Our policy in relation to Category C costs is summarised in Figure 2.2.

Figure 2.2: Summary of our proposed regulatory treatment of early Category C policy

Proposed early Category C Costs Policy

Scrutiny of Costs

Reporting and IPCR

HAL will provide the following information to airlines and the CAA using a cost reporting template to be agreed with the airlines:

- at quarterly intervals, and within one month of each quarter end, HAL will provide an update on the actual early Category C costs incurred to date, compared to both its original budget and subsequent forecasts, with commentary;
- at six monthly intervals, HAL will provide an updated forecast of the total early Category C costs, including a breakdown of the amount it expects to spend on a month-by-month basis until the DCO process is complete, with commentary.

The CAA will make the final decision on the level of efficient costs to be added to the RAB.

We will continue to develop our approach to strengthening our expert review of these costs (and scrutiny of early Category C costs more generally) and plan to continue our engagement with stakeholders on this issue. We will provide an update on our approach in April 2020 or early May 2020.

Governance

We expect to provide high level strategic guidance that will take into account our duties and objectives where:

- airlines or HAL make a case for extension of the recovery cap; or
- airlines/HAL escalate points of disagreement to us regarding the costs, timing or scope for Category C costs.

Risk Sharing

Risk Sharing based on DCO outcome

No risk sharing will be applied in respect of the success or failure of the DCO application, although these costs will earn a lower IDC if the DCO application is not successful.

Further, in the event of an unsuccessful DCO application, early Category C costs will earn a fixed cost of debt in place of the allowed return once these costs have entered the RAB.

Risk sharing in event of HAL Unilateral Withdrawal

Efficiently incurred costs are recoverable in full in the event of unilateral withdrawal from the capacity expansion programme/DCO application process.

Recovery Mechanism

Recovery Period

The level of efficiently incurred early Category C in the RAB will be finalised after the outcome of the DCO application is known (with final decisions being made by the CAA). The profile of regulatory depreciation will take account of our broader approach to affordability and financeability. The recovery of early Category C costs will not commence until after the start of HAL's next main price control.

Category C costs must be transparently identified and separately reported in the regulatory accounts.

Recovery Cap

A Recovery Cap will be applied. The level of the cap will be determined based on a further assessment to be completed in due course. This will be based on the scope of early Category C costs under Scenario 2a.

Should there be a material change in circumstances and where HAL can demonstrate that increasing expenditure is both efficient and in the interests of consumers, the CAA will consider a request to adjust the recovery cap. Each of HAL and airlines should have the opportunity to make representations that the recovery cap should be adjusted and should have discussed these matters bilaterally before making representations to the CAA. The CAA will make the final decision on any adjustment to the recovery cap. We will call this the adjusted recovery cap.

Interest During Construction

Efficient early Category C costs to be added to the RAB will earn IDC from the date that they are incurred until the date they are finalised in the RAB at the following rates:

Timing/quantum of efficient early Category C costs incurred	IDC	
	DCO application is successful	DCO application is unsuccessful
Up to the end of 2019	5.35%	5.35%
From the start of 2020, up to any recovery cap	4.83%	From 2022 lower financing costs / H7 cost of new debt*
Above the recovery cap but below any adjusted recovery cap (if such an adjusted recovery cap is agreed by the CAA)	H7 cost of new debt	
Above any recovery cap	No IDC	No IDC

***Subject to early costs being financeable**

Views invited

2.71 Views are invited from stakeholders on the issues raised in this chapter and, in particular, on our proposed approach to the governance and regulatory treatment of early Category C costs.

Chapter 3

Implementation

Introduction

3.1 In the July 2019 Consultation, we noted that there may be advantages in bringing forward a relatively simple modification to HAL's licence that would deal with issues relating to early Category C costs.

3.2 This chapter sets out:

- a summary of what we said in the July 2019 Consultation on the possibility of making a modification to HAL's licence and the views of respondents on these matters;
- our intention to publish our final decisions on the regulatory treatment of early Category C costs through a policy statement in April or May 2020; and
- our initial views on a possible modification to HAL's licence to protect the interests of consumers and to reinforce our policy statement by providing a licence backed context for certain key features of our decisions on early Category C costs.

The July 2019 Consultation

3.3 The July 2019 Consultation set out our initial assessment of the advantages and disadvantages of introducing a modification to HAL's licence in relation to early costs. This noted that given the materiality of the sums at stake and the importance of these matters to both consumers and other stakeholders, there may be advantages in bringing forward a relatively simple modification to HAL's licence dealing with early Category C costs. We said that such an approach could provide a firmer basis both for:

- reflecting our decisions on the broad programme of expenditure HAL should undertake with respect to early Category C costs; and

- stronger and more formal governance arrangements for changes to the programme of early Category C costs.

3.4 The July 2019 Consultation also noted that:

- there may be advantages in bringing forward a licence condition sooner rather than later, given the potential for relatively large amounts of expenditure in 2020 and 2021;
- it would be important to consider whether a relatively simple licence modification might be a reasonable and appropriate way forward. Such a licence modification could:
  - (i) include a high-level description of the programme of early Category C spending;
  - (ii) set a baseline with the flexibility to allow for changes and variations to be considered where appropriate; and
  - (iii) include confirmation of the principles for the governance arrangements applicable to such spending.[47]

3.5 We also explained that even a relatively simple licence condition would involve significant policy development as well as a careful process and assessment of the available evidence before such a condition could be formally proposed. We asked whether the timetable for a modification should be coordinated with the M5a programme gateway but noted that the procedures under CAA12 would not necessarily lead to the timely finalisation of a modification to HAL's licence.

Stakeholder views

3.6 HAL noted the CAA's duties and considered that a targeted licence condition could be beneficial but should only include the content needed to codify the treatment of expenditure and ensure that the appropriate regulatory treatment can be enforced through the licence. HAL did not support an approach based upon an unduly prescriptive or detailed definition of the programme in the licence on the basis that:

[47] See paragraph 2.37 of the July 2019 Consultation.

