

# Economic regulation of Heathrow Airport Limited: working paper on Q6 capital expenditure and early expansion costs

CAP 1996



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## About this document

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This working paper discusses our treatment and assessment of two categories of historical capital expenditure (“capex”) incurred by Heathrow Airport Limited (“HAL”):

- capex incurred during the Q6 price control period, and our *ex post* assessment of its efficiency; and
- early expansion costs relating to the work to develop a planning proposal for a third runway at Heathrow airport.

In relation to the Q6 capex review, this working paper covers:

- an overview of stakeholder responses received to our September 2020 Working Paper<sup>1</sup>;
- an update on the key policy areas; and
- our emerging conclusions from this review.

In relation to early expansion costs, this working paper provides:

- an update on our policy; and
- our assessment of costs incurred by HAL before March 2020.

## Views Invited

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

Please e-mail responses to [economicregulation@caa.co.uk](mailto:economicregulation@caa.co.uk) by no later than 18 June 2021. 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 Alex Bobocica ([alex.bobocica@caa.co.uk](mailto:alex.bobocica@caa.co.uk)) in relation to early expansion costs or Mantas Aleksa ([mantas.aleksa@caa.co.uk](mailto:mantas.aleksa@caa.co.uk)) in relation to the Q6 capex review.

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<sup>1</sup> See Appendix B: Glossary for further details.

# Introduction and summary

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## Context

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1. HAL's capex is a key element in setting airport charges, as it feeds through to HAL's regulatory asset base ("RAB") and so into airport charges (through a regulated return and depreciation on the capital invested). It is also essential that HAL invests efficiently to provide an appropriate quality of service and, where appropriate, new capacity. Previous CAA consultations<sup>2</sup> have discussed the treatment and assessment of two categories of historical capex:
  - early expansion costs; and
  - capex incurred during the Q6 price control period.
2. For both these categories, the regulatory treatment of this expenditure includes the assessment of efficiency by a process of *ex post* efficiency reviews.<sup>3</sup> These involve an assessment of a sample of relevant capex to determine if there is evidence that the expenditure was incurred inefficiently. We will use this assessment to inform our decision on possible RAB adjustments for both categories of capex.
3. Our assessment of both categories of spending has shown that assessing the efficiency of HAL's capex projects can be challenging. It is often not straightforward to:
  - quantify inefficiency, including because there are limited clearly relevant benchmarks;
  - judge the appropriate scale of the appropriate regulatory dis-allowances (if any); and
  - be clear that projects (or project development activities) are not being judged with the benefit of hindsight.
4. As we explained in the September 2020 Working Paper, we also remain of the view that it is important to continue our work on developing new forward looking (or *ex ante*) incentives for capital efficiency for the H7 price control period. We

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<sup>2</sup> The June 2020 Consultation covered early expansion costs, and the September 2020 Working Paper covered our approach to reviewing the efficiency of HAL's Q6 capex.

<sup>3</sup> The assessment of early expansion costs also includes reviewing whether the costs submitted by HAL are correctly categorised as expansion costs (versus "Business as Usual"). Our assessment approach for early expansion costs is explained in more detail in chapter 4.

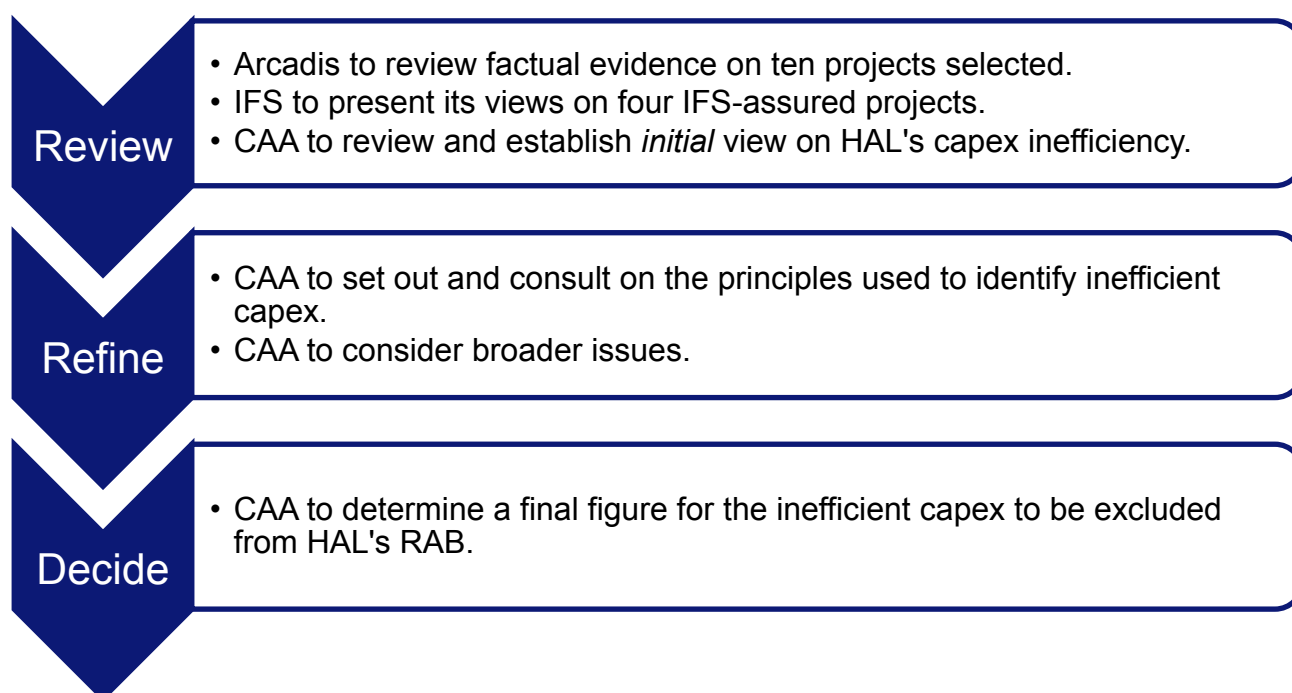
provide further details of our developing policy on incentives for capital efficiency in the Way Forward Document, which is published alongside this document.

