Consumers and Markets Group

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

CAP 1782

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About this document

This document follows on from the consultations that we published on the regulatory framework to support capacity expansion at Heathrow airport in January, June and December 2017 and April and October 2018. It consults further on the development of the regulatory framework and includes:

- our proposed approach to taking into account the financeability of Heathrow Airport Limited's (HAL's) activities over the period of capacity expansion;
- our latest thinking on the development of capital efficiency incentives;
- the proposed next steps for introducing a new licence condition to further promote economy and efficiency on the part of HAL; and
- further thinking on the issues that may be raised by alternative arrangements for delivering new capacity.

Views invited

We welcome views on the issues raised in this document and, in particular, those discussed in the executive summary and highlighted in chapters 1 to 4.

Please e-mail responses to economicregulation@caa.co.uk by no later than 24 May 2019. 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 Rob Toal (Robert.Toal@caa.co.uk).

Update and summary

Introduction

1. In October 2016, the Government announced that its preferred option for the expansion of airport capacity in the south east of England was the Heathrow "Northwest runway". The CAA has consistently stated that additional runway capacity in the south east of England will benefit air passengers and cargo owners. The timely delivery of more aviation capacity is required to prevent future consumers[1] experiencing higher airfares, reduced choice and lower service quality.

2. Over the course of 2017 and 2018, we issued a series of consultations on the core elements of the regulatory framework to support capacity expansion at Heathrow.[2] The most recent of these was issued in October 2018[3] and set out:

   - an update on our approach to aligning the regulatory timetable with the overall timetable for the development of capacity expansion;
   - detailed consideration of a possible new licence condition to further promote economy and efficiency on the part of HAL;
   - details of our approach to addressing the issues that may be raised by alternative arrangements for delivering new capacity; and
   - an update on our surface access policy.

3. HAL has also continued its work on the wider programme, including engaging with airlines and developing its proposals for an overall masterplan for capacity expansion. We strongly welcome the recent focus that HAL has adopted in terms of developing its forecasts of masterplan capital expenditure broadly consistent

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

[2] These documents are available on the H7+ page of our website here and include CAP 1510 ("the January 2017 Consultation"), CAP 1541 ("the June 2017 Consultation"), CAP 1610 ("the December 2017 Consultation) and CAP 1658 ("the April 2018 Consultation").

[3] See CAP 1722 ("the October 2018 Consultation")

with its 2017 Westerly Option estimates. Nonetheless, there remain important issues to resolve, including in respect of the overall timetable and agreeing efficient levels of expenditure in the period before the Secretary of State (or designated government minister) decides on HAL's application for development consent. As we explain below, we will consider these issues further in our next consultation paper.

4. Our Section 16 report on airport/airline engagement in September 2018 also acknowledged HAL's work in support of the process that led to parliamentary approval of the Airports' National Policy Statement, its work on establishing a new engagement governance protocol with airlines, and its work to reflect the interest of consumers in its masterplanning processes. [4]

5. This document builds on our earlier consultations and the responses we received to them, and sits alongside our Section 16 work in monitoring and encouraging effective engagement between HAL and airlines on the development of plans for capacity expansion at Heathrow.

Main issues raised in this consultation

6. Chapter 1 of this document explains how we intend to assess the financeability of HAL's activities in setting the price control that will cover the period of capacity expansion. This will help to ensure that HAL can raise the relatively large amounts of new finance that will be necessary to allow capacity expansion to proceed, which in turn should deliver benefits to consumers in terms of greater choice, less delay and lower fares. It will also allow us to set the price control in a way that provides the best opportunity for the lowest overall efficient costs of capacity expansion. This will involve developing incentives for HAL's management to deliver capacity expansion efficiently, while calibrating these incentives in a way that does not create undue risks for HAL or raise its financing costs in a way that would increase prices for consumers.

[4] See our "Section 16" reports at:

7. In several previous consultations, we have discussed the possible introduction of prospective ("*ex ante*") efficiency incentives for HAL's capital expenditure. These could provide stronger efficiency incentives for HAL, as it would bear a predetermined share of any capital expenditure under- or over spend. Our current approach, by contrast, relies primarily on retrospective ("*ex post*") reviews to investigate possible cases of inefficiency and, where there is sufficiently clear evidence, to decide whether to disallow any expenditure from HAL's regulatory asset base ("RAB"), which is used to calculate its price control.

8. Chapter 2 discusses how strengthening the incentives on HAL for the efficient delivery of capital expenditure is particularly important in the context of capacity expansion. The capital programme that HAL is proposing is very large and it will be in the interests of consumers and airlines to incentivise HAL to deliver expansion in a way that is both efficient and affordable. As noted above, we will also need to ensure that our price control proposals are financeable so that capacity expansion can be delivered with efficient financing costs and, so, the lowest overall efficient costs. Given the risks associated with cost inflation in a complex infrastructure programme, we will need to calibrate any *ex ante* capital expenditure incentives in a way that is integrated with both our assessment of HAL's financeability and the risk and reward package.

9. We build on our earlier consultations on these matters, which describe the key findings of a consultancy study that we commissioned to help understand how *ex ante* incentives might be implemented and set out our views on how we should take forward the development of these incentives.

10. Chapter 3 discusses a possible modification to HAL's licence to further the interests of consumers by introducing a new condition promoting economy and efficiency in the operation, maintenance and timely development of Heathrow airport. It discusses the responses to our previous consultations on these matters, sets out an amended draft licence condition and suggests the next steps in our process, including a statutory consultation to modify HAL's licence in the summer (alongside the modifications we will make to implement the arrangements for the interim period of 2020 to 2021).

11. Our approach to alternative delivery arrangements is discussed in chapter 4. We consider the responses we received on this issue to the October 2018 Consultation and assess the conclusions of the review by Arcadis of the proposals being developed by the Arora Group ("Arora"). Based on the evidence available, we consider its proposals are not sufficiently detailed at this stage for us reasonably to apply our initial tests to decide whether to progress work on developing the regulatory regime to accommodate these proposals. Nonetheless, we remain open to further engagement with Arora and other stakeholders on these matters and have published the Arcadis report alongside this consultation.

Other developments

The interim price review

12. The current regulatory controls on the charges and services that HAL offers to airlines are due to expire on 31 December 2019 and already include a one year extension to the previous Q6 price control.

13. In February 2019, we published a consultation[5] on our initial proposals for the interim arrangements to apply after the end of the Q6 price control (in December 2019) for 2020 and 2021. We examined the commercial arrangements for this period that have been agreed by HAL and certain airlines, including our initial assessment of whether these provide appropriate protection for consumers.

14. Responses to this consultation are due by 23 April 2019 and we will issue a further update on these matters in July 2019.

Working paper on ring-fencing

15. In April 2019, we intend to publish a working paper setting out the options the CAA is considering for providing further assurance that HAL operates in a financially resilient manner and that risks to consumers arising from financial distress are appropriately mitigated. The paper will consider options for possible changes to the financial resilience and ring fencing provisions in HAL's licence

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that may be appropriate given the scale and challenges of the development of new capacity at Heathrow airport. It will develop further the thinking that we set out in the June 2017 and December 2017 Consultations.

Enhanced Engagement

16. Our work on capacity expansion at Heathrow has been conducted in the context not only of our regulatory oversight of HAL under the Civil Aviation Act 2012 ("CAA12"), but also a request from the Secretary of State under section 16 of the Civil Aviation Act 1982. That request asked us to review and advise on how well HAL is engaging with, and responding to, the airline community on its plans for capacity expansion at Heathrow and whether this engagement is appropriately reflecting the interests of consumers in line with the CAA's general duty under the CAA12. Our next update will be provided to DfT in April 2019.

Next steps

Category B and early Category C costs

17. We intend to publish a consultation on the regulatory treatment of HAL’s Category B (planning) costs and early Category C (construction) costs in late April or early May 2019. This will build upon the issues identified in the April 2018 Consultation[6] and the report of the IPCR[7] into HAL’s 2016 and 2017 planning costs.

18. This consultation paper will address issues around the information that has recently emerged from HAL that shows significant increases in its estimates of these costs.

Working papers on surface access

19. We will publish a working paper on our surface access policy in May 2019. This document will consider the responses we received on these issues to the

[7] IPCR report

October 2018 Consultation and will set out our next steps with respect to surface access policy.

Workshops

20. We will also consider whether there might be advantages in holding workshops with key groups of stakeholders on issues such as the timetable for the development of the regulatory framework for HAL and the specification of incentives for cost efficiency.

Our duties

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

Structure of this document

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

- chapter 1 explains how we intend to take into account the financeability of HAL's activities over the period of capacity expansion;
- chapter 2 provides an update on our approach to developing capital efficiency incentives;
- chapter 3 sets out the proposed next steps on a possible new licence condition to be included in HAL's licence to further promote economy and efficiency; and
- chapter 4 describes our current thinking as to how we will approach alternative arrangements for delivering new capacity.

Chapter 1
Approach to Financeability

Introduction

1.1 HAL's next main price control will cover the period of capacity expansion and a very significant programme of capital expenditure. In setting this price control, we will consider the financeability of HAL's activities to help ensure it can raise the relatively large amounts of new finance that will be necessary to allow capacity expansion to proceed. This will both facilitate capacity expansion (which should deliver benefits to consumers in terms of greater choice, less delay and lower fares) and allow us to set HAL's price control in a way that provides for the lowest overall efficient costs of capacity expansion. This will involve identifying a package of incentive and other arrangements that:

- will incentivise HAL's management to deliver capacity expansion efficiently;
- are consistent with financeability;[8] and
- will not create undue risks for HAL that would inappropriately raise its financing costs and, so, prices to consumers.

1.2 In this chapter we:

- summarise the main issues on financeability raised by respondents to the April 2018 Consultation;
- explain how we will consider financeability throughout the price control process;
- present our latest thinking on gearing and capital structure;
- describe how we plan to test financeability in setting HAL's price control; and

[8] This approach should also enable us to satisfy our duty under section 1(3)(a) CAA12 to have regard to the need to secure that HAL is able to finance its provision of airport operation services at Heathrow (often referred to as the "financeability duty").

- discuss how we might adjust our approach to incentive arrangements or our assumptions on financing costs if substantial concerns about its financeability were to emerge during the price control review.

The April 2018 Consultation and respondents' views

1.3 The April 2018 Consultation described our approach to affordability and financeability. It discussed a range of financeability issues, including our assumptions on capital structures, and our approach to testing for debt financeability and the associated credit metrics.

1.4 In response, HAL highlighted the importance of the regulatory framework and the price control review in reasonably promoting its financeability, and noted that the CAA's decision making needs to be integrated. HAL referred by way of example to the CAA's work on:

- financial ring fencing, where it noted the risk that the CAA could inadvertently impose licence conditions that HAL is unable to comply with, such as in relation to credit ratings. It also noted Moody's downgrades of the outlook of several water companies as an example of the potential consequences of inappropriate changes to the regulatory ring fence licence conditions; and
- incentives, financial resilience, financeability and the cost of capital, with HAL noting that these are areas where the CAA's decision making should be properly integrated.