- the information included would have to be at a sufficiently high level to ensure flexibility and prevent the need for a further licence modification if the programme changed; and
- if not drafted carefully, a licence condition could restrict the ability to make required changes to the programme which would in any event need to be approved through governance arrangements, as well as create an increased regulatory burden.

3.7 HAL also said:

- that governance arrangements do not need to be reflected in the licence since Condition F and the Enhanced Engagement Protocol already provide a clear base for governance of early Category C expenditure; and
- providing regulatory certainty is instrumental to delivering expansion and that all parties should have the opportunity to appeal important decisions. However, HAL said that, to the extent the CAA carries out an open and transparent process to set its policy, the risk of appeal would decrease.

3.8 IAG gave guarded support to the proposed modification and considered that it would be beneficial to include a high level description of the early Category C spending to set a baseline from which to manage change. It considered that this approach should mirror the governance principles and objectives set out in the July 2019 Consultation and in earlier consultations.[48] It also stressed the importance of giving the airlines a meaningful role in the process with the ability to veto spending.

3.9 VAA said that a modification to HAL's licence would provide greater certainty around the treatment of early Category C costs but was concerned that an appeal had the potential to delay the programme (and suggested a "fast track" process for the licence modification based on only one round of consultation to help mitigate this risk).

3.10 Airline representatives said that they were agnostic on the proposal for a licence modification, considering it more important for the CAA to focus on the efficiency and regulatory treatment of these costs. While a licence condition might be a useful

[48] Including the April 2018 Consultation, see Chapter 6.

tool, they noted that such a condition would not be a substitute for a robust policy that ensures only efficient costs are remunerated.

3.11 Other respondents generally supported a licence modification.

Way forward

3.12 We note that, while most respondents were broadly in favour of or agnostic to an approach based on modifying HAL's licence, issues were raised around the importance of making sure that the drafting of any licence condition would be sufficiently targeted and flexible and the potential for the licence modification process to create delay and uncertainty. We are also mindful that a more detailed consideration of a licence modification should not be a substitute for the timely development of our policy on the regulatory treatment of early Category C costs. Bearing this in mind, we propose to adopt the following approach:

- to issue a policy statement confirming our decisions on the regulatory treatment of early Category C costs in April or May 2020; and
- consider the responses to the further discussion set out below on the licence modification and the draft licence condition set out in Appendix F, before taking a decision on whether to proceed with a licence modification in 2020.

3.13 We consider this approach has the following benefits:

(i) Regulatory certainty and timely implementation

- Publication of a policy statement in April or May 2020 confirming our decisions on the regulatory treatment of early Category C costs would provide additional regulatory certainty which is a key priority for stakeholders and should promote confidence in the expansion programme. Given that a policy statement is particularly suited to setting out the approach that we expect HAL to take in relation to incurring Category B and early Category C costs and the detail of regulatory and governance arrangements, we consider that this approach is proportionate and in consumers' interests.

- In doing so, we would also have the opportunity to broadly align our policy statement with the M5a[49] and M5 exit[50] programme gateways currently planned for April 2020. This would allow stakeholders to consider both the development of the regulatory framework and progress with the wider expansion programme in the round.

(ii) Flexibility to adapt and respond to changes in the expansion programme

- A policy statement allows the CAA to adopt a more flexible approach in adapting and responding to wider changes and uncertainties in the expansion programme. For example, if new information emerged that required us to update our policy statement, we would have more flexibility to respond in the manner described in chapter 1.

(iii) Consistency with approach to Category B costs

- Category B expenditure is also underpinned by the decisions on the regulatory and governance framework set out in this and earlier consultations, and a policy statement on early Category C costs would provide greater a consistency across both categories of expenditure.

3.14 We also note the evidence discussed in chapter 1 which suggests that our preferred scenario will not give rise to a significant acceleration in early Category C costs during the first half of 2020 as compared to Scenario 1. This means there is less need for us to accelerate the process for developing a licence modification and we can take a more measured approach to considering the case for introducing a licence modification and possible drafting.

Initial views on a possible licence condition

3.15 Bearing the above in mind, we are seeking further stakeholder feedback on the need for, content, and timing of any possible licence condition.

[49] Where the airline community has a formal opportunity to express their commercial views on whether sufficient comfort is available on overall scheme affordability and viability. M5a is currently planned for 9 April 2020.

[50] To clarify areas of agreement and areas of non-alignment between HAL and the airline community in respect of HAL's DCO application. M5 exit is currently planned for 30 April 2020.

3.16 Any licence condition should, in any event, be viewed as part of a suite of regulatory tools alongside the implementation of our policy statement. Based on these considerations and building on the approach discussed in the July 2019 Consultation, we have drafted a relatively straightforward "strawman" for a modification to HAL's licence that:

- reflects our guidance that HAL should adopt a programme of expenditure in line with Scenario 2a as set out in chapter 1; and
- provides arrangements to address possible changes to the programme of early Category C costs should new evidence emerge.

3.17 We consider that such a licence condition could provide:

- a focus on the way HAL undertakes early Category C spending, consistent with the view on our preference for Scenario 2a set out in chapter 1; and
- a process for the CAA to direct changes to this approach, after consultation with stakeholders in the event of a material change in circumstances where the CAA considers it may be in consumers' interests to do so.

3.18 This approach would be consistent with our long held position that capacity expansion is in the interests of consumers, with the obligations framed so as only to apply if the licensee undertakes capacity expansion activities in accordance with the planning process and NPS. Specifically, it would not mandate HAL to undertake capacity expansion but would provide obligations with respect to the approach to early costs and formalise the process for changing the broad approach to these matters. Further explanation of the approach we have taken in drafting this condition is set out, along with the draft text of the condition itself, in Appendix F.

