

Economic regulation of Heathrow: working paper on the efficiency of HAL's capital expenditure during Q6

CAP 1964



Published by the Civil Aviation Authority, 2020

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

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First published September 2020

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About this document

This working paper discusses our approach to reviewing Heathrow's Airport Limited ("HAL's") capital expenditure ("capex") incurred during the Q6 price control. In particular, it includes:

- a recap of our previous work in this area;
- our method for selecting a sample of projects for review and a summary of the findings of our consultants (Arcadis) on whether there is evidence of inefficiency in relation to these projects;
- our proposed approach to reviewing these findings including in the context of broader issues; and
- the next steps.

Views invited

We welcome views on any of the issues raised in this working paper.

Please e-mail responses to economicregulation@caa.co.uk by no later than 17th November 2020. We cannot commit to take into account representations received after this date.

We expect to publish the responses we receive on our website as soon as practicable after the period for representations expires. Any material that is regarded as confidential should be clearly marked as such and included in a separate annex. Please note that we have powers and duties with respect to information under section 59 of the Civil Aviation Act 2012 and the Freedom of Information Act 2000.

If you would like to discuss any aspect of this document, please contact Mantas Aleksa (mantas.aleksa@caa.co.uk).

Introduction and summary¹

This working paper explains our approach to reviewing the efficiency of HAL's Q6 capex. The approach we have adopted involves consideration of a wide range of evidence:

- consistent with the approach adopted for the Q5 review we have selected a sample of projects for review and used expert consultants to provide an assessment of the projects and assess whether there is evidence of inefficiency;
- we have then built on this approach by considering evidence provided by the Independent Fund Surveyor (IFS) and considered how best to take account of the development by the CMA of the Demonstrably Inefficient or Wasteful Expenditure (DIWE) framework, which has been designed to help guide regulatory reviews of capital efficiency; and
- we have also looked at wider issues, including the capitalisation of overhead costs and the lessons from the Transport Study, which has looked at broader factors driving capital efficiency.

Nonetheless, this review of Q6 capex has shown that assessing the efficiency of capex projects on an *ex post* basis is challenging and can be controversial – it is not straightforward to quantify any inefficiency, judge the scale of regulatory dis-allowances (if any) and be clear that projects are not being judged with the benefit of hindsight. Therefore, we remain of the view that it is important to continue our work on developing new forward looking incentives for capital efficiency, as explained in our August 2020 working paper on these matters.

We recognise the stretch on resources that HAL, airlines and other stakeholders are currently experiencing. This working paper includes background information on our proposed approach, and is accompanied by a thorough report by our technical consultants Arcadis. While this ensures a high level of transparency in our approach we recognise that some stakeholders may lack the resources to be able to absorb and comment on all of this information. Bearing this in mind, we are very happy to present our approach to stakeholders and explain key issues. Please contact mantas.aleksa@caa.co.uk if you would find it helpful to discuss the material in this working paper. We will also engage further with HAL and airline stakeholders to help finalise our approach to this review during the remainder of 2020 and 2021.

¹ References to previous CAA consultations, and definitions of terms used in this consultation are set out in the glossary at Appendix B

Introduction

1. A key building block in the economic regulation of HAL is its spending on capex, which covers a range of projects aimed at maintaining, renewing and enhancing the assets at the airport. Given that HAL's spending during the Q6 period amounted to around £3.2bn² (in 2019 prices), this expenditure will form a significant proportion of HAL's RAB (approximately 20% of the total £16.6bn RAB). As a result, through calculation of the regulatory return and depreciation on the RAB, this will feed through to become a significant component of airport charges for many years.
2. An important part of the regulation of capex during the Q6 price control period is the work we are undertaking as part of this review to determine whether:
 - there is clear evidence of inefficiency by HAL; and
 - whether on this basis we should make adjustments to HAL's RAB to provide incentives for efficiency and protect the interests of consumers.
3. Our *ex post* review of capex incurred by HAL during Q5 led to the CAA disallowing £29.6m³ from HAL's RAB when we set the Q6 price control. The quantum of this disallowance was informed by our consultants' studies.
4. The Q6 price control initially covered the period up until December 2018. This was subsequently extended by one year until December 2019. This paper focuses on the Q6 period until December 2018, but also provides information on capital projects that were delayed into 2019 and the current iH7 period, some of which are yet to be completed (the full list of projects is set out in Table 1 of this report).