1.5 HAL also:

- supported the use of the notional approach to assessing financeability and supported this being the primary basis for assessing financeability;
- made recommendations on the specific credit metrics that the CAA should treat as core and secondary as part of the financeability assessment;
- suggested that the CAA should explicitly target a specific investment credit rating for HAL as this would support capacity expansion; and
- said we should also use this rating in our financeability assessment and any proposals for the cost of debt indexation.

1.6 Airlines focussed mostly on affordability. Nonetheless, there was some cautious support for a “twin track” approach to financeability assessment and acknowledgement that HAL’s actual financial structure is best determined by its management. There was also support for setting a price control consistent with HAL retaining access to costs effective investment grade financing.

1.7 Other respondents raised concerns about the financial viability of capacity expansion and the possible need for state support. They made various suggestions, including that gearing should be capped and that we should assess the incremental impact of expansion (relative to a two-runway future for HAL).

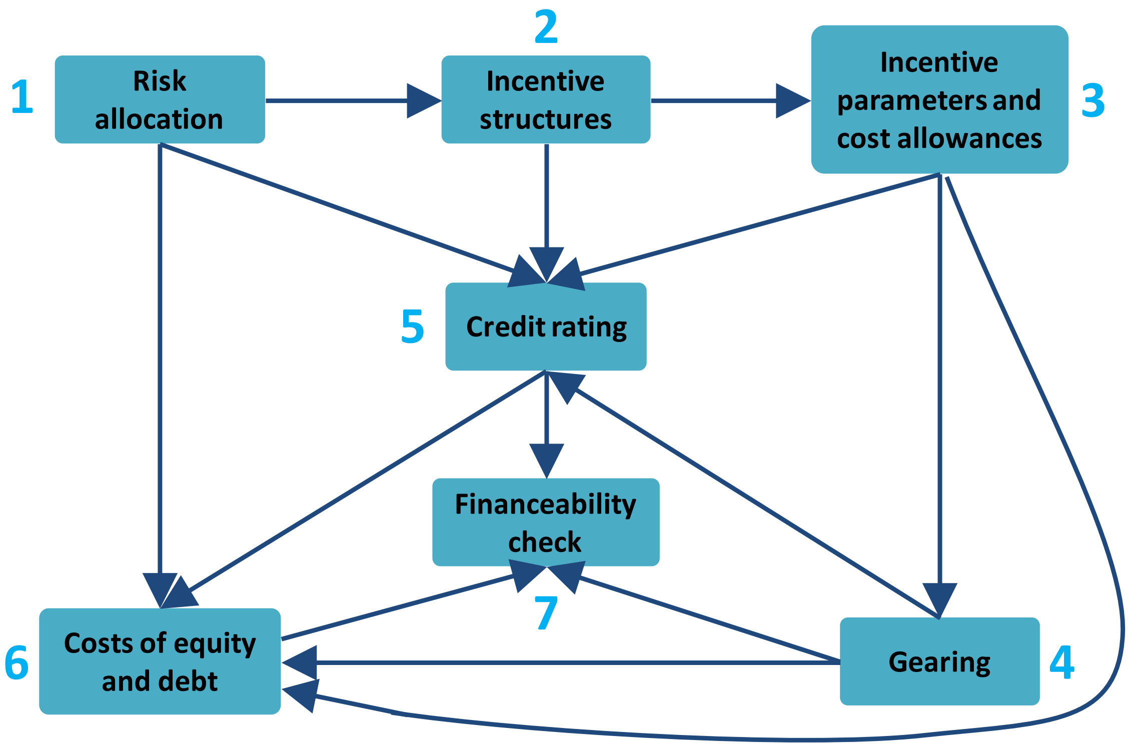
Incorporating financeability throughout the price control

1.8 We intend to take a holistic approach to financeability, which will build on the approach we set out to financeability in the April 2018 Consultation. Such an approach will be consistent with the views of respondents in so far as it:

- captures HAL’s comments about promoting capacity expansion, taking an integrated approach; and
- supports airlines concerns about the importance of overall efficiency and affordability.

1.9 A key driver of HAL’s financeability during capacity expansion will be the delivery by HAL’s management of capacity expansion in a way that is efficient and represents value for money. This will be an important assumption underlying our assessment of HAL’s financeability and we will build on this to take account of a range of factors, as illustrated in Figure 1 below.

Figure 1: the financeability framework



Source: CAA

1.10 This assessment will involve the consideration of the underlying risks associated with capacity expansion and how these are best managed and allocated: this helps inform the sort of incentives we should set for HAL and how investors will perceive the riskiness of HAL.

1.11 For instance, we understand that there will be risks associated with delivering the necessary infrastructure for capacity expansion on time and to budget. On the other hand, it is very important to consumers that capacity expansion is delivered in a way that is affordable. The efficient delivery of capital expenditure will be an important part of this. HAL's management can also exert significant influence on operating and capital efficiency. Taken together, these factors suggest careful consideration of the approach to capital expenditure incentives is required, and that a key consideration in developing and calibrating these incentives should be their impact on HAL's prospective credit rating, costs of debt and equity finance and, ultimately, its overall financeability.

1.12 As incentives are developed, the impacts of parameters and cost baselines can be reviewed and modified in the light of their expected impact on revenues, cash flow, credit ratings, efficient capital structures and gearing levels, credit ratings and the cost of capital. We will take a consistent approach across these assessments, for example, adopting an approach to gearing[9] which is consistent with the target credit rating,[10] and calculating the costs of debt and equity to be consistent with that gearing and credit rating.

1.13 We will take an iterative approach to these matters so, if the checks indicate that HAL has significant headroom above key financeability constraints, we will consider whether more stretching incentives might be appropriate. On the other hand, if the financeability checks indicate difficulties with HAL supporting efficient financing arrangements, we will consider what are the most appropriate mitigating actions to take. In doing so, we will first assume that HAL's management has taken all reasonable steps to manage its financeability and taken appropriate mitigating the actions. If there continues to be an issue, we will revisit our decisions on incentives and/or consider other adjustments to support financeability.[11]

1.14 This approach will build on the work we have undertaken in relation to NATS En Route plc and our draft RP3 performance plan published in February 2019.[12]

Capital structure and gearing

1.15 As part of our work in testing financeability and setting the cost of capital, we will need to make assumptions about HAL's capital structure, including its opening level of gearing at the start of the new price control and the range that it is reasonable for HAL's gearing to take over the period of the price control (and beyond). The April 2018 Consultation discussed the use of a "twin track" approach to capital structure and gearing levels:

9 See paragraph 1.15ff for further consideration of gearing.

10 See paragraph 1.28ff for further consideration of credit ratings.

11 See paragraph 1.35ff for further description of our approach to financeability adjustments.

12 See: CAP 1758

- "Capital Structure 1": a level of gearing similar to the 60% (with a single class of debt) that the CAA (and other economic regulators) have used in the past as the basis for setting price controls and assessing financeability; and
- "Capital Structure 2": a more leveraged structure with a higher level of gearing (and probably at least two classes of debt) that might be more consistent with the financing arrangements that HAL will adopt to support capacity expansion.

1.16 At this early stage of our process, considering these two capital approaches to capital structure will help us understand how sensitive our financeability assessment and approach to the cost of capital is to different assumptions on gearing. It also gives us the flexibility to consider arrangements that will be more consistent with the financing arrangements that HAL is likely to adopt in delivering capacity expansion.

1.17 In the April 2018 Consultation, we referred to Capital Structure 1 as a "notional" capital structure. In practice, both Capital Structures 1 and 2 will be based on assumptions and so could be regarded as "notional" structures, since the relative complexity of HAL's financing arrangements and the potential for them to change over time means it will not be practical or desirable for us to precisely model HAL's actual capital structure.

1.18 Our assumptions on capital structure will have an impact on our assessment of financeability and cost of capital. As the price control review progresses, it is likely that we will want to take a more focused approach and have a clear set of assumptions on capital structure. Nonetheless, it will remain the responsibility of HAL's management to decide on its actual financial structure and ensure that its business is financeable.

1.19 At the last (Q6) price control review, our approach to capital structure and gearing was broadly based around Capital Structure 1, and assumed a 60% level of gearing in calculating the cost of capital and testing financeability. This approach is clear, simple, widely understood and consistent with regulatory precedent (including the approach we have adopted in our draft proposals for the RP3 performance plan). However, there are several reasons that suggest we should reconsider this approach in the circumstances of HAL and capacity expansion:

- there is a significant gap between the notional and actual gearing levels: HAL's 2017 regulatory accounts show a class B gearing ratio of 78.4%.[13] Given the ability of HAL to sustain relatively high levels of gearing, it is worth considering whether there would be advantages for consumers in assuming a higher level of gearing, and what the risks might be with such an approach; and
- it is not clear that the notional approach associated with Capital Structure 1 provides adequate assurance of financeability, particularly in the circumstances of capacity expansion. While we expect the efficient level of gearing to fall from the present levels, it is likely that HAL will seek to utilise significant amounts of investment grade debt financing to help fund the very large capital programmes that will be associated with capacity expansion. If the resulting capital structure is reasonable, and does not involve undue risks for consumers, it may be appropriate to test for financeability on similar levels of gearing.

1.20 We will consider these issues further and test what level of gearing HAL can reasonably sustain given the incentive arrangements that we will develop as part of the price control review.

1.21 There are two of our other workstreams that may have implications for HAL's gearing levels:

- in the April 2019 working paper on Financial Resilience and Ring Fencing, we will discuss issues around gearing caps; and
- alongside our work on the cost of capital, we are considering the use of gearing sharing mechanisms, although our initial view is that such mechanisms are unlikely to suit the circumstances of capacity expansion at Heathrow airport. We discuss these matters further in Appendix B.

[13] Given HAL's current high level of gearing and the forthcoming expansion it is plausible that HAL's gearing might decrease over the H7 period without any regulatory intervention.

Financeability testing

1.22 In the April 2018 Consultation, we noted that capacity expansion will require significant amounts of new equity and debt finance, and that our financeability tests should cover both these sources of finance. We plan to say more about equity financeability in a further consultation in the autumn of 2019, alongside our developing thinking on estimating the cost of equity capital and ensuring that price control incentives are part of an appropriate risk and reward framework. Bearing this in mind, the discussion below largely focuses on debt financeability.

1.23 Our financeability testing will be a qualitative and quantitative assessment of relevant factors and an analysis of projected financial ratios to help assess whether the price control arrangements that we are developing are consistent with HAL financing its activities. This "financeability check" is a key part of the holistic approach to financeability illustrated in Figure 1 above. As well as considering the base assumptions used in calibrating the price control and setting incentives, it will also be important to consider reasonable downside scenarios, so that investors and consumers have assurance that the business will remain financeable in an appropriate range of circumstances. This should also keep HAL's financing costs relatively low and support overall affordability.