3.19 We do not consider it is necessary to include detailed provisions for governance arrangements on early Category C costs in HAL's licence. HAL's obligations with respect to consulting with relevant parties (including airlines) are dealt with in Condition F of HAL's licence (although as discussed in Appendix F, it would be possible to consider strengthening these obligations by specifically highlighting early costs as an issue for consultation). To the extent that additional governance arrangements are appropriate to support our proposed regulatory arrangements, these are discussed in chapter 2 and will be confirmed in our final decisions on these matters (to be set out in our policy statement on early Category C costs).

3.20 The approach discussed above should have a number of benefits for consumers, including:

- a licence condition could sit alongside our policy statement and be viewed as a "back stop" to mitigate the risk of consumers being exposed to the risk of excessive sunk costs later in the programme;
- avoids the potential "chilling effect" of codifying a detailed description of a programme of early Category C costs and associated governance arrangements into the licence, so that an appropriate level of flexibility can be maintained to deal with emerging issues as they arise;
- the appropriate use of a policy statement to codify the CAA's approach to early Category C costs should complement any licence condition and should, on its own, promote confidence in the delivery of capacity expansion in a manner that takes account of timely delivery, affordability and financeability; and
- provides an additional tool to hold HAL to account consistent with our broad approach to spending that would be in the best interests of consumers.

3.21 Developing a policy statement to provide for the detail of the regulatory and governance arrangements for early costs, would also allow us the necessary time to develop a licence condition and consult stakeholders on it. It also provides the flexibility to coordinate the implementation of any such condition with final decisions on the regulatory framework. In the meantime, any early Category C costs that are incurred would be treated in accordance with this consultation and our final decisions to be set out in a policy statement in April or May 2020.

3.22 We are also mindful that, even with a relatively straightforward licence condition, there would still be significant policy, process and evidential requirements that would need to be developed to support this approach (as noted in the July 2019 Consultation). In particular, any licence condition needs to further the interests of consumers under CAA12 regarding the range, availability, continuity, cost and quality of Airport Operation Services, and be consistent with the better regulation principles. The initial thinking set out in this chapter and Appendix F should be viewed in this context.

Views invited

3.23 Views are invited from stakeholders on any of the issues raised in this chapter and, in particular on:

- our proposal to set out our final decisions on the regulatory treatment of early Category C costs through a policy statement in April or May 2020;
- whether it would be in consumers' interests to also introduce a modification to HAL's licence that works alongside our policy statement; and
- our initial views on a possible draft licence condition set out in Appendix F, including views on whether a separate modification to Condition F.1.1 (a)(i) in HAL's licence is needed in respect of consultation requirements on early Category C costs (see paragraph 6 in Appendix F).

Appendix A

Our duties

1. The CAA is an independent economic regulator. Our duties in relation to the economic regulation of airport operation services (“AOS”), including capacity expansion, are set out in the CAA12.

2. CAA12 gives the CAA a general (“primary”) duty, to carry out its functions under CAA12 in a manner which it considers will further the interests of users of air transport services regarding the range, availability, continuity, cost and quality of AOS.

3. CAA12 defines users of air transport services as present and future passengers and those with a right in property carried by the service (i.e. cargo owners). We often refer to these users by using the shorthand of “consumers”.

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

5. In discharging this primary duty, the CAA must also have regard to a range of other matters specified in the CAA12. These include:
   - the need to secure that each licensee is able to finance its licensed activities;
   - the need to secure that all reasonable demands for AOS are met;
   - the need to promote economy and efficiency on the part of licensees in the provision of AOS;
   - the need to secure that the licensee is able to take reasonable measures to reduce, control and/or mitigate adverse environmental effects;
   - any guidance issued by the Secretary of State or international obligation on the UK notified by the Secretary of State; and
   - the Better Regulation principles.

6. In relation to the capacity expansion at Heathrow, these duties relate to the CAA's functions concerning the activities of HAL as the operator at Heathrow.

7. CAA12 also sets out the circumstances in which we can regulate airport operators through an economic licence. In particular, airport operators must be subject to economic regulation where they fulfil the Market Power Test as set out in CAA12. Airport operators that do not fulfil the Test are not subject to economic regulation. As a result of the market power determinations we completed in 2014 both HAL and GAL are subject to economic regulation.

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

Appendix B

HAL’s expansion programme costs

Introduction

1. Our policy on the regulatory treatment of early costs has been developed in the context of the relative stability of HAL’s forecasts of wider programme costs (which include early costs). These wider costs are critical to the overall affordability and financeability, and the successful delivery of capacity expansion as well as protecting the interests of consumers. This appendix summarises the evidence base which supports this approach. It provides both further detail on HAL’s £14 billion (in 2014 prices) estimate of the costs of expansion to deliver its M4 masterplan,[51] together with an overview of the independent reviews and assurance work that has been undertaken on HAL’s forecasts.

2. While HAL’s overall budget for capacity expansion has remained relatively stable it is important to acknowledge there have been changes in the scope of the infrastructure it intends to deliver in the period up to runway opening.

3. HAL’s £14 billion expansion cost estimate has been subject to two sets of external scrutiny:

   - the first review was undertaken by the IFS in March 2019[52] as part of the wider airport-airline governance arrangements for the Heathrow expansion programme; and

[51] This cost estimate represents HAL’s preferred Masterplan at the M4 exit programme gateway of the expansion programme, as at Q1 2019.

[52] Independent Fun Surveyor Report (IFS): Heathrow Expansion M4 Gateway Programme Estimate Review, March 2019.

- the second review was commissioned by the CAA and carried out by Arcadis in October 2019[53].

4. Each assessment was based on information provided by HAL at the time of the review and broadly concluded that the M4 masterplan met the requirement of the NPS to deliver additional runway capacity at Heathrow airport by 2030. However, each report made observations on HAL's cost estimates and highlighted that HAL's proposed schedule to runway opening in 2026 offered limited provision for delay despite the very challenging nature of the work necessary to deliver capacity expansion.