5. We recognise the stretch on resources that HAL, airlines and other stakeholders are currently experiencing. This working paper includes background information on our detailed assessment of early costs. While this ensures a high level of transparency in our approach, we recognise that some stakeholders may appreciate a more focused discussion of key issues. Bearing this in mind, we are very happy to present our approach to stakeholders and explain key issues.
6. Please contact [Alex.Bobocica@caa.co.uk](mailto:Alex.Bobocica@caa.co.uk) or [Mantas.Aleksa@caa.co.uk](mailto: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 both reviews during the remainder of 2021.

## Q6 capex review

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7. In the September 2020 Working Paper, we reviewed ten of HAL's capex projects that were completed or were in progress during the Q6 price control. We also considered a number of broader issues around the delivery of HAL's wider capex envelope during this period.
8. In this paper, we provide an overview of stakeholder responses received to the September 2020 Working Paper as well as an update on the key policy areas and our emerging conclusions.
9. The current regulatory framework for capex includes an *ex post* review for the Q6 period, so that expenditure is 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 calculation of airport charges for the following ("H7") price control. The current framework also has other features designed to encourage capex efficiency, such as airport/airline engagement on capex and the work of the Independent Fund Surveyor ("IFS").
10. Our high-level approach to the Q6 efficiency review remains as set out in the September 2020 Working Paper. This is summarised in Figure 1 below. This update focuses on the "Refine" and "Decide" stages.

**Figure 1: Proposed Q6 capex adjustment framework**

Source: CAA

11. The September 2020 Working Paper sought stakeholder views on the following main issues:
- our use of the DIWE framework<sup>4</sup> for assessing the efficiency of projects;
  - the evidence relating to the Cargo Tunnel project and our approach to identifying an initial estimate of inefficient spending on this project;
  - the differences between the issues raised by our review of the evidence on the Main Tunnel project and the overall conclusions reached by our consultants, Arcadis;
  - our view that any concerns relating to Terminal 3 Integrated Baggage (T3IB), Terminal 5 Western Baggage Upgrade (T5WBU) and the six non-IFS projects reviewed (representing approximately 65% of the total spending assessed, based on the last approved budget) were insufficient to warrant a finding of inefficiency using the DIWE criteria; and

<sup>4</sup> See, for example, UREGNI's guidance "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>



- broader issues relating to the delivery of the Q6 capex envelope, including (i) the possible extrapolation of findings on the projects we reviewed in detail to make further adjustments for inefficiency across HAL's capex programme (ii) capital overheads and (iii) the wider issues identified by the Transport Study.

## Summary of this policy update

12. This paper confirms our earlier view that the evidence we have suggests inefficiency in the Cargo Tunnel project. On the basis of Arcadis' previously identified range for the level of this inefficiency (between £0 to £12.7m), we consider that the level of inefficiency is at the upper end of this estimate (representing approximately 28% of historical spending for this project). We have also considered the additional evidence that was submitted by HAL in relation to questions raised by the Transport Study, but do not consider that this justifies changing our estimate of the inefficiency associated with the Cargo Tunnel project.
13. In addition, we propose to continue monitoring both the Cargo and Main Tunnel projects until they are completed and the benefits to consumers are delivered. Once these projects are complete, we may review them again, depending on the final costs of delivery and whether new information emerges on either efficiency or inefficiency. As such, our conclusions on the Main and Cargo Tunnels projects should be considered as interim.
14. We also note that, given both the evidence and the outcome of this review, there may be a benefit in updating the Capital Efficiency Handbook as well as other relevant governance documents. This is in addition to continuing our work on developing new forward-looking incentives for capital efficiency as noted above and in September 2020 Working Paper.

## Review of early expansion costs

15. On 27 February 2020, the Court of Appeal delivered its judgment that the Airports National Policy Statement ("NPS") had not been lawfully produced<sup>5</sup> and then HAL paused its capacity expansion programme. This judgment was appealed by HAL to the Supreme Court which ruled on 16 December 2020<sup>6</sup> that the Government's decision to designate the NPS had been lawful, reversing the decision of the Court of Appeal. HAL subsequently issued a statement that it will now take the necessary time to consult with stakeholders before taking decisions on what happens next on capacity expansion.

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<sup>5</sup> See: *R (Friends of the Earth) v Secretary of State for Transport and Others* [2020] EWCA Civ 214.

<sup>6</sup> See *R (on the application of Friends of the Earth Ltd and others) (Respondents) v Heathrow Airport Ltd* (Appellant). <https://www.supremecourt.uk/cases/uksc-2020-0042.html>

16. This working paper provides an update on our policy in relation to early expansion costs, and on our initial assessment of the efficiency of costs incurred by HAL before end of February 2020. Our policy covers whether HAL can add efficiently incurred costs to the RAB, the return HAL can earn on those costs and the timing of any RAB additions. Our assessment focuses on whether costs were efficiently incurred and the quantum of costs that can be added to the RAB, in accordance with the rules established by our policy.
17. Prior to 2020, we issued several consultations on the regulatory treatment of early expansion costs in relation to both Category B (planning) and Category C (construction) costs.<sup>7</sup> In the June 2020 Consultation we set out a re-focused and simplified approach for the recovery of early costs incurred before HAL paused its work on expansion (that is, costs incurred before March 2020). The table below provides a summary of these costs.

**Table 1: Summary of early costs incurred by HAL between 2017 and February 2020**

£m	2017	2018	2019	Jan-Feb 2020 <sup>2</sup>	Total
<b>Category B<sup>1</sup></b>	78	118	167	21	384
<b>Category C</b>	6	11	71	21	109
<b>Total</b>	84	129	238	42	493

Source: HAL data.

<sup>1</sup> Category B costs for 2017 and 2018 are not in the scope of our review as part of this working paper; they have already been reviewed by the Independent Planning Costs Reviewer (“IPCR”).<sup>8</sup>

<sup>2</sup> Jan-Feb 2020 data is based on HAL’s internal accounting information.