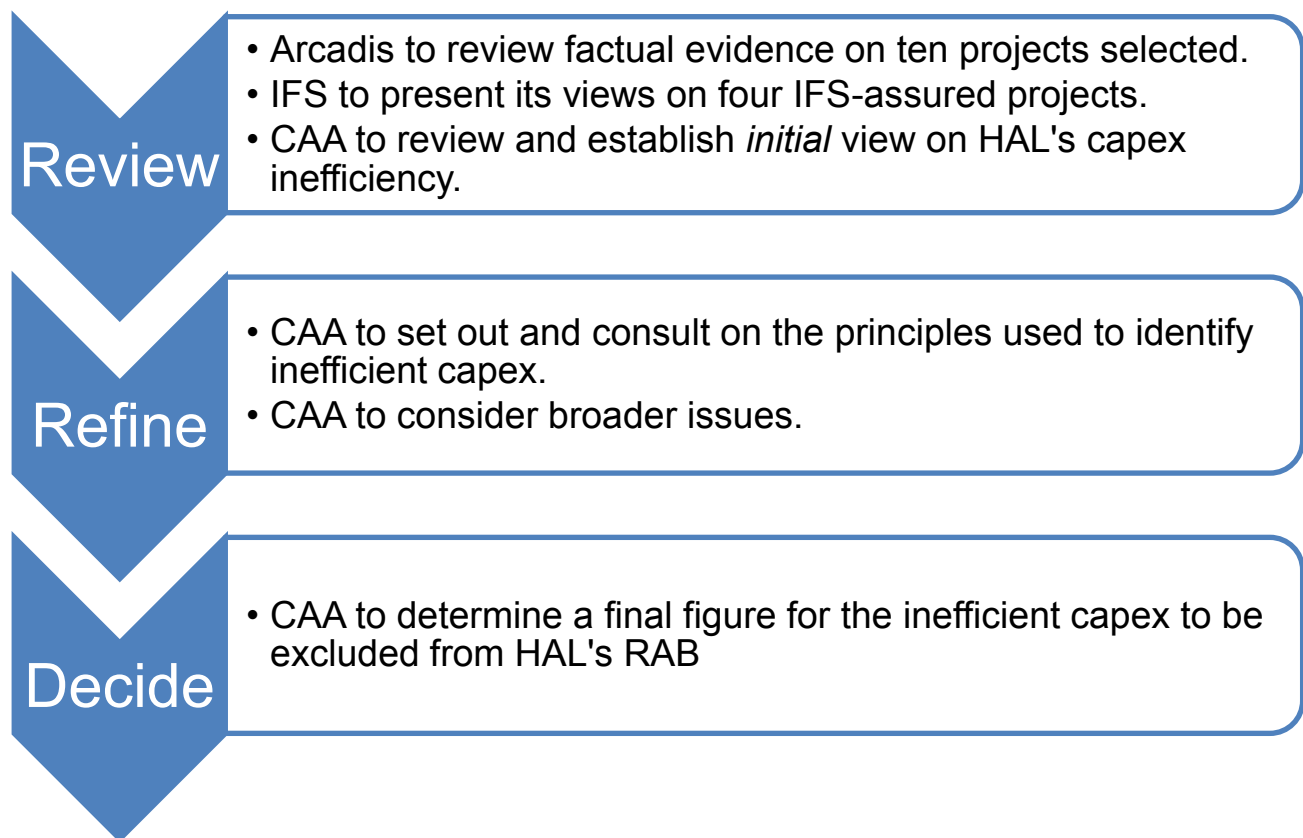
² Excluding expenditure on Category B & C costs. Source: HAL's regulatory accounts.

³ In 2012 prices. More information about Q5 and relevant documents can be found in Glossary of this document.

The CAA's approach

5. The current regulatory framework for capex includes an *ex post* review with expenditure subject to an efficiency assessment at the end of the price control period. Any capex that is determined to be inefficient under this assessment may be “disallowed” from HAL’s RAB and, therefore, excluded from the calculations for the following (H7) price control.
6. Our overall approach is summarised in Figure 1 below. We are currently at the review stage.