A breakdown of HAL's expansion cost estimate

5. A high level breakdown of the M4 masterplan estimate of the costs to be incurred to deliver expansion is set out in Table B.1. This estimate provides a view of expansion costs up to 2026, HAL's proposed runway opening date.

Table B.1: Breakdown of HAL's expansion cost estimate

Category C expansion costs (£m, 2014 prices)	Total costs
Enabling works	**899**
Earthworks	**1,635**
Utilities	**1,434**
Rivers	**595**
Roads	**1,947**
Runways and taxiways	**1,042**
Landscape	**199**
Programme specifics	**6,618**
Total	**14,369**

Source: Table 19 of the Arcadis report.

[53] Arcadis HAL Masterplan Review, Step 0 report, October 2019. Step 0 is aligned to HAL's proposed runway opening date of 2026 as per the M4 Masterplan. We intend to publish the Arcadis report on our website early in 2020.

6. HAL's £14 billion M4 masterplan cost estimate includes an overall risk provision of 28%.[54] We note that a large proportion of costs have been reported as programme specific costs. These are programme level costs that facilitate the delivery of the Heathrow expansion programme that HAL has said cannot be directly attributed to the programme task orders (roads, landscape etc.). Programme specific costs include spending associated with property acquisition, noise insulation, Category B costs, T5+, T1 baggage prolongation and other operational and community spending.

7. Separately, we have received estimates from HAL which set out early Category C costs relating to its Scenario 1 that are included in the £14 billion cost estimate to open the runway. The early Category C cost estimate includes the following costs;[55,56]

- major commercial acquisition costs in the region of £240 million;
- commercial disturbance costs of around £460 million;
- residential compensation costs of around £380 million;
- costs associated with seeking agreement in the region of £60 million;
- design, pre-construction planning and phase 1 construction works in the region of £960 million;
- noise and vortex costs of around £40 million; and
- HAL has also included a risk and contingency provision of around £700 million.[57]

[54] See section 5.4.6 of the Arcadis October 2019 report.

[55] Sourced from a slide deck HAL shared at the Cost and benefits working group on the 28 March 2019. The figured quoted in the breakdown of early Category C costs were provided by HAL on a nominal basis.

[56] HAL provided the breakdown of total early Category C costs on a nominal basis (total early Category C costs £2.8 billion nominal). All figures presented are high-level estimates and have been rounded.

[57] Based on 40% risk and contingency on property costs and 25% applied to non-property early Category C costs.

Summary of expert reviews

8. The IFS was commissioned to provide independent review and assurance to stakeholders on whether HAL's cost estimate is affordable, achievable and represents value for money. The IFS considered that:

- the budget proposed by HAL is realistic and appropriately covers the delivery of the scope of work presented;
- the cost estimate incorporates an overall risk provision of around 28%, which the IFS considers is an acceptable level of contingency for this stage of the programme; and
- the schedule of works in HAL's masterplan offers a deliverable critical path through to runway opening in 2026. However, the IFS also noted that HAL has included limited provision for delay and it considered that a delay of between 12 to 24 months could easily occur, primarily linked to the planning, enabling works and earthworks stages.

9. The CAA commissioned Arcadis to assess whether HAL's masterplan up to 2026 is operable, deliverable, timely, reasonable and reliably costed and is in the interest of consumers. As part of its review, Arcadis considered the approach that HAL had taken to develop its cost estimate and whether there were any gaps in the scope of the cost estimate. Arcadis's key findings were that:

- on balance, HAL's cost estimate up to 2026 is reasonably and reliably costed;
- the cost estimate includes a risk contingency which meets previous recommendations from the IFS and is in line with industry benchmarks;
- HAL's approach to the structure and methodology of compiling the cost estimate reflects industry best practice;
- the level of quantification and benchmarking has increased since previous cost estimates leading to an increased level of cost certainty. For example, Arcadis noted that around 66% of HAL's direct costs have been benchmarked, market tested or calculated which it considers is generally

reasonable at this stage. However, Arcadis recommended that this could be improved for some actives including utilities and enabling works as the design develops and more detail becomes available;

- HAL has incorporated benchmark data from other sectors such as the Environment Agency, Highways England, London Underground, the rail and water sectors, utilities, other international airports and consultant databases, as well as benchmarks from previous Heathrow projects;
- costs included within HAL's estimate are based on 2014 prices[58] but, since 2014, there has been an overall positive inflation rate for construction and general price levels in the UK and London. So, when HAL adjusts its estimate to reflect current prices, the total cost estimate will increase; and
- no allowance has been included in HAL's expansion cost estimate for its Communities Compensation Fund ("CCF").

CAA observations

10. In chapter 1 we outline the level of early costs (being spending incurred by HAL before the outcome of HAL's DCO application is known) that we consider is in the interest of consumers. It is important to recognise that these early expansion costs are a subset of HAL's overall expansion programme cost estimate of £14 billion. Both the IFS and Arcadis regard HAL's expansion programme cost estimate is reasonable given the current maturity of the programme.

11. We note that the £14 billion estimate includes a number of assumptions about the costs of the expansion programme. There remain significant uncertainties about these assumptions including the final approach to, and costs of, surface access arrangements and, in particular, the Western Rail Access scheme. We will consult further on surface access arrangements and costs once HAL has provided further information on these matters.

[58] In line with the reviews undertaken by the Airports Commission.

12. We also understand from HAL that it is considering whether the CCF, which is set out in the NPS, will be treated as a separate "ring-fenced" fund. If so, any costs associated with the CCF[59], will not be included in HAL's expansion cost estimate because these costs will not be recovered through airport charges. Discussions on the approach and regulatory treatment of costs associated with the CCF are ongoing.