18. HAL has continued to incur costs associated with the expansion programme after the Court of Appeal’s judgment. The costs that HAL has incurred after 1 March 2020 include costs of pausing and demobilising its expansion programme, which we refer to as “wind-down costs”, and which HAL has most recently estimated to be in the region of £30m, for the period between March 2020 and December 2020. They also include the costs associated with HAL’s appeal against the Court of Appeal’s judgement, which HAL has estimated to be approximately £1.1m (incurred between March 2020 and December 2020).
19. In this working paper, we are setting out the following final policy proposals in relation to early expansion costs. These final policy proposals are consistent with the proposals set out in the June 2020 Consultation, including:

<sup>7</sup> See the December 2019 consultation, the July 2019 consultation, and earlier consultations in relation to capacity expansion.

<sup>8</sup> See Appendix B of the July 2019 Consultation, and Appendix D of the June 2020 Consultation.

- i. costs incurred by HAL before March 2020 can be added to the RAB at the beginning of 2022, subject to the efficiency review that we are currently undertaking;
- ii. risk sharing arrangements and recovery caps are no longer appropriate and will, therefore, not apply to these costs; and
- iii. we will make an allowance for financing costs for costs incurred before March 2020 as follows:
  - a. the Q6 cost of capital of 5.35% for the period up to the end of 2019; and
  - b. the iH7 cost of capital of 4.83% for the period after January 2020.

20. We are also confirming our June 2020 proposal to allow HAL to recover costs incurred in winding down the expansion programme over the course of 2020 and 2021 if relevant, subject to an efficiency review.
21. As HAL is still incurring a small amount of costs in relation to programme wind-down (specifically associated with property purchases), we are not in a position to start our assessment of these costs yet. We will confirm in due course the timing and process for this assessment.
22. We also set out the findings from our initial assessment of early expansion costs incurred before March 2020 (see chapter 4). This assessment identifies areas where HAL has yet to provide sufficient information to support its view that costs have been efficiently incurred. If HAL does not provide appropriate further information and evidence in relation to these matters, then it is likely that we would reach a finding of inefficiency. In these circumstances, we would assess and quantify the level of inefficiency based on available evidence. Based on that assessment and quantification, we would then decide whether some of the spend in relation to these areas should be excluded from the RAB at the beginning of H7.

## Structure and consultation questions

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23. This working paper is structured as follows.

### **Q6 capex review**

- Chapter 1 outlines stakeholders' feedback to the September 2020 Working Paper and provides an update to our policy.

### **Review of Early expansion costs**

- Chapter 2 sets out our final policy on Category B and early Category C early expansion costs incurred before March 2020;

- Chapter 3 provides an update on wind-down and Supreme Court appeal costs incurred by HAL during 2020; and
- Chapter 4 sets out our assessment, including findings, of early expansion costs incurred before the March 2020.

24. This working paper also sets out a number of consultation questions, including:

**Chapter 1:** we would welcome views from stakeholders on any aspect of our work on the Q6 capex efficiency review and in particular:

- our conclusions that the outcome of this review on the Main and Cargo Tunnels projects should be considered as interim;
- our view that, given the information currently available on the inefficiency attributable to HAL in the Cargo Tunnel project, the adjustment to HAL's RAB should be at or towards the top of Arcadis' previously identified range of £0 to £12.7m; and
- our view that the Capital Efficiency Handbook (and other relevant governance documents) would benefit from being updated in the light of the conclusions of this review.

**Chapter 3:** we welcome views on our approach to allowing the recovery of HAL's early costs incurred after March 2021, including our proposal to carry out an efficiency assessment later this year, and on any other issues raised in the chapter.

**Chapter 4:** we welcome views on any aspect of our approach to the efficiency assessment of early costs and in particular:

- the initial findings of our review of Category B and Category C costs, including in relation to the findings of potential inefficiency;
- the cross-cutting issues we have identified and any implications of these for our assessment of efficiency; and
- whether there is any additional evidence we should consider in relation to our initial findings.

## Chapter 1

# Update on the Q6 capex efficiency review

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## Introduction

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- 1.1 This chapter provides an update on our work on the efficiency review of HAL's Q6 capex. In particular it:
- sets out the feedback we received to the September 2020 Working Paper on the DIWE framework and our conclusions on these matters;
  - discusses stakeholders' feedback on a sample of Q6 capex projects and updates our assessment of them. We also set out our views on a number of related policy areas; and
  - summarises our main decisions, further recommendations and seeks views on key issues.

## The DIWE framework

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### Stakeholder responses

- 1.2 We received eight responses. Two of these responses were from the airline community (LACC/AOC and British Airways), one from HAL, three from campaign groups with an interest in capacity expansion and two from individuals who are affiliated to campaign groups. Campaign groups that responded were Richmond Heathrow Campaign, No 3<sup>rd</sup> Runway Coalition and Heathrow Hub Limited.
- 1.3 BA's response supported the introduction of the DIWE criteria and agreed that HAL cannot "contract out" responsibility for project delivery. However, it also said that the introduction of the DIWE framework would "inadvertently" shift the burden of proof, so capex would be deemed efficient unless shown to be inefficient. BA went to say we should consider the approach to the DIWE framework that had been adopted by Northern Ireland Authority for Utility Regulation (UREGNI).
- 1.4 AOC/LACC noted that the Capital Efficiency Handbook (especially the efficiency aspects of it) should have been given greater consideration in our review. They also said that their approval is subject to all relevant projects following the capital governance process.
- 1.5 Campaign groups broadly supported our overall approach. However, the 3<sup>rd</sup> Runway Coalition noted that the framework could be further strengthened by placing the onus on HAL to prove that capex was efficient in the first instance.

- 1.6 HAL was concerned that we had moved from our established processes for assessing capital efficiency that were agreed at the start of Q6, by introducing the DIWE framework now. It noted that the DIWE framework should only be applied from a time when it would be reasonable for HAL to have understood the framework and developed a compliance strategy.