Stress testing

1.24 The downside scenarios or stress tests we need to consider will involve analysing what would happen if the price control were set on a particular basis, but the assumptions with respect to costs or other variables turn out to be less favourable than assumed in setting the price control. For example, we might look at the impact of a macro economic downturn in which passenger volumes and non-aeronautical revenues fall.

1.25 We would assume that HAL's management would effectively manage factors over which they can exert a reasonable degree of influence, so that the focus of the stress tests would be factors that are less controllable and have the potential to drive downsides. We would also expect that management would mitigate the financeability impact of less controllable factors, by, for example:

- deferring non-essential capital expenditure;
- reducing dividend payments;
- considering whether there are other steps to limit any increases in gearing, including, if appropriate, seeking additional equity finance; and
- maintaining prudent levels of liquidity.

1.26 Appendix C describes our initial thinking on possible scenarios that we would expect to use for our stress testing analysis. Our thinking on these matters is likely to evolve as the price review proceeds.

1.27 While the stress testing analysis will produce quantitative results, interpretation is likely to require a qualitative assessment and the stress tests may not provide a simple “pass/fail” assessment of the financeability of a potential price control settlement.

Credit ratings

1.28 We expect to use credit ratings in two ways as part of our financeability assessment:

- to check that HAL’s financial position in the base case (i.e. when all costs and revenues match up with the regulatory allowances) is consistent with a “reasonable investment grade” credit rating; and
- to assess that, in our downside scenario, post management mitigating actions, HAL’s financial position is still consistent with an investment grade credit rating (i.e. at least BBB- or equivalent).

1.29 In making assumptions as to what should constitute a reasonable investment grade rating, we will consider the advantages of higher investment grade debt (which is a very cost effective finance but would only be consistent with more stringent financeability checks) against lower investment grade debt (which would be somewhat more expensive, but would be consistent with less stringent financeability checks). As we have noted above, if we were to adopt Capital Structure 2, this could involve assessing multiple classes of debt.

1.30 In the Financial Resilience and Ring Fencing working paper, we will consider options for the possible introduction of a requirement to maintain an investment grade credit rating and we expect to carry out stress tests in a way consistent with any credit rating requirements in HAL's licence.

1.31 In response to the April 2018 Consultation, some respondents raised the issue of whether we should assess credit rating levels by reference to the threshold level for a credit rating (i.e. the lowest possible level for a given rating) or the point midway between downgrade and upgrade to a different rating. Our current thinking is that, when seeking to achieve a "reasonable investment grade" credit rating in the base case, we would plan to use mid-points, while the stress test would look to achieve at least the minimum level for investment grade.[14]

Credit metrics

1.32 Credit metrics are financial ratios which give insights into the financial position of a company and its credit rating. They are commonly used by credit rating agencies as well as being used in some lending agreements (including the debt which the Heathrow group issues to fund HAL).[15]

1.33 In the April 2018 Consultation, we listed the credit metrics that we would expect to consider as part of our financeability assessment. We also categorised the metrics between core and secondary to indicate those on which we expected to place greater reliance. Following further consideration, we no longer categorise metrics as core and secondary and instead describe the guiding principles to selecting credit metrics and how these principles apply to the metrics that we select.

1.34 Our guiding principle in selecting credit metrics is to identify metrics that will help us to assess whether HAL's financial position will be reasonably compatible with our assumptions on credit ratings. To the extent it is appropriate, we will look not

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14 Our assessment would look at the underlying substance of the projected financial position. So, we might consider that isolated instances of metrics below threshold levels would not constitute a financeability concerns provided that the longer term position was healthy.

15 See the "common terms agreement" for HAL's financing platform:

just at the metrics used by the rating agencies, but also at the metrics contained within HAL's financing platform.[16]

Financeability adjustments

1.35 The aim of the holistic approach to financeability described above is to ensure that the different elements of the price control and incentive arrangements are calibrated in such a way that the price control is financeable and HAL should have access to reasonably low cost finance, which in turn should support the overall affordability of capacity expansion.

1.36 As explained above, if our modelling indicates a possible financeability problem, we will ensure it also reflects reasonable managing/mitigating actions by HAL (including reducing dividends, considering other steps to limit any increases in gearing and seeking greater efficiencies). If there is a remaining problem, we would consider the following adjustments to support our work on financeability and in establishing price control arrangements that best protect the interests of consumers:

- modifying incentive and risk sharing arrangements, including incentive baselines and strength;
- making changes to our assumptions on capital structure and the opening level of gearing and the resulting changes to the cost of debt and equity;
- reprofiling revenue or regulatory depreciation; and
- revising our underlying assumptions on the cost of debt and/or equity finance.

1.37 Where we make these adjustments, including for the purposes of rectifying a financeability issue, we would perform the stress testing again to assess whether it remedied the financeability issue effectively. In doing so, our focus would be in protecting consumers, promoting efficiency and setting a price control consistent with financeability. Our approach to these matters will be consistent with our

16 The common terms agreement referred to in footnote 16 above requires that HAL maintain specified levels for certain credit metrics in order to avoid default.

overall objective of finding a package of price control measures that best suits overall efficiency and affordability, by taking a proportionate approach to incentives that encourages efficiency but is also consistent with efficient financing.

1.38 Regulatory depreciation is the price control building block that provides for the return of capital to investors by taking an amount from the RAB and translating that amount into revenue in a given year. Amounts still in the RAB are indexed by inflation and investors also earn a real return (i.e. the cost of capital) on the RAB such that in present value terms they should be indifferent to the timing of depreciation.

1.39 Regulators have in the past looked to depreciation as a possible financeability adjustment. However, given that depreciation is essentially just re-profiling of revenue cash flows, it does not automatically affect the value of the business. Consequently, credit rating agencies commonly reverse depreciation adjustments to assess the underlying financial position of a regulated company.

1.40 Nonetheless, it is important that regulatory depreciation has a reasonable profile over time and is set in a way such that its profile does not create unnecessary strain on cash flow in one period and excess cash flow in another period. If the profile of regulatory depreciation is not reasonable or appropriate, adjusting it may be a useful financeability adjustment. Otherwise, we would not expect the reprofiling of regulatory depreciation, of itself, (for example to meet an affordability concern) to be an effective form of financeability adjustment.

Key issues for consultation

1.41 We invite stakeholders to comment on any of the issues relating to financeability and on:

- our overall (holistic) approach to financeability;
- what assumptions we should make on capital structures and gearing;
- our approach to stress testing and credit ratings and metrics; and
- what approach we should take to financeability adjustments.

Chapter 2

Incentives for capital expenditure efficiency

Introduction

2.1 In several previous consultations, we have discussed the potential advantages of strengthening the incentives on HAL to deliver capital expenditure efficiently. We discussed the possible role of *ex ante* capital efficiency incentives in the January 2017 and June 2017 Consultations. These are incentives where HAL would bear a predetermined share of any capital expenditure under- or over spend.[17] The April 2018 Consultation described an initial assessment of the possible impact on HAL's return on regulated equity (RORE) of several different approaches to introducing capital efficiency incentives.

2.2 Most recently, the May 2018 working paper summarised the main advantages and disadvantages of capital efficiency incentives. We said that we expected to carry out further work to consider the practical challenges associated with implementing these incentives, the best way to address these, and whether they could mean that the potential disadvantages of these incentives might outweigh their potential benefits.

2.3 In chapter 1, we stress the importance of a balanced approach to incentives, and that these should form part of an overall package of regulatory measures that is both affordable and financeable. This will involve building on the work we set out in the April 2018 Consultation on RORE ranges.

2.4 This chapter summarises stakeholders' responses to the discussion of capital efficiency incentives in the April 2018 Consultation, describes a consultancy study that we commissioned to help understand how these incentives might be implemented, and sets out our current views on the next steps for developing these incentives.

[17] We refer to these as "capital efficiency incentives" in this chapter.

Stakeholder views

2.5 HAL has previously expressed concerns that the introduction of capital efficiency incentives would represent a significant departure from our current regulatory practice, and could introduce new risks for costs, delivery times and financeability while reducing flexibility. In its response to the April 2018 Consultation, HAL said that the CAA had not identified specific concerns about the current framework, which HAL says is working well, and that our work on capital expenditure incentives should be integrated with the wider design of the regulatory framework, including estimating the cost of capital.

2.6 In relation to our initial estimates of the impact of capital efficiency incentives on RORE, HAL said:

- the options we had examined were simplistic and only suitable for a high level financial analysis; and
- the estimated impact on RORE must be treated with caution as the comparisons with other industries refer to both operating and capital expenditure incentives, and low levels of RORE can lead to significant financeability challenges.

2.7 Airlines expressed a range of views. Airline representatives supported our examination of a wide range of regulatory options, saying that the cost of construction needs to be realistic, efficient and affordable, and that the incentive regime should not incentivise adding costs. But they also wondered whether a strengthened governance process and a much stronger and objective *ex post* efficiency regime, if properly and rigorously enforced by the CAA, might deliver better outcomes.

2.8 One airline supported rigorous capital efficiency incentives, but it also said that all costs must be subject to review by the Independent Funds Surveyor (IFS) and that, in the event of an over spend, the use of capital efficiency incentives must not preclude a subsequent *ex post* review (which could lead to a higher proportion of the over spend being excluded from the RAB). It also said we should model a 'strong' capital efficiency incentive alongside the 'weak' and 'moderate' options we examined in the April 2018 Consultation. Another airline noted the options we had examined were symmetrical and said that it should already be in HAL's best interests to achieve a "faster build and lower cost" scenario, as there would also be benefits from a significant increase in passenger volumes and thus aeronautical and commercial revenues.

2.9 Arora said that it is premature to be assessing capital efficiency incentives in the absence of a settled HAL scheme and a clear process for alternatives to be assessed.

CEPA's study on implementing *ex ante* incentives

2.10 We commissioned CEPA (with assistance from our technical adviser Arcadis) to develop some detailed descriptions of the way that different approaches to capital efficiency incentives might be implemented in practice.[18]

2.11 CEPA's analysis focused on two main options. Its first option, which it calls the "regulatory model", is similar to the option described in the April 2018 Consultation with relatively weak incentives applied across all of HAL's capital expenditure. In summary, this might be implemented as follows:

- a 'baseline' cost forecast for all H7 period capital expenditure would be set during the price control review. HAL would bear a pre-determined share of any under- or over spends relative to this baseline. Because of the high-level nature of this option, the incentive rate might need to be relatively weak;
- at the same time that the baseline cost forecast is set, the scope of work/delivery obligations would be set at a relatively high level. These would be used in the end of period reconciliation (see below) to adjust the baseline forecast if HAL had delivered more or less than what was originally expected;
- the incentives would be subject to a cap and floor. Under- or over spends within the cap and floor would be subject to the incentive. If spending were

[18] CEPA, Possible ways of implementing ex ante efficiency incentives for Heathrow's capital expenditure, March 2019.

to turn out to be outside the cap and floor, the CAA would carry out an "extraordinary review" to determine how such spending should be treated;

- at the following price control review, the CAA would first assess whether any adjustment to the baseline cost forecast was required, in particular, to reflect whether HAL had achieved the high level work/delivery obligations specified when setting the price control, and then calculate the outturn under- or over spend that would be subject to the incentive rate. The incentive would then be implemented through a RAB adjustment.