13. HAL's £14 billion cost estimate quoted in this appendix is based on 2014 prices, so the overall level of programme costs will be higher than £14 billion in nominal prices. HAL will shortly produce revised cost forecasts in its initial business plan ("IBP"), which is part of the process for setting its next main price control (H7). These IBP forecasts will be in 2018 prices.

14. As well as capital expenditure on capacity expansion, HAL plans to spend significant amounts on maintaining and updating its existing assets in the period to 2026. We will provide an assessment of all its spending plans as part of the price control review process.

15. The M4 masterplan also sets out HAL's plans to expand airport capacity to 2050, including expanding terminal capacity. These plans have also been reviewed by the IFS and Arcadis and we intend to publish the Arcadis review of the post 2026 M4 masterplan early in 2020.

[59] The NPS considered that a sum of £50 million per annum could be an appropriate amount for the CCF at an expanded Heathrow airport.

Appendix C

Investigating congestion premiums and consumer benefits

Introduction

1. This appendix summarises the sources of evidence we have considered in respect of the consumer benefits expected to arise from the expansion of Heathrow airport referred to in chapter 1.

2. 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 consumers experiencing higher airfares, reduced choice and lower service quality. At the same time, we are mindful that the quantification of these benefits is not straightforward and is subject to significant uncertainty.

3. Evidence has been put forward in the form of reports prepared for several parties that attempts to quantify these benefits. Several reports focus on congestion pricing, which, in this context is the impact that the capacity constraint at Heathrow airport has on air fares. We refer to this increase as a “scarcity rent”. This represents the increase in passenger fares that result from capacity at Heathrow airport being constrained, compared to the level of fares that would prevail in the absence of the constraints. Scarcity rents are a function of demand being more than the capacity available.

4. While our consideration of consumer benefits focuses on congestion pricing, we recognise that there are likely to be other consumer benefits associated with expansion, such as the benefits associated with greater choice of routes or improved resilience at the airport.

Summary of evidence

Institute for Transport Studies (July 2019)

5. The CAA commissioned an independent review of the body of evidence on scarcity rents by the Institute of Transport Studies ("ITS"). Although the review did not include a separate estimate of the level of scarcity rents arising at Heathrow, ITS considered that the work by Frontier Economics for example, was an important addition to the body of evidence on scarcity rents. ITS concluded that scarcity rents of some scale are likely to arise at Heathrow airport, that these were unlikely to accrue to HAL or to the Government, and hence were likely to accrue to airlines operating at Heathrow. ITS further considered that the level of scarcity rents earned would be likely to vary depending on the characteristics and market position of the airline in question, with some airlines potentially earning limited or no scarcity rents. [60]

Frontier Economics (May 2019)

6. HAL commissioned Frontier Economics to produce an estimate of the congestion premium at Heathrow based on a triangulation of three sources of evidence;
   - a "top down" analysis of passenger volumes;
   - an econometric analysis of fare data; and
   - an analysis of slot transfer prices.
7. Frontier Economics estimated a congestion premium (i.e. a total amount of scarcity rents earned by airlines operating at Heathrow) of around £2 billion each year. It also considered that "*with greater capacity … the premium will be much reduced, if not eliminated in the early years [of the operation of new capacity]*". It also noted, however, that "*even if the additional capacity*

[60] ITS (2019), "Independent Peer Review of Recent Research on the Existence of Scarcity Rents at Heathrow", July, p7. This report is published alongside this consultation, see: www.caa.co.uk/CAP1871a.

is sufficient, it will take time to ramp up use of the new runway", which could imply that expansion will not immediately drive the full quantum of estimated consumer benefits.[61]

RBB Economics (February 2019)

8. RBB Economics ("RBB"), on behalf of IAG, produced a critique of the reports produced by Frontier Economics (in December 2017) and FTI Consulting (in October 2018) in respect of scarcity rents. RBB said that the Frontier Economics analysis has "fatal shortcomings"[62] in the following respects:

- the basis of competition between airlines at Heathrow is "city pair routes", suggesting that Frontier Economics was incorrect to assume Heathrow represents a single competitive airline market; and
- the shortage of available slots does not imply that airlines cannot offer more seats on the city pairs on which they compete.

9. RBB considered that there is no evidence to suggests that there are scarcity rents being earned at Heathrow.

FTI Consulting (October 2018)

10. We commissioned FTI Consulting ("FTI") to critique analysis that had previously been put forward by Frontier Economics on behalf of HAL in December 2017[63] and IAG's response to this analysis. FTI's report highlighted certain methodological shortcomings with the Frontier Economics' December 2017 analysis (referred to below). The report suggested that further consideration of the level of scarcity rents at Heathrow, through more detailed econometric analysis, may be valuable. It is noteworthy that the principal shortcomings identified by FTI were at least partly addressed in Frontier's subsequent (May 2019) report: – for example,

[61] Frontier Economics (2019), "Estimating the Congestion Premium At Heathrow", May, p9 https://www.caa.co.uk/uploadedFiles/CAA/Content/Standard_Content/Commercial_industry/Airports/Economic_regulation/H7/Estimating%20the%20congestion%20premium%20at%20Heathrow.pdf

[62] RBB Economics (2019), "The effect of congestion at Heathrow Airport", Section 2.1, February.

[63] Frontier Economics (2017), "Competition & Choice", December.

the latter no longer relies exclusively on an econometric analysis of fares, and the econometric analysis that is conducted no longer relies exclusively on an airport specific dummy variable as a basis for estimating scarcity rents (although this remains Frontier's preferred approach). The FTI report did not recommend a particular value for the level of the congestion premium at Heathrow, although it considered that scarcity rents could, in principle, apply in the current context.

SEO Economic Research (2017)

11. This study commissioned by Airports Council International Europe (a professional association of airport operators) provided an estimate for the congestion premium across all European airports. The study was noted as a relevant piece of evidence by our advisors, FTI. The premium was estimated at €2.1 billion (approximately £1.8 billion) each year in 2014 and was projected to grow to €6.3 billion (approximately £5.4 billion) by 2035. The study noted that the congestion premium at Heathrow airport would not be as high as this figure, since it is unlikely that the sum of scarcity rents at all other European airports is zero.