### Our views

- 1.7 We explicitly considered the merits of using the DIWE principles and compared them to the principles in the Capital Efficiency Handbook in the September 2020 Working Paper. We highlighted that the DIWE approach:
- provides an explicit, structured set of criteria for the *ex post* assessment of the efficiency of capex projects, accepted across regulated sectors and recognised independently as good practice by CMA;
  - builds on the current framework described in the Capital Efficiency Handbook; and
  - explicitly recognises that HAL cannot contract out responsibility for project development and delivery, so that inefficiency by one of HAL's contractors on a project is treated in the same way as inefficiency by HAL's own personnel.
- 1.8 On the question of whether we should assume that capex is efficient unless demonstrated otherwise, and the approach used by UREGNI, we reiterate that we are adopting an approach endorsed by CMA in the context of its work on NERL, rather than applying the approach implemented by UREGNI (which was specific to the arrangements applicable at the time for System Operator for Northern Ireland (SONI)).
- 1.9 Bearing in mind the similarities in approach to the Capital Efficiency Handbook, the wider advantages of the DIWE framework and the precedent established by the CMA, we will not be making further changes to our use of the DIWE approach.

## The assessment of individual projects

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### Cargo Tunnel

- 1.10 Each of BA and AOC/LACC noted that our conclusions on the Cargo Tunnel project should be interim and finalised only upon the projects' completion. BA also noted that all spending to date should be disallowed as inefficient, while AOC/LACC added that the top range of inefficiency should not be capped at £12.7million. The 3<sup>rd</sup> Runway Coalition said that all £12.7million of inefficiencies identified by Arcadis should be disallowed from HAL's RAB.
- 1.11 By contrast, HAL considered that it had managed the project proactively and that there was no evidence that it had contributed to any inefficiency. It also added that hindsight should not be used to examine decisions that were right for the

moment when they had been made and had been taken after consultation with stakeholders.

### Our views

- 1.12 Given the materiality of this project (the latest forecast total cost is around £200m) and the current and past issues identified, our conclusions on the Cargo Tunnel should be regarded as interim. We propose to continue monitoring the project throughout its delivery through various governance forums and the reports released by IFS. Once the project is complete, if there is substantive new evidence relating to efficiency or inefficiency, we may decide to conduct a further assessment of this project.
- 1.13 We remain of the view that the range derived by Arcadis for the estimates of inefficiency remains appropriate and proportionate. In the September 2020 Working Paper, we noted that the project faced several delivery issues including a lack of alignment between budget and solution, a lack of reporting on final cost, and that there was no ongoing review of the schedule. In addition, the project is currently paused and going through a re-planning process. Taken together these factors suggest some of the costs incurred to date are likely to be inefficient.
- 1.14 In the September 2020 Working Paper, we noted the Arcadis' view that the cost of £12.3m incurred as part of surveying, design and planning works is the main element of inefficient spending, and the further inclusion of "stand back review" costs of £0.5m (that is, reassessment of the project requirements, benefits and business case) represents additional inefficient spending. We note also:
- the airlines' view that all of the sunk cost on the project of around £40m could be considered inefficient; and
  - an update provided by HAL in a January 2021 airport-airline governance forum (Capital Portfolio Board), that some of the historically incurred costs on this project related to design packages, materials and other costs are likely to be written off/impaired by HAL in future.
- 1.15 On the basis of the evidence and our analysis, we consider that the level of inefficiency could lie in the upper part of the £0 to £12.7m range proposed by Arcadis, with any expected adjustment to be made to HAL's RAB likely to lie in the range £12.3m - £12.7m. This figure also takes account of the significant cost over-runs and other difficulties associated with this project. We have also considered the evidence submitted by HAL in relation to the Transport Study (which is covered in greater detail later in this Chapter). In summary, this supports us in continuing to take a proportionate approach to our estimates of inefficiency and does not justify either increasing or decreasing the estimate of project specific inefficiency.
- 1.16 As noted above and in the September 2020 Working Paper, we consider that, as the project is not yet complete, this finding should be treated as interim. Once the

project is complete (or not later than end of H7 to provide a backstop date in the case of further delays) HAL should have an opportunity to make the case that the spending is efficient, and we will consider whether there is further information on over-runs or inefficiency.

- 1.17 In summary, our present intention is for an adjustment to the H7 opening RAB in the range £12.3m - £12.7m (based on Arcadis' previously identified range), but we do not rule out further adjustments for this project once information is available on its final cost.

## **Main Tunnel**

- 1.18 Airline respondents broadly consider that the Main Tunnel project meets the requirements for identifying inefficiencies. In particular, AOC/LACC noted that the CAA should consider further issues in relation to this project as part of its efficiency review, including:
- overspending against the budget;
  - late timing of HAL's realisation and reporting of the issues;
  - significant delays; and
  - poor supplier performance.
- 1.19 BA stated that it would have expected both Tunnel projects to have been delivered to the previously agreed scope and price. Some other respondents had similar views to airlines. For example, Heathrow Hub noted that it is difficult to reconcile the evidence in Arcadis' report with their conclusions that the project was "efficiently delivered".
- 1.20 HAL expressed surprise that we had requested further evidence and views on this project. It considered that the process in developing our initial conclusion had not been transparent given the evidence it had previously provided. It also noted that airlines wanted more competition between contractors for construction projects at the airport and so it had been a background consideration in determining its contracting strategy with respect to this project. Overall, HAL agreed with Arcadis' view that it did not contribute to any capital inefficiency.

## **Our views**

- 1.21 In response to the September 2020 Working Paper we have received relatively little additional factual evidence on the Main Tunnel project. We also note the continuing differences of opinion between Arcadis and the views of each of the airlines and HAL.
- 1.22 Having reviewed all the evidence and views provided by Arcadis, airlines, HAL and other respondents, we do not consider that, at present, there is sufficient evidence of inefficiency to disallow any of the capex incurred on this project.



However, as with the Cargo Tunnel, we propose that, once the project is complete (or not later than the end of H7 to provide a backstop date in the case of further delays), if there appears to be new evidence of inefficiency, we would review this project further, noting that stakeholders have identified ongoing concerns on the efficiency of the project as it progresses.