2.12 In addition to the core regulatory model, CEPA suggested a possible variant where certain costs that are less suited to capital efficiency incentives could be excluded and subjected instead to *ex post* efficiency reviews. This might cover costs that are more difficult to forecast or less controllable by HAL, such as land acquisition costs.

2.13 CEPA's second option, which it calls the "governance model", would apply only to certain cost categories. It is therefore similar to the option set out in the April 2018 Consultation where stronger incentives are applied to a subset of HAL's capital expenditure. The main features of CEPA's core governance model are that:

- the selected cost categories would be those most suited to capital efficiency incentives, for example, because HAL has more control over costs, and outputs are easier to define. In CEPA's illustrative example, these incentives would apply to around 55 per cent of HAL's capital expenditure, which might be broken down into around 10 separate 'pots' [19];
- an initial baseline cost forecast would be established during the price control review. This would cover the total forecast cost for the categories subject to the capital efficiency incentives and would be updated later as

[19] The cost categories identified by CEPA include Third Runway Airfield and Landside infrastructure; Western Campus (airfield, passenger (T5X and T6) and landside infrastructure); and Cross Campus Passenger Connectivity. Other cost categories not selected for CEPA's illustrative example include Displaced Uses; Natural Environment & Water Courses; Surface Access; and Property/Compulsory Purchase.

individual projects within each pot that has reached a sufficient degree of maturity, such as Gateway 3 ("G3") in HAL's current gateway system.[20] Because the final baseline cost forecast would be more accurate, this approach could be applied with a stronger incentive rate than the regulatory model;

- delivery obligations/scopes of work would be defined for each pot subject to incentives. These would be more detailed than under the regulatory model, but would nevertheless be defined for overall pots rather than individual projects, and would allow the components of each category to evolve over time;
- a cap and floor would operate in the same way as under the regulatory model. It would be defined relative to the baseline, so the absolute level of the cap and floor would move as the baseline itself is updated with more mature cost forecasts;
- there would also be an end of price control period reconciliation process similar to that under the regulatory model. This would involve adjusting the baseline for any under- or over delivery during the price control period, with a single under- or over spend relative to the revised baseline calculated to cover all of the cost categories subject to the incentives. The CAA would then adjust HAL's RAB at the start of the next price control period (H8) to take account of the over spend or under spend.

2.14 CEPA identified four possible variants to its core governance model. These are:

- updating the baseline cost forecast on the basis of the prices set by HAL's suppliers (through competitive tenders) rather than the cost forecast at an earlier stage (such as gateway G3);

[20] In HAL's Capital Investment Protocol and Capital Efficiency Handbook, gateway G3 is the investment decision. It follows the strategic assessment, business justification and options decision, but it precedes the start on site. It marks the transition from identifying the most appropriate solution to delivering the change. All scope that has progressed through G3 is considered 'core' capital expenditure and is baselined at a P50 level of confidence.

- updating the baseline cost forecast for each pot at an earlier stage than G3, for example, when a certain proportion of the projects for that pot have reached G3;
- a rolling mechanism, so that under- or over spends for each pot would be calculated when that pot reaches a certain (pre-defined) stage of completion (which for at least some pots would fall within the H8 price control period), rather than calculating under- and over spends during the H8 price control review; and
- a hybrid model where the costs not subject to the governance model would be subject to (probably weaker) incentives by applying the regulatory model to these costs.

CAA's current view

2.15 Capital expenditure incentives have significant potential advantages in terms of helping to protect consumers. The risk of cost escalation in major infrastructure projects is well known, and an increase in the cost of Heathrow expansion could have a material adverse impact on affordability. The significant increase in HAL's forecast of Category B costs that we reported in January[21] reinforces the importance of ensuring that HAL faces sufficient pressure to keep its costs under control.

2.16 Nevertheless, we recognise the importance of considering the practical challenges and the risk of distortions that could arise if new incentives are introduced in an inappropriate way. We consider that CEPA's work has been helpful in setting out, in more detail than previously, some options for how we could apply capital efficiency incentives and has highlighted some of the key differences between the different possible approaches.

2.17 One important advantage of the approach that CEPA calls the regulatory model is that it applies to all capital expenditure and, therefore, ensures that HAL faces pressure to avoid cost escalation across the entire expansion programme (as well as business as usual capital expenditure). While this may include some

[21] See CAP 1752.

costs over which HAL has only limited control, such incentives will nevertheless encourage HAL to manage these risks effectively.

2.18 Under the regulatory model, moreover, the cost baseline would be fixed at the time of the price control review (although by specifying delivery obligations and a "logging up/down" process there would be the opportunity to adjust this later for over/under delivery). Unlike some versions of the governance model, this would place pressure on HAL to avoid cost escalation during the earlier stages of the expansion programme, before individual projects reach gateway G3.

2.19 We recognise, however, that because of the need to set a cost baseline at a relatively early stage, and because it applies to costs that may be more difficult for HAL to forecast or control, the regulatory model may need to be implemented with a weaker incentive. Otherwise, there might be a danger that the risks arising under this approach could increase HAL's financing costs in a way that would outweigh the benefits of a stronger incentive.

2.20 CEPA's governance model, by contrast, would be focused on the cost categories that are most suited to efficiency incentives, and would be based on capital cost allowances fixed at a later stage. This approach could, therefore, be applied with a stronger incentive rate. However, we note that fixing the cost allowance at a relatively late stage might also reduce incentives on HAL to manage programme wide costs.

2.21 As well as considering the suitability of different types of capital cost for stronger incentives, it would be important to ensure that the boundaries between categories subject to different incentive rates are clearly defined, and that the risks of regulatory gaming (for example, by misallocating costs) are minimised. Our initial view is that, if we were to implement the governance model, we would expect the stronger incentives to apply to categories accounting for a reasonable proportion of total capital expenditure. CEPA's illustrative option, for example, might apply to cost categories accounting for around 55 per cent of capital expenditure.

2.22 Under both CEPA's core governance and regulatory models, a reconciliation between forecast and outturn expenditure will take place during the subsequent price control (H8) review. The exact nature of this reconciliation, and any adjustments to the cost baseline to reflect under- or over delivery compared with the original cost baseline, will need to be considered further as we develop more detailed options.[22]

2.23 In addition to the issues above, we note that there are other details of incentive arrangements that would need to be addressed before any of the options could be implemented. These include, for example, how baseline cost forecasts should be uplifted to allow for price or cost inflation, the role of any cap and floor, what happens if either is breached, and the monitoring arrangements that would accompany each of the options.

2.24 If we decide to introduce capital efficiency incentives, it will be important that we adopt a cautious and proportionate approach to introducing a form of efficiency incentives that is new to HAL, even though it has been used extensively in other regulated industries. We consider that careful selection of an appropriate incentive rate, and careful consideration of other details (including any cap and floor plus, under the governance model, selecting the cost categories that would be subject to *ex ante* incentives), should allow us to achieve this.

2.25 We consider that the regulatory model has some important advantages over the governance model which, on its own, might not provide incentives for HAL to manage the overall costs of its capital programme. But we will continue to consider both the regulatory and the governance models, both so that we can consider the case for applying stronger incentives to certain cost categories alongside the regulatory model, and also in case our further work reveals specific difficulties within the regulatory model that cannot be resolved. The governance model would build on HAL's existing processes for capital governance and so might be easier to introduce.

[22] Under the 'rolling mechanism' variant of CEPA's governance model, the reconciliation between forecast and outturn expenditure for each programme would occur once that programme is complete. In this case, there might be less need to adjust for under or over delivery.

Next steps

2.26 CEPA's report includes a more detailed description of possible ways of implementing capital efficiency incentives than in our previous documents. The discussion of these arrangements above underlines the importance of addressing the potential challenges associated with implementing capital efficiency incentives (as described in the May 2018 working paper) including:

- the need for sufficiently reliable cost forecasts to underpin any incentives, and questions as to how these might be developed;
- the need to define the deliverables associated with different capital expenditure allowances, so that we can identify any underspends that are due to non-delivery rather than improved efficiency;
- the need for adjustment mechanisms, to avoid unnecessary rigidity and ensure that desirable design or scope changes can be accommodated even after the initial cost allowance has been set;
- considering whether adjustments for certain external cost changes might be needed;
- considering how to address the risk of "gaming" of incentives, or the risk that a change in the incentive framework could adversely affect stakeholder relationships; and
- the need to establish robust boundaries between the cost categories subject to different incentives that are applied to different categories of costs.

2.27 There remains a significant amount of work to design capital efficiency incentive mechanisms and to consider some of the implementation issues that we have not yet addressed. This includes:

- defining the specific cost categories to which incentives will apply and, where necessary, establishing cost allocation guidelines between the different categories;

- developing a method for setting the cost baseline, including when it will be finalised, how it will be reviewed (by us or others) and whether there should be any automatic updating (for example for general price inflation);
- defining delivery obligations for different categories of cost, so that we can distinguish for example between underspends that are due to efficient delivery, and those that are due to slower than expected progress or non-delivery of certain items;
- establishing plausible ranges for incentive rates and confirming when and how under- and over spends will be calculated, and the precise mechanism (such as an adjustment to HAL’s opening RAB at the H8 price control review) for making these adjustments;
- considering whether there should still be some potential role for *ex post* efficiency reviews, for example for cost categories that are subject to relatively weak incentives; and
- in due course, setting the final incentives including the precise incentive rate(s) that will apply, and whether there is any “dead band”, cap/floor or similar.

2.28 In addition to developing our broad approach to capital efficiency incentives and addressing the design details of an appropriate mechanism, it will be important to ensure an integrated approach with our assessment of HAL’s risk exposure, financeability and affordability. This includes assessing how any capital expenditure efficiency incentives would operate alongside other incentives, and how they would form part of a balanced risk and reward package, as discussed further in chapter 1.

2.29 As well as considering the above issues, our immediate next steps will include a detailed assessment of the information that has become available as part of HAL’s master planning process to establish:

- what might be a feasible timetable for setting a cost baseline and what levels of uncertainty might be associated with such a cost baseline;

- understand more about the likely phasing of HAL's capital programme and the key projects that are expected to be delivered in the H7 price control period; and
- work out at a high level the possible deliverables associated with key projects.

Views invited

2.30 Views are invited from stakeholders on any issues relating to incentives for capital efficiency and on:

- the models described in CEPA's report, including any possible improvements or refinements that we should consider;
- our initial view that the regulatory model would provide better incentives on HAL to control the overall costs of its capital programme; and
- specific issues that we should consider during the next stage of our work on capital expenditure efficiency incentives.

Chapter 3

Promoting economy and efficiency

3.1 The October 2018 Consultation built on a number of previous consultations since 2014 in considering whether a new condition in HAL's licence to promote economy and efficiency by HAL (an "efficiency condition") would further the interests of consumers.