Frontier Economics (December 2017)

12. HAL commissioned a report from Frontier Economics in December 2017, which provided:

- observations on the DfT's forecasts and economic appraisal in respect of capacity expansion at Heathrow;
- an estimate of the extent to which fares are elevated at Heathrow as a direct result of existing capacity constraints; and
- a comparative estimate of the connectivity and 'catalytic' (trade and foreign direct investment ("FDI")) benefits of expanding Heathrow and Gatwick.

13. This analysis did not attempt to capture the consumer benefit, but instead focussed on the wider benefits of expansion at Heathrow airport. The estimation of the extent to which fares are elevated at Heathrow due to

capacity constraints was based on an econometric analysis of passenger fares at Heathrow.

EY (September 2017)

14. HAL commissioned EY to present evidence in on the affordability of airport charges at Heathrow. As part of this work, EY considered the profitability of airlines' collective operations at Heathrow and estimated this to be around £6.7 billion per annum. Again, the level of the congestion premium at Heathrow airport would not be as high as this figure, since, if the scarcity rents were to be above this level, it would imply that airlines' operations at Heathrow airport would be loss making in the absence of capacity constraints, which does not seem plausible.

Airports Commission (2015)

15. International Transport Forum ("ITF")/SEO on behalf the Airports Commission carried out analysis into the competition benefits that would arise from expansion of Heathrow airport[64]. They concluded that despite potential increases in the average per passenger charges levied on airlines, fares would be likely to remain unaffected or even fall. This conclusion was based on their view that significant scarcity rents were accruing to airlines operating at Heathrow airport if it remained constrained, which would allow it to absorb any rise in charges rather than pass it on to passengers through increased fares.

Additional evidence

16. In addition to the published material that we discussed in this chapter, we have access to other sources of evidence and information, including a number of studies provided to us on a confidential basis. These studies concluded that scarcity rents at Heathrow airport could be between £0.9 billion and £2.5 billion per annum.

[64] Airports Commission (2015), "Final Report", July 2015, paragraph 6.49.

CAA observations

17. We consider that there are a wide range of approaches to estimating the existence and scale of the congestion premium at Heathrow airport. Each approach has advantages and difficulties and we note that some of the empirical estimates of congestion costs are very much an upper bound on what might be a plausible estimate of the congestion costs at Heathrow airport. Table C.1 below summarises the range of estimates we have considered.

18. Based on the conclusions of our advisors, ITS and FTI, we consider that it is likely that some airlines are earning scarcity rents at Heathrow airport. The range of evidence we considered points towards an estimate between £0.9 billion and £6.7 billion per annum. Given the difficulties associated with some of these estimates we have decided to adopt a conservative approach to these estimates and have focussed on the lower quartile of this range (i.e. £0.9 billion-£2.5 billion per annum) for the purposes of our assessment of scenarios in chapter 1.

Table C.1: Summary of evidence

Source	Description	Estimate of congestion premium
University of Leeds (July 2019)	Critical review of existing studies	n/a
Frontier Economics (May 2019)	Empirical estimate	£2.0bn-£2.4bn p.a.
RBB (February 2019)	Critical review of existing studies	n/a
FTI Consulting (October 2018)	Critical review of existing studies	n/a
SEO Economic Research (2017)	Empirical estimate	£1.8bn-£5.4bn p.a.
EY (September 2017)	Estimate of airline profitability	£6.7bn p.a. (upper bound)
Airports Commission (2015)	High-level view of scarcity rents	n/a
Additional evidence considered	Empirical estimate	£0.9bn-£2.5bn p.a.

Source: CAA

Appendix D

Setting a recovery cap for Category B costs

Introduction

1. This appendix provides further detail on our approach to establishing the £500 million recovery cap for HAL's Category B costs referred to in chapter 2.

2. We set out our approach to establishing a recovery cap in the July 2019 Consultation.[65] We said that we would assess HAL's overall revised budget (currently c. £530 million[66]) for reasonableness, including building on the findings of the report to HAL prepared by Steer as well as other evidence including the findings of the IFS and the IPCR. Our technical advisors (Arcadis) supported our work on this assessment.

Our approach

3. Arcadis undertook reviews of:

- the findings of HAL's report by Steer (May 2019);
- the findings of the IFS's reviews (March 2019);
- the reviews by the IPCR of actual costs incurred by HAL in 2016 and 2017; and
- the actual Category B costs incurred by HAL to date.

4. Each of the Steer and the IFS reviews found that HAL's total budget of £530 million (in nominal prices) for Category B costs appeared to be reasonable.

[65] See paragraph 1.23 ii) of the July 2019 Consultation.

[66] Nominal prices

5. We also undertook an analysis of HAL’s actual spending against its total Category B budget of £530 million. This analysis noted that, by the end of the second quarter of 2019, HAL had underspent by 7% against this total budget. However, we noted that this level of underspend reflects the fact that HAL has aligned its budget to actual expenditure in 2016, 2017 and the first 10 months of 2018. The level of underspending in Q1 and Q2 of 2019 was 14% and 11% respectively. A further review of the actual costs incurred by HAL in 2018 revealed underspending of 11% against the budget in place at the start of 2018. This suggests that HAL has consistently underspent against its Category B budget.

6. In its reviews of HAL’s 2019 Category B costs, the IFS commented that spending the budgeted level of costs may be challenging due to the level of underspend observed to date.

7. We have extrapolated the level of underspend observed during the first half of 2019 (c.13%) to the budget for the second half 2019 through to the end of 2021. This suggests that total Category B costs could reasonably be projected to be in the region of £480 million (in nominal prices). This represents an overall reduction of c. 9% to HAL’s total budget for Category B costs.