### **T3IB and T5WBU**

- 1.23 AOC/LACC and BA consider that each of these projects display inefficiencies and that these should be considered further. For instance, on the T3IB, AOC/LACC considered that there had been poor planning and resourcing and that HAL had not learned from mistakes it made in Q5. They also took the view that certain elements of spend on that project from Q5 should be reassessed. Concerns were also expressed about the sudden increase in spending of £40m against the budget of £90m. They considered that this demonstrated HAL's failure to adhere to the governance arrangements and is a clear demonstration of inefficiency under the DIWE framework. In addition, Heathrow Hub noted difficulties in reconciling the evidence discussed in Arcadis' report with Arcadis' conclusion on the T3IB project.
- 1.24 HAL, on the other hand, welcomed our view that there had not been inefficiency on the T3IB and T5WBU projects. It also noted that it would not be in the interests of consumers to stifle innovation, by making such a finding on either or both of these project/s.

### **Our views**

- 1.25 Given the absence of additional factual evidence being presented, we remain of the view that the issues with these projects are not sufficient to warrant a finding of inefficiency under the DIWE criteria.
- 1.26 However, we were concerned about the points raised on HAL's compliance with the agreed governance processes. We have requested minutes of relevant meetings from airlines for further review which confirmed that the issue was discussed. Based on this further evidence, and the IFS's findings on Q6, we consider that compliance with the relevant governance was, at times, a problematic issue during Q6, particularly for larger or more complex projects.
- 1.27 We expect that HAL will adhere to the agreed capex governance framework arrangements, both for existing arrangements in iH7 and the updated arrangements for H7. If there are further instances of HAL not adhering to the framework, we would expect to use such evidence in future reviews in forming our views on capital efficiency, where this is an appropriate and proportionate approach.

## Non-IFS assured projects

- 1.28 AOC/LACC noted that their key concerns were around the four major IFS assured projects rather than the non-IFS projects. Heathrow Hub questioned details of Arcadis' review, enquiring why HAL had not undertaken a ground condition survey at the design stage on the Northern Perimeter parking project before undertaking any work. On the other hand, HAL welcomed Arcadis's finding that all six projects had been delivered efficiently.

### Our views

- 1.29 We note the detailed point raised on the Northern Perimeter parking project. This issue has previously been queried by us with Arcadis, but this did not lead to a change in Arcadis' conclusions that:
- value for money was provided; and
  - this project was adequately managed throughout.
- 1.30 Overall, and having considered stakeholders' responses, we have decided not to consider these projects further and there is insufficient evidence to support a finding that HAL's expenditure was DIWE.

## Other issues

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### Extrapolating our findings across HAL's capex portfolio

- 1.31 BA did not support making adjustments to estimates of inefficiency either by extrapolating the results of sampling or taking account of wider evidence (as discussed further below). HAL by and large agreed that extrapolation of our findings from the small sample of projects is not appropriate.
- 1.32 Having considered respondents' views, and consistent with the approach set out in the September 2020 Working Paper we will not extrapolate the results of our assessments across HAL's capex portfolio.

### Capital overheads

- 1.33 Airlines broadly welcomed our views on capital overheads and the need to review this area as part of H7 process. The 3<sup>rd</sup> Runway Coalition agreed with the key concerns we expressed in this area and noted that this appears to be a device for HAL recouping opex rather than being essential for capex delivery. Richmond Heathrow Campaign Group stressed that these costs should be efficient and that their apportionment and allocation to capex projects should be fully justified.
- 1.34 HAL noted that capital overhead costs will be a topic for ongoing discussion over the coming months, as both the portfolio and the capex incentives are developed.

- 1.35 Having considered the feedback we have received, we confirm our view that we will consider these matters as part of our work on the H7 price control review.

### **Additional Information**

- 1.36 Each of BA and AOC/LACC agreed that the questions we raised in the September 2020 Working Paper on the Transport Study framework appeared sensible and worth considering. However, they each expressed concerns about our willingness to revise the level of disallowed inefficiency downwards should the evidence presented by HAL be considered as “exceptional”.
- 1.37 The 3<sup>rd</sup> Runway Coalition noted that it is essential that HAL should provide any relevant information it has on significant outperformance and the wider issues raised by the Transport Study or the CAA’s concerns over HAL’s delivery of complex projects.
- 1.38 HAL agreed that the Transport Study framework is a relevant reference point and submitted evidence on the questions raised.

### **Our views**

- 1.39 We have sought advice from Arcadis on the additional evidence submitted by HAL. In particular, we asked Arcadis to review whether the submitted examples of projects and processes that were undertaken by HAL during Q6 were “exceptional” against a range of benchmarks.
- 1.40 In considering this additional evidence, Arcadis’ reviewed the examples submitted by HAL through a “Q6 lens” and not by reference to today’s industry practice. It also considered whether the practices implemented by HAL added value and how HAL delivered these through its projects and the possible impacts in terms of costs savings, time savings or quality improvements.
- 1.41 Arcadis concluded that there is no evidence that HAL demonstrated a very significant outperformance over expected industry practice during the Q6 price control. It also added that HAL’s performance was in line with how other major transport providers (and those highlighted in the Transport Study) have developed their programmes. Many of the practices adopted by HAL were already in use or have been developed by these organisations. In addition, Arcadis’ opinion was that Q6 was no more of an operational challenge than in previous price control periods which saw completion or major progress on projects such as Terminal 5 and T3IB. On the basis of this opinion and our own review, we conclude that the additional evidence submitted by HAL in relation the Transport Study is not ‘exceptional’, and no further adjustment is required as a result.

## Risk allowances

- 1.42 Respondents raised various points around the treatment of risk allowances. For example, BA noted that, if risks are properly accounted for at the planning stage, the divergence of out-turn costs within the programme as a whole should be normally distributed around a mean. Richmond Heathrow Campaign Group requested for more references to be made to risks and contingency cost management in our document. Similar points were noted in Heathrow's Hub response. In addition, HAL highlighted that projects are priced at the P50 level and not P95 as the latter would not be in the interests of consumers.
- 1.43 Examining the approach to risk allowances has not been a key focus of this review, which has looked for evidence of inefficiency. We will be undertaking further work on risk allowances as part of our work on the H7 price control.