3.2 This chapter considers these matters further and includes:

- a short summary of the approach set out in the October 2018 Consultation;
- a summary of the views of respondents;
- our response to these views and our future approach to these matters; and
- key issues for consultation.

The October 2018 Consultation

3.3 The October 2018 Consultation noted that:

- HAL's licence does not explicitly drive efficiency across all aspects of its business or provide a specific obligation against which the CAA can investigate allegations of inefficiency, save in limited areas;
- other elements of the regulatory regime (such as incentives and *ex post* reviews) may not compensate for this by covering all HAL's activities effectively;
- in the context of the market power of Heathrow airport, commercial pressure from airlines is not a full substitute for regulatory oversight;
- *ex post* use of competition law would not provide sufficient protection for the interests of consumers; and
- HAL's licence appears out of step with the regimes in other sectors subject to economic regulation.

3.4 To address these issues, we discussed the development of a licence condition that would require HAL to conduct its business in an economical and efficient manner to secure (i) the efficient operation and maintenance, and (ii) the economical, efficient and timely enhancement and development of Heathrow airport. We were very clear that an efficiency condition should focus on *how* HAL conducts its business, rather than precisely *what* it delivers, and should not mandate that HAL make particular investments (including the capacity expansion programme). Addressing earlier concerns from HAL that an efficiency condition could be too vague, we suggested a list of non-exhaustive “areas of focus” for the condition.

3.5 We said that an efficiency condition could be introduced at the start of the interim price control period in 2020 and ahead of HAL’s next main price control period expected to start in 2022. An efficiency condition could:

- provide clear expectations for HAL’s conduct and help frame discussions between the CAA and HAL to help to avoid formal actions;
- give the CAA formal oversight over how HAL conducts its business and provide a basis for intervention if its conduct causes detriment to consumers; and
- guide the development of HAL’s business assurance processes.

Stakeholder views on the need for an efficiency condition

3.6 HAL did not accept that the CAA had justified introducing an efficiency condition, particularly on the grounds that it was not necessary, targeted or proportionate.[23] It suggested that the CAA’s rationale for introducing an efficiency condition was muddled. It also considered that introducing an efficiency condition would be a breach of the principles of better regulation.

3.7 HAL took the view that an efficiency condition was not necessary because (i) the CAA’s powers under CAA12 to conduct *ex post* reviews and even terminate the price control, and (ii) existing licence conditions on the efficient procurement of capital projects and operational resilience, are flexible enough to enable the CAA

[23] HAL’s response included Appendices setting out its views on the appropriateness of an efficiency condition in addition to the arguments summarised here. We have considered this in detail and our response to the main issues in that Appendix is set out in this chapter.

to investigate any concerns. It also considered that (i) existing price controls, (ii) the CAA's current approach, including to require Category B and Category C costs to be spent efficiently on pain of disallowance, and (iii) its commercial incentives to grow passenger numbers had, to date, proved effective to promote economy and efficiency and ensure both investment and that it provides good quality services.

3.8 HAL also said that an efficiency condition was not targeted, as the CAA had not provided clarity as to its objectives or given examples of behaviour by HAL to justify the condition. It suggested that introducing an efficiency condition would not be proportionate, would not be in line with the CAA's duties under CAA12 and would not provide the CAA with any more certainty over HAL's capital expenditure than the current regulatory framework. It took the view that an efficiency condition would undermine investor confidence and HAL's ability to finance its operations because HAL would never be certain that it was complying with its obligations.

3.9 Airlines and their representatives were more supportive of the introduction of an efficiency condition for the start of the 2020, especially if there was not to be a condition on constructive engagement. They agreed that an efficiency condition with a behavioural focus could be an additional tool to allow the CAA to intervene within a price control period and would not be too onerous, although there was also some support for a more output based approach.

3.10 Giving examples of areas they consider could have been addressed by an efficiency condition, airlines observed that they were not satisfied that HAL either is currently efficient, or responds to consumers' needs, expressing dissatisfaction with HAL's engagement with them. Airlines considered that the pressure they can exert is insufficient to ensure that HAL is efficient, because they do not have sufficient information or resources and HAL has significant market power.

3.11 Airlines also said that an efficiency condition should be in addition to, not a substitute for, the development of price control incentives. One airline respondent, however, expressed a concern that an efficiency condition could create an additional risk that HAL might want reflected in the weighted average cost of capital ("WACC").

3.12 Arora supported the introduction of an efficiency condition as soon as possible, to apply to both expansion and HAL's business as usual activities. It should sit alongside alternative delivery arrangements, address engagement and be introduced early in 2019. It cited the CAA's "Section 16" and consultants' reports as well as HAL's Innovation Partners process as evidence that HAL is not as efficient as it could be or engaging with third parties appropriately. It also wanted the CAA to include a condition in HAL's licence requiring it to collaborate with, and make non-commercially sensitive information available to, parties promoting alternative plans for expansion, allowing pooling of some activities to avoid duplication and community confusion, saving time and money. We deal with Arora's suggestions for a new condition in HAL's licence requiring it to provide information to alternative developers in chapter 4.

3.13 Other stakeholders were broadly supportive, although one expressed a concern that an efficiency condition could limit HAL's ability to enter agreements with statutory authorities and another preferred a more commercial approach.

Stakeholder views on the drafting of an efficiency condition

3.14 Notwithstanding its comments on the need for an efficiency condition, HAL suggested some drafting changes, the most significant being (i) to add an explicit reference in the condition to the CAA's duties (especially the "secondary duties" in relation to users' reasonable requirements and for HAL to be able to finance its activities), and (ii) to remove a perceived blurring of the distinction between how HAL behaves and what it delivers that HAL considered was created by the "areas of focus" (save for a reference to engagement with consumers and "other stakeholders"). It also offered to engage further on drafting issues.

3.15 By contrast, Airlines, their representative and Arora supported the "areas of focus" in the draft condition. Airlines were particularly keen to expand the drafting to drive "effectiveness" on the part of HAL to ensure that it delivers what customers want and need. Airlines also sought clarification to avoid any perception that the drafting might inadvertently capture airlines' activities and for "economical", "efficient" and "timely" to be defined as objective tests.

CAA views on the need for an efficiency condition

3.16 We reject HAL's suggestion that we have not provided an appropriate justification for the introduction of an efficiency condition. The October 2018 Consultation was very clear that an efficiency condition is necessary to:

- promote economy and efficiency across all of HAL's activities; and
- complement price controls and existing narrowly-focussed obligations.

3.17 We consider that an efficiency condition is necessary to facilitate (i) oversight of the way HAL runs its business generally, and (ii) consideration of efficiency issues which both bear on the price control and more widely. An efficiency condition is needed to ensure that HAL is required to conduct its activities across the board in an economical and efficient manner, ensuring that there are no regulatory "gaps" between other obligations and incentives. As such, HAL's comment that an efficiency condition would not give the CAA additional assurance over capital expenditure is (i) of little relevance, as such a condition would cover not only capital expenditure efficiency, but also business as usual activities and process issues; and (ii) incorrect, as there are aspects of HAL's capital programme that are not necessarily fully incentivised by the existing arrangements.

3.18 Further, the CAA rejects HAL's suggestion that a licence modification can be introduced only if justified by examples of specific conduct that it would address. CAA12 gives the CAA a broad discretion to modify HAL's licence to further the interests of consumers and to consider how it can do so in a proportionate manner. The CAA has this discretion without the need for us to be responding to prior behaviour by HAL. As explained above, an efficiency condition is needed to ensure that the regime applying to HAL is comprehensive.

3.19 That said, we note that a number of the issues raised by airline respondents in relation to HAL's conduct are in areas that could have fallen within the scope of an efficiency condition. Furthermore, as discussed extensively in our "Section 16" reports to the Secretary of State between February 2017 and September 2018, we have identified repeated failings in HAL's approach with respect to engagement and the provision of information.[24]

3.20 This should not be taken as representing a final view by the CAA on HAL's conduct on the issues raised by respondents:[25] rather the existence of such examples reinforces the need for an efficiency condition to allow for regulatory action closer to "real time" rather than:

- an *ex post* review, potentially some years later at the next price control and which could realistically lead only to a financial adjustment; or
- policy development for a licence condition dealing with a specific issue which itself may take many months and which not could not address prior conduct and may not be suitable to deal with wider issues and conduct.

3.21 While we see the commercial pressure that airlines can bring to bear on HAL and the commercial incentives that apply to HAL as playing an important role in ensuring HAL delivers what its customers need on a day-to-day basis, this is not sufficient to render an efficiency condition unnecessary. Commercial pressure from airlines is limited by the fact that HAL has substantial market power, there is significant information asymmetry between HAL and airlines, and airlines have neither investigatory nor enforcement powers to back up the commercial pressure they can bring to bear.

3.22 An efficiency condition would provide stakeholders, including airlines, with the ability to raise issues for consideration by the CAA in "real time" in a way targeted at the particular matter at hand in a way stakeholders cannot at present. This could facilitate a remedy to address any proven problems other than by:

- seeking the imposition of a new specific licence condition;
- contributing to the development of the next price control; or

24 See, for example, comments on engagement with airlines and provision of cost information in the CAA's Advice to the Secretary of State for Transport: [CAA assessment of airport-airline engagement on capacity expansion during May-September 2018]:

25 In any event, the instances described would not investigated by the CAA under any new licence condition, as such a condition would not have retrospective effect.

- using competition law.[26]

3.23 Furthermore, the existing obligations in the licence that HAL refers to as “wide ranging mechanisms” are, in fact relatively tightly focussed obligations on specific issues and an efficiency condition of the kind under consideration is necessary to address gaps between these provisions.[27] For these reasons, we reject HAL’s arguments that the CAA’s existing powers are adequate and consider that introduction of an efficiency condition is necessary.

3.24 As we made clear in the October 2018 Consultation, an efficiency condition should be targeted by being focussed on *how* HAL delivers in the interests of consumers, rather than the specifics of *what* it delivers. This reflects the reality that HAL will face in operating infrastructure as complex as Heathrow, where even an efficiently run company may have issues with service and outcome delivery from time to time. We understand airlines’ interest in focusing on outputs, but what can be reasonably expected from HAL is that it approaches the management of the airport efficiently and effectively: this does not necessarily mean delivering all the desired outputs and outcomes all of the time.

3.25 We agree with HAL that an efficiency condition should not be focussed on specific outputs and, in particular, should not be, or be seen as, mandating capacity expansion. Major capital programmes should be subject to a package of price control funding and incentive arrangements clearly identified in HAL’s licence.

3.26 Bearing the above in mind, we consider that a condition focussed on *how* HAL delivers its services in the interests of consumers is appropriately targeted as required by CAA12.

3.27 As for proportionality, we do not accept HAL’s argument that it would necessarily be unaware of conduct that it should seek to avoid or understand how it should comply with such an obligation, since businesses, especially those with access to sophisticated internal and external systems and advice are able to manage these

[26] Competition law is unlikely to suitable for addressing relevant issues, including service quality or efficiency, and is likely to involve a very lengthy process.