8. However, we note that HAL’s commentary on its actual spending compared with its budget identified some costs of discrete activities which have been deferred to later periods. Adding back these costs to the £480 million projection described above suggests that total Category B costs may be reasonably expected to be in the region of £494 million (in nominal prices), 6.8% below the Category B costs budget.

9. In this light, we have decided initially to set the recovery cap at £500 million (in nominal terms). This is 5.6% below HAL’s budget and is consistent with the trend of spending seen to date while providing for a reasonable adjustment in respect of the costs that we are aware that HAL has deferred.

10. As set out in chapter 2, we do not expect to change the level of the cap unless there is a material change in circumstances that suggests a compelling reason for change and where HAL can demonstrate that increasing expenditure is both efficient and in the interests of consumers.

11. As noted in chapter 2, any request to adjust the recovery cap should be made directly to the CAA, allowing sufficient time for the CAA to consider the request. Each of HAL and airlines should have the opportunity to make representations on whether the recovery cap should be adjusted and should have discussed these matters bilaterally before making representations to the CAA.

12. The CAA will make the final decision on any modifications to the recovery cap.

Appendix E

Proposal for the treatment of early expansion costs in HAL's RAB

Introduction

1. This appendix describes how the iH7 closing RAB (HAL's RAB at the end of the iH7 period on 31 December 2021) will be adjusted to reflect the addition of capital expenditure on expansion undertaken by HAL in the years up to the end of 2021. This appendix assumes throughout that the DCO outcome will be known at the start of the H7 price control period. If this is not the case, further consideration would be needed in respect of setting the H7 opening RAB.

Timing of the recovery of HAL's early expansion costs

2. The July 2019 Consultation noted our previous position that Category B costs[67] should only be added to the RAB after the outcome of HAL's DCO application is known. That consultation did not set out a view on the appropriate timing of additions of early Category C costs to the RAB.[68] Instead, it noted that we would need to confirm the timing of recovery for these costs subsequently.

3. In chapter 2 we outline our proposal to finalise the level of efficiently incurred early Category B and early Category C costs to be added HAL's RAB after the outcome of its DCO application is known.

4. In addition, our current policy is that each category of cost will earn an IDC from the date the costs are incurred until the date they are finalised in

[67] Excluding £10 million per annum of Category B costs that will be treated as fast money and be recovered in-year rather than being added to the RAB.

[68] Paragraph 2.28 of the July 2109 Consultation indicated that "it will also be appropriate to adopt similar arrangements [to Category B costs] for the return on costs from the date they are incurred until the decision on HAL's DCO application".

the RAB at a rate that will vary according to the outcome of the DCO process, as set out in chapter 2.

5. This approach reflects our preference for the consistent treatment of Category B and early Category C costs, where such treatment is both appropriate and practicable. It should also support the financeability of HAL's early spending.

Treatment of early expansion costs during iH7

6. In our April 2018 Consultation[69] we set out our initial view of the allowed revenues for the price control to apply during 2020 and 2021 (the interim price control, iH7). This was prior to the agreement of the commercial deal between HAL and airlines which was used to underpin our decision on the iH7 price control[70]. The indicative price path we outlined was based on an assumption that around £650m of expansion related costs would be added to the RAB in this period, and that HAL would earn an allowed return of 4.83% and RAB depreciation on these costs.

7. The commercial deal specifies a price path that is consistent with the allowed return, capex forecast, and depreciation profile set out in the April 2018 Consultation.

8. In the November 2019 Notice of licence modifications, we indicated that the closing iH7 RAB would be based on the capex and depreciation profile set out in Appendix C of our April 2018 Consultation. We did not explicitly set out how we would calculate the opening RAB for H7, given that our policy proposals for expansion-related costs were still in development and being consulted on at that stage.

9. Historically, we have adjusted the opening RAB for the next price control period for the difference between the capex allowances set at the start of

[69] Economic regulation of capacity expansion at Heathrow: policy update and consultation ("the April 2018 Consultation"): see www.caa.co.uk/CAP1658.

[70] Economic regulation of Heathrow Airport Limited from January 2020: notice of licence modifications (the November 2019 Notice): see www.caa.co.uk/CAP1852.

the previous price control period and actual, efficiently incurred capex in that period.

Updated guidance to reflect our proposed policy

10. We propose to reconcile these two approaches by using a true-up mechanism as part of the H7 price control review and final determination to bring these two approaches together. This could be implemented as set out in the following paragraphs.

11. If HAL's DCO application is successful, the true-up mechanism would need to reflect:

- the 5% uplift on Category B costs up to £265 million (excluding the £10 million per annum treated as "fast money" in previous price controls); and
- the IDC for Category B and early Category C costs proposed in chapter 2.

12. If HAL's DCO application is unsuccessful, the true-up mechanism would need to reflect:

- the 15% disallowance on Category B costs up to £265 million (excluding the £10 million per annum treated as fast money); and
- the IDC for Category B and early category C costs proposed in chapter 2.

13. This true-up mechanism would involve a number of steps, as follows:

Step 1 – the iH7 closing RAB will be recalculated as follows:

- the iH7 opening RAB; PLUS
- the CAA's view of efficient non-expansion related capex (i.e., excluding all expansion-related capex); LESS
- depreciation of the iH7 opening RAB; LESS
- depreciation of efficient non-expansion related capex.

Step 2 – the present value of CAA's view of efficiently-incurred expansion related capex during iH7 will be calculated based on:

- the CAA's view of efficiently incurred Category B and early Category C costs;
- the 5% uplift or 15% disallowance to efficiently incurred Category B costs depending on the outcome of HAL's DCO application;
- an uplift to reflect accrued IDC for Category B and early Category C costs corresponding to our policy proposals set out in Tables 2.1 and 2.2 in chapter 2 of this document; and
- the observed rate of the retail prices index ("RPI") inflation over this period.