## Areas outside the scope of this document

- 1.44 We note that several respondents have raised additional points relating to HAL's third runway scheme and HAL's regulatory framework more widely. These topics fall outside of the scope of this paper and, therefore, are not considered here.

## Summary of our main decisions

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- 1.45 In summary:
- we will be retaining our proposal to use the DIWE framework as outlined in the September 2020 Working Paper;
  - we have made interim conclusions on the Cargo and Main Tunnel projects. We proposed that once these projects are complete (or at the end of the H7 price control period if this is earlier), if there appears to be new evidence that suggests a greater level of efficiency or inefficiency, we will review these matters further;
  - the evidence currently available suggests inefficiency/a downward adjustment to HAL's RAB in the range £12.3m - £12.7m for the Cargo Tunnel at the start of the H7 price control period i.e. at or towards the top of Arcadis' previously identified inefficiency range of £0 to £12.7m . We are currently not proposing an adjustment for the Main Tunnel;
  - we reiterate the need for HAL to adhere to the existing capex governance arrangements;
  - we are not proposing inefficiency adjustments or to carry out further work on T3IB, T5WBU or the non-IFS projects;
  - we have not made adjustments for exceptional performance in relation to the Transport Study framework; and

- we retain our view that capital overheads are an important area and further work will be carried out as part of H7 price control review.

## Further recommendations

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- 1.46 We note that the impact of the covid-19 pandemic and associated drop in passenger numbers has led HAL to cancel and/or pause many capex projects. Given the scale of change, we will continue monitoring the situation, but expect HAL to provide structured reporting of its plans and estimates for the portfolio of paused projects.
- 1.47 In addition, based on the outcome of this review, we consider that there are number of issues where we would expect HAL to improve its performance on in H7 price control.
- we remain concerned about HAL's delivery of more complex projects as demonstrated by the issues identified in the Main and Cargo Tunnels projects; and
  - we also note the importance of good planning in the project delivery process and consider that more resources should be devoted to this activity where it is proportionate (and note the concerns expressed by Arcadis that the scope of certain projects lacked appropriate definition at the time HAL entered into contracts with its contractors).
- 1.48 To help address these issues, we consider that the Capital Efficiency Handbook (and other relevant governance documents) would benefit from being updated as part of our work on H7 price control to reflect the lessons learned from this review. We also remain committed to work on improving the capital efficiency incentives for the H7 price control, building on the successful elements of the current framework.
- 1.49 In addition, we note that several capital projects have finished/will finish in 2019-2021, and that there are several projects that will continue in to H7. In line with the discussion in the September 2020 Working Paper, we will consider if there is a case for carrying out further reviews of the efficiency of these projects. For projects that continue into H7, we would expect any further *ex post* reviews to take place towards the end of H7 period. For example, we would consider a further review if the IFS (or other stakeholders) identifies potential inefficiencies with projects delivered during the period.

## Views invited

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- 1.50 We would welcome views from stakeholders on any aspect of our work on the Q6 capex efficiency review and in particular:
- our conclusions that the outcome of this review on the Main and Cargo Tunnels projects should be regarded as interim;

- our view that, given the information currently available, the inefficiency attributable to HAL in the Cargo Tunnel project and that an adjustment to HAL's RAB should be at or towards the top of Arcadis' previously identified inefficiency range of £0 to £12.7m; and
- our view that the Capital Efficiency Handbook (and other relevant governance documents) would benefit from being updated in the light of the conclusions of this review.

## Chapter 2

# Final policy for early costs incurred before March 2020

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## Introduction

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- 2.1 In this chapter, we set out our final policy on the recovery of early expansion costs incurred by HAL during the period before March 2020 when the capacity expansion programme was paused. This policy covers both Category B (planning costs) and Category C (early construction) costs. It follows on from the approach set out in the June 2020 Consultation.
- 2.2 A key principle underpinning price control regulation is that the price controls should be set in a way that takes account of all relevant and efficiently incurred costs. This is in the interests of consumers as otherwise the regulated company may not have sufficient incentives to invest and provide an appropriate level of service. We have previously said that HAL's efficiently incurred early costs of capacity expansion should be added to its RAB and recovered during the H7 price control period and beyond. In making these commitments, we took the view that developing expansion was in the consumer interest at the time the expenditure was incurred.
- 2.3 We do not consider it is appropriate to revisit this approach in the current changed circumstances, as that would not be consistent with the CAA's established policy and would undermine confidence in the regulatory framework and constitute an undesirable form of "hindsight regulation". Such an approach could have the effect of deterring future investment, to the detriment of users of airport services.

## The June 2020 Consultation

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- 2.4 In the June 2020 Consultation we considered the following main issues:
- a) **A re-focused approach to costs that HAL incurred before it paused its work on expansion:** we considered that it was no longer necessary or proportionate to have separate policies for Category B and Category C costs given that HAL had paused its capacity expansion programme. Our simplified approach proposed the same treatment for all expansion costs incurred by HAL before March 2020, with these costs being added to HAL's RAB at the beginning of the next regulatory period (H7), subject to an efficiency assessment.
  - b) **Setting out aspects of our previous policy proposals which are no longer appropriate:** including future risk sharing arrangements, recovery

caps for costs incurred in 2020 and 2021, enhanced reporting requirements and a new licence condition on governance arrangements.

- c) **Financing costs:** we proposed to make an allowance for financing costs in the period up to 2022 using:
- i. the Q6 cost of capital of 5.35% for the period up to the end of 2019; and
  - ii. the iH7 cost of capital of 4.83% for 2020 and 2021.
- d) **Initial thinking on the treatment of programme wind-down costs** incurred by HAL after 1 March 2020, as well as the **costs HAL would incur in relation to the appeal to the Supreme Court**. This is covered in chapter 3 of this document; and
- e) **Assessing the efficiency of expansion costs:** in assessing whether costs were in the interest of consumers and should be added to the RAB, we said we would consider whether they are:
- i. supported by appropriate evidence;
  - ii. have been categorised correctly between “business as usual” (“BAU”) and “expansion” activities (to guard against potential “double counting” of costs); and
  - iii. efficiently incurred.