[27] See conditions C3 (Procurement of capital projects) and D2 (Operational resilience).

risks appropriately through their business assurance processes. As HAL should be able to use its existing business assurance and compliance procedures (assuming they are fit for purpose) to manage compliance with an efficiency condition, we do not consider that HAL's compliance costs in relation to an efficiency condition are likely to be significant or disproportionate to the benefits that an efficiency condition would bring to the overall consistency of the regulatory regime. These business systems should also mitigate the risks highlighted by HAL that it would necessarily be unaware of conduct that it should seek to avoid or that it would fail to understand how it should comply with such an obligation.

3.28 Our obligations in relation to proportionality also apply to any action that the CAA might take under an efficiency condition, if it is introduced. So, we do not see an efficiency condition as being an appropriate mechanism to resolve either (i) trivial issues which will not have a material impact on the interests of consumers, or (ii) commercial disputes between HAL and its customers. Any investigation that the CAA undertook under it would be considered in the light of its enforcement policy and prioritisation principles and the condition would be interpreted consistently with the regulatory principles and duties set out in CAA12. Should the CAA take any enforcement action under such a condition it would also be subject to oversight of the Court.

3.29 We also do not accept HAL's suggestion that an efficiency condition would undermine investor confidence. HAL has provided no evidence to substantiate this position, while we observe that other regulated companies which are subject to obligations relating to economy and efficiency, such as those active in water, energy and air traffic control, do not display any signs of a loss or absence of investor confidence as a result of those rules. We would also note that HAL's comment that consumers' interests could be protected by the CAA's ability to terminate HAL's price control, but consider that this is unlikely to be a proportionate or viable tool to address HAL's behaviour in any but the most exceptional circumstances.

3.30 We do not consider that the mere absence of an efficiency condition in HAL's licence, as compared with the arrangements in other regulatory sectors, is a reason to justify the imposition of such a condition to align the regulation of HAL with those other sectors. We do, however, consider that the provisions used in other sectors are relevant as a "cross check" to ensure that an efficiency condition is proportionate: comparisons with other sectors are relevant here because the market power of Heathrow airport and the capital-intensive nature of HAL's activities, have parallels in other sectors.[28]

3.31 In the light of the above, we consider that an efficiency condition would be proportionate.

3.32 We reject the notion that an efficiency condition that allowed the CAA to conduct a targeted investigation following substantiated allegations of inappropriate behaviour by HAL, would be a breach of the principles of better regulation. As we have explained above, an efficiency condition is necessary, targeted and proportionate. Any action that the CAA might take, either to introduce an efficiency condition, or to take enforcement action under it, would also need to be targeted and the CAA's actions would be accountable, through the existence of the relevant statutory safeguards (including appeal rights in relation to licence modifications, and Court oversight of enforcement activity).

3.33 We note Arora's support for an efficiency condition and can confirm that we do not see such a condition as an alternative to our wider policy on alternative delivery arrangements, which is explained in more detail in chapter 4. As explained above, an efficiency condition would be focused on the efficient operation by HAL of its regulated activities and it would be for HAL to be able to demonstrate that its activities were efficient. As we have explained in previous consultations, a failure to engage by HAL with third party developers may lead to inefficiency or inefficient costs.[29] However, a failure to engage effectively with a competitor is not, without substantive evidence, an indication of inefficiency.

3.34 In the light of the above, and having fully considered stakeholders' views, including those in the Appendix to HAL's response, the CAA is minded to

[28] Indeed, as we observe above, the CAA has consistently discussed the need for an efficiency condition since 2014.

[29] See, for example, the December 2017 Consultation at chapter 1.

continue with the development of an efficiency condition. Such a condition has the potential to be an important part of the overall regulatory framework and provide safeguards for consumers, particularly in the event that serious or systematic issues arise that have a detrimental effect on the interests of consumers. Nonetheless, it will not be a panacea for all the difficulties of regulation and we will need to continue to develop the overall framework for economic regulation. All stakeholders will also need to continue to work constructively with HAL and recognise the challenges of developing robust and appropriate plans for airport expansion. Only in this way will the interests of consumers be best protected and the plans for capacity expansion developed in a way that best suits the needs of wider stakeholders.

3.35 We remain of the view that introducing an efficiency condition alongside the arrangements for the interim period (i.e. towards the end of 2019) remains appropriate, allowing appropriate time to consider points around the precise drafting of an efficiency condition. If, having reviewed the responses to this consultation, we remain of this view, our next step will be to issue a statutory consultation to modify HAL's licence to introduce such a condition.[30] We may also consider updating the condition in formulating the licence changes necessary to support our next main price control review of HAL's activities, currently scheduled for 2021.

CAA views on the drafting of a condition

3.36 Having considered and taken into account stakeholders' responses, for the reasons set out below, we consider that the initial drafting discussed in the October 2018 Consultation may appropriately be amended to:

- refer more explicitly to the CAA's duties;
- target the "areas of focus" which had been included to address responses to earlier consultations by HAL more closely on consultation with stakeholders; and

[30] If this were to be the case, this statutory consultation could form part of a wider statutory consultation on the licence modifications required to implement the CAA's policy for the iH7 period, once this has been finalised.

- clarify relevant considerations by referring explicitly to present and future users.

3.37 However, for the reasons set out below, we do not consider that an efficiency condition would benefit from an attempt to define “economy or efficiency”, or from including references to “effectiveness” or the standards to which other businesses operate.

3.38 As we noted in the October 2018 Consultation, we do not consider that explicit reference to elements of the CAA’s duties is strictly necessary as any action the CAA takes in relation to an efficiency condition must be carried out in accordance with those duties. Nonetheless, to the extent such references aid the interpretation and intent of the condition they may be helpful. As a result, we propose to amend the draft efficiency condition to refer to the requirements of users (explicitly referring to both present and future users) and acknowledge the need for HAL to be able to finance its activities at Heathrow, in line with CAA12.

3.39 We consider that the “areas of focus” can be more targeted, consistent with enhancing the intent and effectiveness of the condition since compliance with the Airports National Policy Statement (“NPS”) will be required for HAL to obtain a development consent order (“DCO”) under the Planning Act 2008 (“PA08”), and balancing the costs of delivery and ongoing costs is implicit in any consideration of economy and efficiency. As such, we consider that an efficiency condition can be effective without explicit reference to these elements.

3.40 We note that, in HAL’s comments in relation to the drafting of the condition, it retained reference to engagement with consumers and other stakeholders. We consider that an approach to an efficiency condition that refers to engagement with stakeholders remains appropriate and is consistent with the consultation requirements provided for in Part F of the licence. As a result, and in the light of the issues identified in our “Section 16” reports, such as provision of information on costs to shareholders,[31] we consider that a reference to engagement with stakeholders should be retained.

[31] See, for example, the CAA’s Advice to the Secretary of State for Transport CAA assessment of airport-airline engagement on capacity expansion during May to September 2018.

3.41 By contrast, we do not consider that an attempt to define economy, efficiency or timeliness would be helpful as these terms are fact-specific concepts requiring assessment in the context of the particular issue under consideration. The inappropriateness of defining these terms can be seen from the fact that the relevant issues would be very different in the context of a reasonable approach to engagement with airlines compared to the issues that might be considered in the context of record keeping or operational matters.

3.42 We also consider that the concepts of “economy” and efficiency” need to be read together and should be interpreted by the CAA in a way that is consistent with the CAA’s duties under CAA12 in the context of the specific matter under consideration. This means that, in a particular context, it will not necessarily be the case that HAL should adopt the lowest cost solution, especially when the interests of both present and future users are taken into account. Rather, HAL’s approach should represent value for money for users in both the short and long term. As such, an attempt to define these terms (which are not defined in CAA12) is likely to unduly limit the flexibility of any condition to enable the CAA to effectively address the matter at hand.

3.43 We do, however, consider that an approach that ties the condition even more closely to the CAA’s duties may be helpful in ensuring that the condition is more readily understood, including the interplay between how HAL is expected to respond to what users demand, and the need for HAL to be able to finance its activities. In doing so, we consider that it is helpful to refer explicitly to present and future users (in line with the approach taken in CAA12), as this may also be relevant in assessing efficiency as noted above.

3.44 In this light, we do not consider that references either to “effectiveness” or the standards to which other businesses operate would be appropriate in the context of an efficiency condition drafted more closely to reflect the CAA’s duties, as these terms are not included in section 1 CAA12 and consideration of them is implicit in the concepts of economy, efficiency and timeliness. We do not consider that excluding these words in the wording of an efficiency condition will expose HAL to undue risk, not least because stakeholders would be free to bring forward arguments on such issues in relation to what constitutes “economic and efficient" behaviour in the event that a specific concern arose. Finally, we do not share airlines' concerns that a condition could apply to their activities because obligations in HAL's licence can only apply to the activities of HAL. Nonetheless, we have made a simple revision to make this clear.

3.45 In this light, we set out a revised text for an efficiency condition at Appendix D.

Views invited

3.46 Views are invited from stakeholders on any of the issues raised in relation to an efficiency licence condition for HAL and on the drafting of the proposed efficiency condition set out at Appendix D.

Chapter 4
Alternative delivery arrangements

Introduction

4.1 In the October 2018 Consultation, we set out our updated views on the issues raised by potential alternative arrangements for the delivery of new capacity at Heathrow airport.

4.2 We noted that Arora had told us that it intends to pursue its own proposals for the delivery of new capacity by making an application for a DCO.[32] We discussed our approach to addressing the issues that might be raised by this, including the information we considered that Arora would need to provide to us before we would be in a position to consider further how to develop the regulatory framework to take account of its proposals.

4.3 Since the October 2018 Consultation, our consultants, Arcadis have conducted a review of Arora's proposals to determine and assess their maturity.

4.4 This chapter summarises:

- the responses to the October 2018 Consultation;
- our views on the main issues raised by respondents;
- the findings of Arcadis' review;
- further details of the initial tests we consider that Arora should meet for the CAA to undertake detailed work on the regulatory framework that might apply to any element of capacity expansion developed by Arora;
- our views on the sharing of information by HAL; and
- key issues for consultation.

[32] CAA is a statutory consultee under PA08 and will be asked to comment on any capacity expansion DCO whether our statutory roles, including in relation to economic, safety, airspace and security regulation, suggest that there are likely to be any impediments to the grant of planning consent.

Stakeholder views

4.5 The main points made in HAL's response to the October 2018 Consultation included its views that:

- it is for the Planning Inspectorate, not for the CAA, to consider the merits of alternative DCO applications;
- further development of policy for alternative providers increases uncertainty for HAL's regulatory arrangements;
- third party providers should be required robustly to demonstrate real prospects for viability, financing and rapid development of expansion proposals;
- the CAA should set out a meaningful timeline for testing the credibility of Arora's proposals; and
- innovations in the regulatory framework should only be introduced if they are in the interests of consumers.