Figure 1: Proposed Q6 capex adjustment framework



Source: CAA

Process to date

7. In developing this working paper, we have considered the following:
- our statutory duties⁴;
 - findings by Arcadis and the IFS;
 - experience from *ex post* reviews we have carried out and the results of the recent CMA review of NERL's price control arrangements;
 - stakeholders' views of particular capex projects;
 - the Q6 capex governance framework used by HAL; and
 - wider evidence on HAL's treatment of capital overheads and the results of the [Transport Study](#).
8. In 2018, we started reviewing HAL's overall capex during Q6. We went through a number of steps: reviewing existing evidence, developing project selection and assessment criteria, and engaging with stakeholders. We selected ten of HAL's capital projects that were then subjected to independent assessment by our consultants, Arcadis. By selecting these ten projects, our aims were to select the subset of IFS-assured projects (which are the larger and more strategically important projects in HAL's portfolio) that had already been identified as having issues with cost control and/or timely delivery, and also a sample of other (non-IFS assured) projects.

Issues dealt with in this working paper

Assessing sample projects for inefficiency

9. We summarise Arcadis' assessment criteria and its findings in chapter 1 of this working paper. We also explain our approach to reviewing these projects, including the use of the evidence submitted by IFS.

⁴ Our duties are set out at Appendix A of this document.

10. Arcadis' review of the selected Q6 projects provided an independent view of HAL's efficiency. Arcadis' technical assessment focused on HAL's⁵ delivery of projects by reference to HAL's Capital Efficiency Handbook ("the Handbook") and built on existing work done by the IFS, while also including additional evidence received from stakeholders.
11. We go on to consider how we should best assess the findings of Arcadis and the IFS in determining estimates of any inefficiency by HAL. In its Provisional Findings on NERL's RP3 price controls the CMA invited the CAA to develop a policy statement for NERL that better explained how the CAA would judge any disallowance of capex, following an *ex post* efficiency review. In response, the CAA submitted a draft regulatory policy statement that set out the principles and procedure that we expected to follow in determining whether any of NERL's capex should not be included in its RAB at the next price control review. In the draft policy statement, we set out a test of whether expenditure was "demonstrably inefficient or wasteful expenditure" (DIWE).
12. The CMA welcomed development of this draft regulatory policy statement and concluded that this would sufficiently specify and constrain the basis upon which the CAA would be expected to apply a disallowance of capex⁶. This approach has been used by the CMA and other regulators in the past⁷ and we use this approach in chapter 1 as the basis of our assessment of HAL's capex.
13. Key issues for consultation identified in chapter 1 include:
 - use of the framework for considering whether expenditure is "demonstrably inefficient or wasteful" and whether this should be modified to reflect the circumstances of HAL and the Q6 efficiency review;

⁵ Arcadis's review did not consider HAL's wider internal processes in delivering these projects but focused on the efficiency of the selected sample of projects.

⁶ See NATS (En Route) Plc/CAA Regulatory Appeal Final Report, pg. 9, paragraph 42.

⁷ See, for example, UREGNI's "Guidance on the interpretation and application of the Demonstrably Inefficient or Wasteful Expenditure (DIWE) Provision", 27 July 2017: <https://www.uregni.gov.uk/sites/uregni/files/media-files/Guidance%20on%20the%20interpretation%20and%20application%20of%20Demonstrably%20Inefficient%20or%20Wasteful%20Expenditure.pdf>

- our approach to determining and estimating efficiency/inefficiency for the Main and Cargo Tunnel projects; and
- our overall approach and conclusions on other projects.

Broader issues

14. In chapter 2, we set out broader issues that it may be appropriate to consider as part of this review, including:
 - whether there are issues arising from our use of a sample of capital projects that inform this review;
 - the treatment of capital overhead costs; and
 - the wider issues and difficulties with the projects discussed in chapter 1 and whether there is merit in considering the wider issues raised by other frameworks, including the Transport Study (in which efficiency initiatives and good practice were considered within capital intensive industries, with a focus on the transport sector).
15. In considering these broader areas, we note:
 - the advantages of consistency with the DIWE framework discussed in chapter 1 and the Q6 price control settlement;
 - the advantages of creating incentives for efficiency but also avoiding creating undue risks for HAL that might increase its cost of capital and in turn airport charges; and
 - our work to develop more effective capital efficiency incentives for the H7 price control period as summarised in the August 2020 working paper.
16. Key issues for consultation include:
 - our initial view that it is not appropriate to extrapolate the results of the sample of projects we have assessed and make further adjustments for inefficiency;
 - that further work on capital overheads should be undertaken as part of Constructive Engagement and HAL's work on its RBP; and

- our suggestions that HAL should provide any relevant information it has on significant outperformance and the wider issues raised by the Transport Study or our concerns about its delivery of complex projects.