This is covered in chapter 4 of this document.

## Stakeholder feedback to the June 2020 Consultation

- 2.5 HAL broadly agreed with our approach of simplifying policy and adding efficiently incurred early expansion costs to the RAB. The HCEB also agreed that Category B and Category C costs which the CAA finds were incurred efficiently should be added to the RAB.
- 2.6 However, HAL did not agree with the CAA’s proposal to apply the iH7 cost of capital of 4.83% for expansion costs incurred in 2020 and 2021. It said that market data at that time in relation to airport WACC suggested a WACC much higher than 4.83%. HAL said that, from the point of view of regulatory consistency, the CAA should apply the Q6 WACC.
- 2.7 AOC/LACC and BA disagreed with the proposed approach, and specifically with treating Category B and Category C costs in the same way. They said that Category B and Category C costs should be treated differently from a policy perspective. They suggested that early Category C costs were incurred “at HAL’s risk”, without appropriate governance and oversight and that, therefore, the CAA should not allow HAL to recover these costs.



- 2.8 In addition, AOC/LACC said that, given the DCO has not been successful, HAL should:
- only be allowed to recover 85% of the Category B costs incurred, applying the risk sharing mechanism in the CAA's planning cost recovery policy to the present situation; and
  - only be able to earn a return equal to the cost of debt on these costs. BA made a similar point arguing for the application of the 85/15 sharing mechanism.
- 2.9 The RHC did not support HAL recovering the full amount of early expansion costs from consumers. HHL was also concerned with the CAA's proposal to allow HAL to recover early expansion costs in full (subject to an efficiency review).

## Final policy decisions

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### Recovery of costs

- 2.10 Prior to expansion being paused, the CAA had been developing and consulting on policy in relation to the recovery of early Category C costs in a number of documents (see the July 2019 Consultation and the December 2019 Consultation). HAL incurred costs with an understanding that this policy was being developed and they would be able to recover costs on the basis of the final policy.
- 2.11 We are also aware that the scale and nature of these costs was being discussed by HAL and airlines on an ongoing basis while the work was being undertaken, including through forums such as the Joint Expansion Board ("JEB") and the Costs and Benefits Working Group ("CBWG"). This was an important part of the process but, in the circumstances of a pausing of the capacity expansion programme, the issue of whether particular items of expenditure had been discussed as part of this governance process should not necessarily be considered decisive in determining its regulatory treatment.
- 2.12 Airlines have also argued that HAL was incurring Category C costs based on a plan with an assumed opening date for the new runway of 2026, "despite all evidence to the contrary". They have said that because the opening date was subsequently revised to 2028, HAL was initially incurring early Category C costs at an excessive rate, based on an unrealistic opening date assumption, and that this also means that they should not be allowed to recover these costs.
- 2.13 The decision to pursue capacity expansion at Heathrow airport was based on a range of factors, including evidence that showed significant costs to consumers from the constraints on runway capacity in the south east of England. We had also engaged with HAL and other stakeholders on the overall timetable for

capacity expansion towards the end of 2019. In these circumstances, there is no in principle basis for penalising HAL in relation to the broad timetable it was pursuing.

- 2.14 Nonetheless, our assessment of HAL's cost efficiency remains important, and our initial work on these matters is summarised in chapter 4.

### **Risk sharing arrangements and other outstanding policy issues**

- 2.15 As explained in the June 2020 Consultation, our previous policy on early expansion costs also included an 85/105 risk sharing mechanism<sup>9</sup> on the first £265 million of HAL's Category B costs (above an initial £10 million per annum that HAL is allowed to recover through current charges). These arrangements were designed to encourage HAL to develop a high-quality planning application.
- 2.16 Another element of our previous policy was that we reserved the right to decide whether HAL should be constrained to recover less than 85% of efficiently incurred costs in certain limited circumstances where HAL had "unilaterally withdrawn" from the planning process.
- 2.17 In response to the June 2020 Consultation, airlines said that the risk sharing mechanism should apply to Category B costs already incurred, as in their view, the expansion programme had "failed".
- 2.18 We note that HAL challenged the Court of Appeal's February 2020 ruling, and had its appeal upheld.
- 2.19 Having reviewed the arguments raised by all parties, we do not consider there are grounds on which the CAA could consider using its discretion under our previous Category B policy to reduce HAL's recovery of Category B costs below the 85% threshold. This is because HAL has not "unilaterally withdrawn" from the planning process.
- 2.20 In relation to the 85/105 risk sharing mechanism, as set out in the June 2020 Consultation, the position is now different as HAL has effectively been forced to pause its plans for capacity expansion through no fault of its own, and there is no clear timetable for the programme to restart. It is appropriate that we respond to the changed circumstances and it does not appear appropriate to now apply incentive arrangements designed to encourage a high-quality planning application.

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<sup>9</sup> Our previous proposals for the recovery of early expansion costs included a risk sharing mechanism for Category B costs over £10 million per year and up to £265 million (2014 prices). This is explained in more detail in the December 2019 Consultation. The sharing factors were 85/105 based on the failure or success of the DCO application. If HAL is successful with its DCO application, it would recover 105% of its efficient costs. If unsuccessful it will recover only up to 85% of its efficient costs. We did not propose similar arrangements for early Category C costs.

2.21 Respondents to the June 2020 Consultation did not comment on the other aspects of our previous proposals which we did not think were relevant in the changed circumstances, including recovery caps and enhanced governance arrangements. We are, therefore, confirming the proposals to remove these elements of policy as final.

## Financing costs

2.22 In the June 2020 Consultation we also said that, consistent with our previous policy, we intend to make an allowance for financing costs in the period up to 2022 using:

- the Q6 cost of capital of 5.35% for the period up to the end of 2019; and
- the iH7 cost of capital of 4.83% for 2020 and 2021.