4.6 HAL has also provided a report by Frontier Economics commenting on the merits of introducing competition into the provision of new terminals.[33] The Frontier report considers how competitive arrangements could be introduced into the value chain as part of capacity expansion, for example in the design, build, financing or operation of new terminals at Heathrow. While acknowledging that it is likely to be possible to introduce competition into the delivery of new terminals at Heathrow, the report concludes that a competitive model would require various regulatory, legal and operational interfaces between HAL and a third party to be created, and this could potentially increase the risks of lapses in coordination.

4.7 Airlines and Arora suggested that the CAA should immediately increase its resources to develop the regulatory framework for a third party. Airline respondents focussed on the advantages that competition from Arora could bring to the process of capacity expansion and suggested that:

[33] See "Economic regulation of terminal expansion", a report by Frontier Economics:

- it may be necessary for the CAA to take more steps to accommodate Arora's proposals and the CAA should take into account the informational advantages HAL will have over Arora. They said that developing regulatory arrangements is the role of the CAA, and the onus should not be wholly on Arora to make significant progress in proposing suitable regulatory arrangements;
- the CAA should be prepared to take decisions on Arora's credibility before competition to deliver capacity expansion demonstrates real benefits;
- the CAA must be careful not to reach any premature judgments on Arora's proposals or hold it to a higher standard than HAL has been held to when assessing its credibility (in particular, HAL has provided only limited information on costs and efficiency); and
- the CAA may need to judge whether the information requests by Arora, and the responses to them by HAL, are fair, and whether they advance the consumer interest.

4.8 Airline respondents also expressed continued support for a 'BuildCo' approach and consider that such an approach could offer value to the expansion programme. Airlines said that the CAA is best placed to drive further development of the BuildCo concept, working closely with airlines (albeit that they have provided no detail on which such an approach could be developed).

4.9 Arora emphasised that the CAA should develop the regulatory framework to show how a third party could be accommodated at Heathrow. It said that it is critical this work is carried out as early as possible, to enable it to make progress and to help shape its DCO application. Nonetheless, Arora also said that speed of delivery of capacity expansion should not be prioritised over possible future efficiency savings. It also:

- said that the provision of information by HAL is/was fundamental to a fair DCO process, and that the CAA has a positive obligation to ensure essential information is shared;
- proposed a licence condition to require HAL to collaborate and share non-commercially sensitive information with third parties; and

- proposed to undertake land referencing jointly with HAL.

4.10 Arora confirmed it is committed to an ongoing evaluation of its proposals and is engaging closely with the CAA, airlines and other stakeholders, who have a major role to play in the application of any credibility tests.

4.11 Since responding to the October 2018 Consultation, Arora has provided an update on the scope of its expansion proposals, clarifying that this is the "Heathrow Western Hub", comprising reconfiguration and expansion to the west of Terminal 5. It is no longer proposing to deliver the new runway, or the related works on the M25. Arora has suggested its proposals can be delivered in conjunction with HAL's Northwest runway expansion proposal. Since this response, Arora has submitted an Environmental Impact Assessment Scoping Report to the Planning Inspectorate for consultation.[34]

4.12 We also received responses from other stakeholders including local councils and transport authorities that noted that alternative delivery arrangements could introduce further complexity to the expansion programme.

CAA views

4.13 It is for the Planning Inspectorate and the Secretary of State on an application under PA08, not the CAA, to consider the merits of alternative DCO applications, with regard to whether they should proceed or not. In this context, the choice of whether a commercial party (including Arora) seeks to develop part (or, indeed all) of the new capacity at Heathrow is, in the first instance, a matter for that commercial party, with the outcome of planning applications to be decided by the relevant planning process. The CAA will respond to any such proposals in a manner that is consistent with its duties under CAA12 and other legislation, including its role as a statutory consultee under PA08.

4.14 Our primary statutory duty is to further the interests of consumers and, in doing so, we will develop policy in a way that is appropriate, proportionate and

[34] See: Report

targeted. Our initial tests were designed to support this approach by helping us to use our resources in the way that best supports our statutory duties.

4.15 We remain open to further dialogue with Arora (and other stakeholders) on our tests and other matters and, consistent with our established policy, will seek to develop the regulatory framework in a way consistent with furthering the interests of consumers. Nonetheless, to understand how any regulatory arrangements might best reflect the circumstances of Arora's plans, we consider that a necessary first step is to consider and understand the credibility and maturity of its proposals through our initial tests, as set out in Appendix E.

4.16 As we set out in the October 2018 Consultation, while we consider that airlines have made an interesting suggestion in relation to the development of a BuildCo for capacity expansion, the proposal shared with us contains no detail on how this idea might work in practice. Bearing this in mind, we have decided to retain our focus on Arora's proposals and HAL's Innovation Partners scheme.

The Arcadis review of Arora's proposals

4.17 In October 2018, the CAA and the airline community commissioned our technical consultants, Arcadis to undertake a high-level, information gathering, and evidence-led review of Arora's proposals. The purpose of the review was to assist us, airlines and other stakeholders in understanding the detail behind Arora's plans. We asked Arcadis to focus the assessment on four aspects of the proposals:

- scope and design;
- cost and affordability;
- operability; and
- timing and delivery.

4.18 The Arcadis report has been published alongside this consultation.[35] Arcadis reported that, throughout the review, Arora engaged constructively, providing it

[35] See: The Arcadis Report

with access to key stakeholders, shared information and evidence to support the proposals.

4.19 The key findings of the Arcadis review are that:

- at a high level, Arora's proposals are currently at an early stage of maturity. Arcadis was, therefore, unable to confirm whether the proposals would meet the requirements of the NPS or whether they would be consistent with the aspiration for no real increase in charges;
- nonetheless, there are parts of Arora's design which could allow for interesting and innovative opportunities to be realised as plans develop, for example, in terms of consumer experience, operational efficiency and allowing for the future rationalisation of the Eastern campus;
- Arcadis highlighted that significantly more information and a greater level of detail and maturity is needed in Arora's proposals, and that Arora appears committed to taking its proposals forward in this manner. Arora has now put a team in place that it considers will have the capability to deliver a DCO application, albeit that Arcadis considered the stated timescales to be "ambitious"; and
- Arcadis set out areas where Arora should take steps further to develop the scope and design of its proposals.

Initial tests of Arora's proposals

4.20 As we have previously set out in both the October 2018 Consultation[36] and the Technical Information Note,[37] we do not consider it is appropriate for the CAA to commit significant resources to considering the regulatory framework before we have understood that Arora's proposals are credible, plausible and deliverable.[38] We intend that these initial tests will allow us to understand Arora's proposals

[36] Available online: CAP1722

[37] Available online: Technical information note

[38] This approach is consistent with our duties, as under S1(4) of CAA12, which state the CAA must carry out its regulatory duties in a way that is transparent, accountable, proportionate and consistent, and we must also only target regulatory activities at cases in which action is needed.

better, so that, if appropriate, we would be in a position properly to commence work on developing any possible future regulatory framework.

4.21 We also note that the Department for Transport ("DfT") currently considers HAL is the only credible promoter that is able to deliver the Northwest runway scheme.[39] In the Relationship Framework Document (RFD) between DfT and HAL, DfT outlines a number of factors which DfT believes currently make HAL the only credible scheme promoter. These include that (i) another party would need to acquire land from HAL compulsorily in order to deliver capacity expansion and (ii) that, were another party to seek development consent, it would require HAL's agreement and collaboration in relation to airport operations and managing interfaces. DfT also notes that HAL has made significant progress towards the delivery of capacity expansion, including undertaking a blight agreement with the Secretary of State, and providing assurances regarding financeability.

4.22 Nonetheless, in considering our initial tests we will be guided by our statutory duties and will focus on the information and evidence provided by Arora. We are committed to ensuring we engage with Arora in a reasonable, fair, proportionate and appropriate manner. However, it is important to note that this does not mean we will treat Arora and HAL identically, as the level of engagement that is reasonable and proportionate depends on the maturity and detail of the expansion schemes. HAL is also in a different position from Arora in some important ways (irrespective of scheme maturity), including that HAL will be likely to continue to be regulated by the CAA irrespective of the outcome of each DCO process.

4.23 The Arcadis review of Arora's proposals provides some helpful initial evidence. Based on the evidence provided by Arcadis, we currently consider there is insufficient detail in Arora's proposals for us to apply our initial tests at this stage in a way that will provide us with meaningful information as to how to proceed. We had been seeking more detail about Arora's plans for some time before the

[39] See chapter 2 of the RFD

Arcadis report was commissioned, and it is clear from the Arcadis report that there remains significant work for Arora to do if it is to meet our initial tests.

4.24 If these areas become significantly more mature, for example, through material developments in the areas identified by Arcadis as requiring further work in relation to scope and design, Arora may be in a position to provide more evidence on the cost, affordability, operability and timing of the delivery of its proposals. We will continue to be open to further discussions with Arora on the tests and how it might best provide the information necessary for us to gain a fuller understanding of its plans. But the primary onus remains on Arora to show that it can address the issues identified by Arcadis and demonstrate that it can meet our initial tests.

4.25 Having reflected on stakeholders' responses to the October 2018 Consultation, we have developed further our initial tests (as set out in Appendix E) so that they are more focused and informative. The tests focus on how Arora intends to address the key issues of safety and security, consumer benefit, deliverability and operability, the regulatory framework, and compliance.

4.26 We may commission further work by Arcadis to review developments in Arora's plans. Whether we conduct a further review (and its timing) will depend on the progress made by Arora' but it is unlikely we would commission such a review before the autumn of 2019. This would allow time for Arora to develop its plans further but still be approximately one year ahead of when we currently understand that Arora plans to submit its DCO application.

4.27 In the meantime, we remain open to Arora providing evidence that its proposals are sufficiently mature to apply our initial tests, and we will consider any such input. In this context, we appreciate that some elements of Arora's proposals may progress more quickly than others. In advance of any further evidence from Arora, we remain open minded about how we will apply these tests. For example, the tests may be satisfied on an iterative basis, so that, if there are areas of weakness, Arora could provide further information to satisfy our tests.

4.28 Finally, it is important to note that none of these steps we intend to take preclude HAL and Arora from discussing how they could work together to deliver capacity expansion, and we would respond accordingly if such discussions occurred.

Information provision

4.29 We recognise that there are significant concerns from Arora and airlines regarding the provision of sufficient information to Arora on HAL's Northwest runway scheme to allow Arora to continue to develop the detail of its own proposals. Although Arora's scheme is now focused on the western campus at Heathrow there remains a significant element of competition and rivalry with HAL, as Arora is putting itself forward as an alternative developer for part of the capacity expansion programme. As a result, our expectations for HAL's engagement and information provision to Arora are necessarily different from our expectations on HAL to share information with airlines set out in our planning costs policy [40] and the "Section 16" reporting to the Secretary of State.