Next steps

17. As noted above we will consider refining the results of our analysis in response to the comments of respondents on this consultation. In making final decisions on any RAB adjustments we will consider all the information available, with a view to retaining existing incentives on HAL for efficiency but avoiding creating undue risks, such as those that might be created with judging performance with the benefit of hindsight. As part of the rounded assessment, we would consider any evidence that HAL provides of exceptional performance on the delivery of its wider capital programme.
18. We will use what we learn in this review in setting our future policy for the incentives and other arrangements relating to capex by HAL, including the capex governance framework for H7. In particular, it will be important to take account of the experience of this review in designing a stronger, more consistent and targeted incentive regime, consistent with the approach set out in our August 2020 working paper.
19. We currently envisage that there will be at least one additional round of engagement with stakeholders needed to quantify and present any potential disallowances due to inefficiency. We will also consider if there is a case for carrying out further reviews of the efficiency of HAL's capex project for projects delivered in the period 2019-2021. For example, if the IFS (or other stakeholders) identify potential inefficiencies with a project (or projects) delivered during this period.

Structure of this document

20. The structure of the rest of this working paper is as follows:

- chapter 1 describes the process we used to select our sample of projects and summarises the findings of Arcadis' report. It also introduces a structured framework for reviewing this evidence; and
- chapter 2 discusses broader issues that may be relevant to our assessment of efficiency.

21. We also set out in Appendix C a comparison between the criteria used for assessing the efficiency of capex set out in the Handbook, and comparable criteria included in the DIWE framework.

Chapter 1

Assessing the sample projects for inefficiency

Introduction

1.1 This chapter starts by summarising some of the background to HAL's capex programme in the Q6 price control period and the approach we adopted to assessing the efficiency of HAL's Q5 capex. It then sets out:

- how we selected a sample of Q6 capital projects for review;
- our approach to reviewing projects and quantifying any inefficiency;
- a summary of the results of this review for each project or a group of projects; and
- emerging themes and conclusions.

HAL's Capex in Q6

1.2 During the original five year period of the Q6 price control (April 2014 to end of December 2018), HAL spent c.£3.2billion⁸ on renewing, maintaining and enhancing its assets. By the end of 2018, HAL had underspent against its capex baseline by around £260 million (both figures in 2019 prices). HAL undertook around 220 capital programmes/projects⁹ of varying complexity and materiality, with some of these set to continue beyond the end of the Q6 price control. These projects have produced a range of outputs, for example: helping to facilitate growth in average aircraft size, improving HAL's baggage handling capabilities and introducing self-service journey options for passengers.

Previous experience of reviewing HAL's Q5 capex

1.3 We commissioned consultants Alan Stratford & Associates ("ASA") to assess HAL's capex efficiency on a number of key Q5 projects as part of setting the Q6

⁸ Source: HAL's Regulatory accounts. Excluding Category B & C costs.

⁹ Source: January 2020 Portfolio Overview Report.

price control. ASA's main finding was that most projects had generally progressed well in terms of budget and schedule. However, ASA concluded that the Terminal 3 Integrated Baggage ("T3IB") project had experienced problems that HAL should have reasonably foreseen and mitigated. ASA estimated that inefficiencies resulted in about £30 million of excess costs during Q5.

- 1.4 Based on ASA's assessment, and after consideration of stakeholders' views, we decided to disallow £29.6m (in 2012 prices) from HAL's RAB due to capital inefficiency. Broadly, the test we used was whether the expenditure would have been incurred by an "efficient operator" and, for the reasons outlined in our decision, we considered that certain expenditure had been inefficiently incurred.

Our approach to sampling projects

- 1.5 During the Q6 price control period, HAL has operated under a capex governance framework described in the Handbook that has involved the IFS in helping monitor and assess the progress of certain number of key capex projects through HAL's capex governance processes.
- 1.6 To understand HAL's capex envelope better and gather early views from stakeholders, we held introductory meetings with a number of key stakeholders, including the airline community. We also studied existing information and guidance, such as IFS project "close out" reports and the Handbook. In addition, we sought airlines' initial views on which projects they thought might be inefficient and why they thought this.
- 1.7 When selecting our sample of projects that were subject to an independent assessment, we sought to take into account what we had learned from the Q5 capex review, the key differences between the Q5 and Q6 capex frameworks, and what we had learned from our discussions with stakeholders. HAL's capex envelope can be classified into IFS and non-IFS assured projects (the IFS was first introduced in Q6) and we have selected projects for review from both these categories.