Step 3 – the present value of depreciation and allowed return recovered by HAL through airport charges over this period will be calculated based on:

- an allowed return of 4.83%, in line with the figure proposed in our April 2018 consultation[71]; and
- the observed rate of RPI over this period.

Step 4 – the iH7 closing RAB will be calculated as:

1. the re-calculated iH7 closing RAB from Step 1 above; PLUS
2. the present value of expansion related capex from Step 2 above; LESS
3. the present value of expansion related cashflows recovered by HAL through airport charges during iH7 from Step 3 above.

14. Expansion related capex should be treated separately from both non-expansion related core and development capex.

[71] Economic regulation of capacity expansion at Heathrow: policy update and consultation ("the April 2018 Consultation"): see www.caa.co.uk/CAP1658, Appendix D, paragraph 14.

15. We welcome views on our proposed approach to adjusting the closing iH7 RAB to reflect our policy proposals for Category B and early Category C costs, as set out above.

Appendix F

Draft licence condition on early Category C costs

Introduction

1. This appendix provides further detail on a possible draft licence condition on early Category C costs as described in chapter 3. We are seeking stakeholders' views on the draft licence condition set out below.

2. This draft condition has been framed in a manner that is consistent with our long held position on capacity expansion[72] and as such, the obligations are framed so as only to apply if the licensee undertakes capacity expansion activities in accordance with the planning process and Airports National Policy Statement. Specifically, it does not mandate HAL to undertake capacity expansion.

3. In order to target the aspects of the expansion programme where there are greatest benefits to consumers from the regulation of HAL's conduct, the obligations are focussed on only two dimensions of HAL's approach. These are:

   - the timeliness of the delivery of expansion; and
   - the need for consumers not to be exposed to the risk of an excessive level of potentially sunk costs.

4. Following the analysis in chapter 1, this draft condition refers to a runway opening date of 2029 and construction spending of not more than £1.6 billion before the grant of a DCO. The condition does not attempt to define the activities that the licensee should concentrate on and the scenario on which it is based is not a detailed project plan. The underlying activities are

[72] 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 consumers experiencing higher airfares, reduced choice and lower service quality.

not sufficiently certain to form part of the licence condition and are more appropriately dealt with through appropriate governance processes.[73]

5. Taking this approach allows the condition to set out a fairly simple obligation that in the circumstances where the licensee is carrying out expansion, it should do so in a manner consistent with a runway opening date not later than 2029 and not incurring more than £1.6 billion of construction costs prior to the determination of its DCO application.

6. Recognising the need for a flexible approach so that our regulatory framework can adapt to new information which may lead to changes in the preferred scenario set out in chapter 1, the draft condition contains a process that provides for the CAA to direct modifications in limited circumstances as permitted by section 21(3) CAA12.

7. If stakeholders consider that the licence should also explicitly refer to wider governance for expansion, then, separately we could amend condition F.1.1 (a)(i) of the licence to require HAL to consult relevant parties on:

> "*its proposals for future investment in the short, medium and long term****, including its proposals for the early costs of construction of a third runway and associated infrastructure,*** *that have the potential to affect those parties.*"

8. A draft of the possible text for a condition adopting this approach is set out below.

[73] See chapter 2 for further information.

A potential licence condition: Construction Costs in respect of Expansion

Condition [ ]: Construction Costs in respect of Expansion

1. Where the Licensee is proposing to undertake Expansion, except where the CAA makes a direction in accordance with paragraph [7], the Licensee shall undertake a programme of early works aimed at:

   (a) commencing the provision of airport operation services using a third runway and associated works at the Airport to commence not later than 2029; and

   (b) incurring no more than £1.6 billion (in 2018 prices) of Construction Costs prior to the determination of any Application for Development Consent made by the Licensee.

2. Nothing in this condition shall require the Licensee either to undertake Expansion or carry out specific works in relation to Expansion.

3. If, prior to the grant of development consent to permit it to undertake Expansion under the Planning Act 2008, there has been a material change of circumstances such that it reasonably appears to the CAA that it may be appropriate for the obligations on the Licensee set out in paragraph 1 to be amended in the interests of consumers, the CAA may modify the date specified in paragraph [1(a)] or the level of Construction Costs specified in paragraph [1(b)] by issuing a direction to and the Licensee shall comply with such obligations as amended.

4. The CAA may issue a direction of the kind described in paragraph [3] of this condition only after complying with paragraphs [5] to [6] of this condition.

5. Before issuing a direction under this condition, the CAA will publish on its website and give the licensee, airlines and the AOC a notice that:

   (a) describes the material change of circumstances such that appears to the CAA to make it appropriate for the CAA issue the notice;

   (b) sets out the modification it proposes and the date from which the CAA proposes that such modification shall have effect;

(c) explains why in the CAA's opinion the modification is necessary in the interests of users of air transport services; and

(d) specifies a period of at least [14] days from the date of the notice within which any representations with respect to the proposal may be made.

6. The CAA will consider any representations that are duly made in response to any notice under paragraph [5] of this condition and not withdrawn before deciding whether to proceed with the modification specified in that notice.

7. Having complied with paragraphs [5] and [6], the CAA may make the modification in a direction issued for the purposes of this condition that sets out the modification to the Licensee's obligations in paragraph [1] of this condition and specifies the date from which it is to have effect (or the mechanism by which that date is to be determined).

8. In this condition:

(a) "Expansion" means the expansion of the capacity of the Airport in the manner provided for in the Airports National Policy Statement;

(b) "Airports National Policy Statement" means the Airports National Policy Statement designated by the Secretary of State under section 5(1) of the Planning Act 2008 on 26 June 2018;

(c) Construction Costs means costs incurred by the Licensee in relation to the construction of infrastructure for Expansion except those associated solely with seeking planning permission for Expansion by means of an Application for Development Consent; and

(d) Application for Development Consent means an application made, or intended to be made, by the Licensee for an order granting development consent to permit it to undertake Expansion under the Planning Act 2008.