4.30 That said, we note that Arora considers much of the information it will require to prepare its DCO application is common to HAL's application. As we said in the October 2018 Consultation, where appropriate, Arora may make targeted and justified information requests of HAL, including a clear, targeted, and reasonably full explanation as to why HAL should provide the specific information it is requesting. Arora should also demonstrate how any information requested meets CAA's expectations, including avoiding the unnecessary duplication of costs which may be borne by consumers.

4.31 If Arora considers it has satisfied these criteria and HAL is not responding to its information requests in an appropriate or reasonably timely manner, it should raise its concerns with the CAA. In doing so it should demonstrate to CAA the nature of its concern, why it considers HAL should supply the requested information, and be clear about the nature of the information sought. In the absence of Arora providing clear and detailed evidence that HAL has failed to provide appropriate and necessary information, it would be premature for us to take forward consideration of the licence condition on HAL suggested by Arora to require HAL to share information. Nonetheless, if evidence emerges of HAL

[40] We will shortly be consulting in further detail on our cost policy for planning costs. This policy consultation will be available on our website:

inappropriately withholding information, we would consider the best option to address the issue.

4.32 As we have previously made clear,[41] we will expect HAL to address how it has engaged with potential third party providers in its business plan. If particular opportunities are not followed up by it, we will expect HAL to justify its proposed costss to demonstrate that its preferred approach better serves the interests of consumers and provides better value for money than the alternative. If evidence were to emerge showing that HAL had acted inconsistently with these expectations, this might indicate inefficiency and, where we have evidence indicating inefficient expenditures, we would seek to guard against the recovery of these costs from consumers.

Views invited

4.33 We welcome views on any aspect of the issues raised by alternative delivery arrangements and on our approach to the initial tests for Arora discussed in this chapter and in Appendix E.

[41] December 2017 consultation

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 airport, these duties relate to the CAA’s functions concerning the activities of HAL as the operator at Heathrow airport.

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

Gearing sharing mechanisms

1. When Ofwat consulted on introducing a gearing sharing mechanism as part of a wider suite of policy changes, some licensees and investors objected on the basis that such an arrangement constituted a material change of regulatory approach. We are mindful of the challenges posed by expansion and recognise the value in a stable regulatory regime. While we have completed some initial work exploring the merits of gearing sharing mechanisms, we are of the view that an additional adjustment mechanism may not be in the interests of consumers and that the main issues raised by gearing sharing can be better addressed by careful consideration of other elements of the regulatory framework.

2. The key arguments in support of gearing sharing include:

   - allowing consumers to share in the benefits more directly and immediately from management decisions to set actual gearing at levels above the notional level;
   - providing a mechanism for price control allowances more closely to match actual financing costs;
   - reducing the incentive for management to focus on complex, highly geared structures, rather than on operational matters;[42] and
   - reducing the risk that the financeability assessment proves inaccurate as, over the price control period, the gearing diverges from the level used in the financeability assessment.

[42] Were there evidence that highly geared structures benefit consumers, we might see potential consumer benefits from management putting time into developing and maintaining these structures. In the absence of such evidence, it seems likely that management seek high gearing to boost equity returns at the cost of reduced financial flexibility with no obvious benefit for consumers.

3. Gearing sharing mechanisms also have certain disadvantages when compared to a simpler approach based on notional gearing:

- it could be difficult to align the gearing level used in the financeability testing with the gearing used in assessing the WACC if one is static while the other updates over time;[43]
- introduces some additional complexity into the price control; and
- by mechanistically allowing for the possibility of higher levels of gearing , we could unintentionally allow for levels of gearing that might contribute to financial distress.

4. We have commissioned Ernst and Young ("EY") to review gearing sharing arrangements, explore other regulatory approaches to gearing and explore how a range of different gearing sharing arrangements might be applied to HAL. EY's conclusions are contained in a report that we will publish shortly to complement this consultation.

5. We note that some of the key issues that the EY report identifies as potential sources of gain that might be adjusted by a gearing sharing mechanism (such as the tax shield created by high levels of debt finance) might be better addressed more directly and explicitly by refining the regulatory treatment of corporation tax allowances. We plan to explore these options further, including the approaches adopted by other regulators to these matters. [44]

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[43] A gearing sharing mechanism would not necessary change the WACC allowance, but if the price control allowance changes due to changes in gearing, in practice, this brings the same outcome.

[44] See Ofgem

Appendix C

Initial thinking on stress test scenarios

Approach to developing stress test scenarios

1. In our stress testing, we want to understand the impacts of factors that HAL's management has influence over and those that it has less control over. We note that some factors, notably capital expenditure, contain some elements that are more controllable while others are less controllable. Our stress test scenarios will, therefore, involve some judgement about the extent of controllable and less controllable factors. We plan to use sensitivity analysis to understand the extent to which outputs (like prices and credit metrics) are affected by controllable and less controllable factors.

2. Sensitivity analysis involves changing one parameter at a time and observing its impact. Stress testing, by contrast, involves changing a collection of parameters all at once. By doing so, we can attempt to take account of the relationships between parameters. For example, we can model changes in passenger volumes and inflation rates that we consider are coherent.

3. The impact of economic factors in the wider economy are a key consideration when developing coherent stress test scenarios as changes in them are likely to affect a range of parameters, including:

   - the cost of new debt;
   - capital expenditure unit costs;
   - passenger volumes; and
   - inflation.

4. Some of these changes are also likely to lead to second order effects. For example, lower passenger volumes may affect both operating costs and non-aeronautical revenue.

Initial thinking on choosing stress test scenario parameters

5. The state of the economy is one of the largest non-controllable factors that is likely to have a bearing on the H7 price control period. We plan to base our stress test scenarios on specific macro-economic scenarios.

6. There are a range of well-regarded third parties who provide macro-economic projections and we consider that the Bank of England is one such institution which is also very transparent about its projections.[45]

7. Our initial view is that we should base our stress testing of less controllable factors on the stress test scenarios produced by the Bank of England. These scenarios themselves contain projections for inflation and interest rates in the event of an economic downturn. We plan that those parameters would directly form a part of our stress test scenario.

8. Other input parameters in our financeability modelling, such as passenger volumes, operating costs and non-aeronautical revenues, are likely to be indirectly affected in a macro-economic downturn of the sort described by the Bank of England scenarios. We plan to make clear assumptions about precisely how those parameters would be affected.

9. Our initial thinking is that, given the strong historical correlation between GDP[46] and passenger volumes,[47] we would scale the base case passenger volumes projections in line with Bank of England's stress test

[45] See Bank of England – Stress testing

[46] Gross domestic product

[47] The DfT aviation forecasts note that GDP is one of several factors that influence passenger volumes, https://www.bankofengland.co.uk/stress-testing

GDP figures.[48] We would look to model the impact of a change in passenger volumes on non-aeronautical revenues and operating costs. Judgement will be required in determining a suitable scaling factor, but we would expect that both non-aeronautical revenues and operating costs would scale in proportion to changes in passenger volumes.

10. In a macro-economic downturn, construction unit costs can decrease.[49] However, the Bank of England stress test forecasts do not give any direct indication of the potential size of this effect. In developing our stress test scenarios, we will look for evidence on the extent to which changes in the wider economy can influence construction unit costs and seek to incorporate this into our stress test scenario development.

11. While changes driven by the wider economy are likely to move in a reasonably predictable way, changes in more controllable factors are more liable to move with a greater degree of independence. For example, unexpected ground conditions or poor cost control could cause an increase in capital expenditure costs with no direct impact on other parameters.

12. Calibrating the inputs for our stress tests will require a mixture of judgements and analysis and we will look to HAL to provide evidence for suitable stress test inputs and relationships.

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[48] The calculation would be to take the base case passenger volumes, divide by the Bank of England's base case GDP figures and multiply by the Bank of England's stress test GDP figures.

[49] As companies scale back investment reducing the demand for construction works and products.

Appendix D

Proposed text of an economy and efficiency condition

Proposed text for inclusion in Part B: General Conditions of HAL's licence as a new condition "B3 General Duty of the Licensee":

B3.1 The Licensee shall conduct its business and its activities that relate to the provision of airport operation services at the Airport so as to secure the economical and efficient:

(a) operation and maintenance; and

(b) timely enhancement and development

of the Airport.

B3.2 In complying with [Condition B3.1], the Licensee shall seek to secure that the reasonable demands of present and/or future users of air transport services regarding the range, availability, continuity, cost and quality of airport operation services at the Airport are met. In so doing, the Licensee shall carry out appropriate engagement with users, airlines and other stakeholders, including providing timely and accurate information to them, so that it can identify present and/or future users' reasonable demands.

B.3.3 The Licensee shall fulfil its obligations under this condition to the greatest extent reasonably practicable, taking into account all relevant circumstances, including the need for it to finance its provision of airport operation services at the Airport.

Appendix E

Initial tests for Arora

So that it can demonstrate that its proposals for the development of elements of capacity expansion at Heathrow airport are sufficiently mature and credible for the CAA to commence more detailed work on how the regulatory regime under CAA12 might be developed to accommodate its proposals, Arora would need to provide information and evidence to address the following questions.

Safety and security:

1. Do the proposals consider how to ensure safe and secure airport operation, including during the construction phase? Does this consideration include how to ensure the safe operation of airspace surrounding the airport, and safe integration with other airports whose operations utilise the same airspace?

2. Is there initial evidence that the proposals will deliver a single accountable operator, in line with safety and security regulation expectations? As a minimum, CAA expects proposals to reflect the need for accountable safety managers, and integration with the existing safety management systems of NATS En Route plc and HAL.

3. Does Arora have an initial plan for how it will develop a security programme in compliance with security regulations?

4. Is there initial evidence that Arora has considered how to deliver key airport operation services such as airspace and air traffic management, firefighting, aircraft and vehicle traffic management, or ground handling services?

Consumer benefit:

5. Is there a reasonable prospect that the proposals would be in the interests of consumers?

6. Is there initial evidence that the proposed costs of these proposals are economic and efficient?

7. What evidence is there that these proposals have a reasonable prospect of being consistent with the affordability challenge set by the Secretary of State?

8. Is there initial evidence that the proposals have been informed by consumer engagement and evidence of consumer requirements?

9. Is there initial evidence that the proposals have been informed by engagement with airlines to understand and meet their needs?

Deliverability and operability:

10. Is there initial evidence that the proposals will work operationally and be able to be delivered?

11. Is there initial evidence that Arora has a robust programme plan for preparing its DCO application, including the planning milestones, deliverables and submission date?

12. Is there initial evidence that the proposals will address operational issues such as resilience?

13. Is there initial evidence that the proposals could integrate with wider airport operations, for examples baggage or IT systems?

Regulatory framework:

14. What are Arora's initial views on the commercial and regulatory arrangements that might support its proposals?

15. Can the regulatory framework be developed to support these proposals?

16. Is there evidence to suggest this framework would aim to protect the interests of consumers?

17. Is there evidence of how Arora may propose to manage costs, for example by being willing to accept a regulatory cost control mechanism?

Compliance:

18. Is there initial evidence that the proposals will be compliant with the NPS and other relevant statute?

19. How do the proposals seek to manage the environmental impact?