2.23 In response to our consultation, HAL argued that current market data suggests a WACC much higher than 4.83%. HAL also said that, from a position of regulatory consistency, the CAA should not apply a different WACC than the Q6 assumption.

2.24 Airlines considered that HAL should only be allowed to earn the cost of debt on early costs.

2.25 We note the points raised by stakeholders and we acknowledge that recent events including the covid-19 pandemic may have affected rates of return, but we note that stakeholders have very different views on the likely magnitude of these impacts. We also note the importance of consistency in policy to our broad approach of allowing the recovery of early costs. In these circumstances, it remains appropriate to use a cost of capital consistent with the underlying price control arrangements, which is the 5.35% WACC for Q6 period and the 4.83% WACC for iH7 period, as set out in the June 2020 Consultation.

## Summary

2.26 Having considered the feedback received, we are confirming as final the policy proposals set out in the June 2020 Consultation (and summarised in paragraph 2.4 above) in relation to the policy for recovery of Category B and early Category C expansion costs incurred before 1 March 2020. Issues relating to recovery of wind down and appeal costs, and our assessment of efficiency, are dealt with in the next two chapters.

## Chapter 3

# Policy for early expansion costs incurred from March 2020

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## Introduction

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- 3.1 In this chapter we provide an update on capacity expansion related wind-down and appeal costs incurred by HAL from 1 March 2020. We also provide an update on a joint request from HAL and airlines in relation to the re-opening of the Interim Property Hardship Scheme (“IPHS”).
- 3.2 Unlike early costs incurred before 1 March 2020 (which are dealt with in chapter 2) we have not yet finalised the policy that will govern the regulatory treatment of these costs.

## Wind-down costs

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- 3.3 HAL has continued to incur costs associated with the expansion programme after the Court of Appeal’s judgment. The costs that HAL has incurred from 1 March 2020 include costs of pausing and demobilising its expansion programme, which we refer to as “wind-down” costs.
- 3.4 We understand from HAL that further costs of pausing expansion are likely to continue until late 2021 (with most of the expenditure having been incurred in 2020). Based on HAL’s submissions to date, wind-down costs from 1 March 2020 until the end of 2020 total £30 million. This spending includes costs such as residual staff costs, costs associated with fulfilling supplier contractual commitments, and HAL’s pre-existing agreements relating to property acquisition.
- 3.5 In the June 2020 Consultation, we said that we intended to finalise the approach to the recovery of these costs once the full nature and extent of spending has been confirmed by HAL. Nonetheless, as with other expansion costs, we said that we would expect HAL to be able to recover efficiently incurred costs.
- 3.6 As part of this process, we said we would expect HAL to provide evidence to airlines for review by the IFS to justify these costs as part of the existing airline/airport governance arrangements, including demonstrating that the costs have been efficiently incurred and properly allocated.

## Stakeholder views

- 3.7 HAL welcomed our proposals in the June 2020 Consultation in relation to wind-down costs, but requested that we provide a more detailed plan for how this policy would be finalised.

- 3.8 AOC/LACC said that HAL should not be allowed to recover any wind-down costs through the RAB. They said that given the lack of Government support and, therefore, a clear policy in relation to expansion, any future costs HAL incurs would fall under the definition of “Category A” expenditure<sup>10</sup> and, therefore, must be at HAL’s own expense.
- 3.9 BA argued that the approach CAA set out in the June 2020 Consultation to the scrutiny and assessment of wind-down costs would not be effective in ensuring HAL recovered only an appropriate level of costs.

### Policy on wind-down costs

- 3.10 As with other elements of early costs the key test we will apply is efficiency, rather than judgements on the direction of Government policy. Given the circumstances of the covid-19 pandemic and the collapse in passenger demand, HAL’s overall approach of seeking to demobilise the programme as quickly as practicable appears broadly reasonable. Our overall position remains unchanged from the June 2020 Consultation that HAL should be able to recover efficiently incurred costs.
- 3.11 We intend to undertake an assessment of the efficiency of HAL’s wind-down costs later this year, once the winding down programme is complete.
- 3.12 Consistent with our wider policy we intend that the efficient early costs HAL incurs from 1 March 2021 should attract a return and be added to HAL’s RAB in line in line with the policy set out in chapter 2.

### Supreme Court costs

- 3.13 In addition to the wind-down costs discussed above, HAL has also, over the course of 2020, incurred costs in relation to its appeal against the Court of Appeal’s decision to the Supreme Court. HAL has informed us that over the course of 2020, it incurred approximately £1.1m of costs in relation to the appeal.
- 3.14 As highlighted in the June 2020 Consultation, we intend to take into account the Supreme Court’s judgement on awarding costs in the case in finalising our policy. This court has yet to hand down its judgement on these matters.
- 3.15 For the avoidance of doubt, should the Supreme Court award HAL all or a proportion of costs incurred in the case, we would not allow HAL to recover those costs again through the RAB and hence through airport charges. If the Supreme Court does not award HAL any costs, we would then have to review those costs and make a decision about the costs HAL has incurred, including taking into account the reasons set out by the Supreme Court.

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<sup>10</sup> For definitions of the various categories of planning costs, please see the glossary.

## **Costs relating to the Interim Property Hardship Scheme (IPHS)**

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- 3.16 The reinstatement of the NPS (following the Supreme Court decision) triggered the application of the statutory blight regime, which means that eligible property owners can serve blight notices on the Secretary of State. We understand that the contractual arrangements between HAL and the DfT mean that HAL is obliged to meet valid blight claims on behalf of the Secretary of State.
- 3.17 In addition to blight, the IPHS is a discretionary HAL policy that aims to assist eligible property owners who have a compelling need to sell their property but have been unable to do so, except at a substantially reduced price, as a direct result of expansion proposals, and as a consequence are facing significant hardship. Under the IPHS, property owners who can demonstrate that they meet certain eligibility criteria are able to have their property purchased by HAL.
- 3.18 HAL and airlines jointly wrote to CAA on 30 March 2021 to ask for confirmation that future expenditure efficiently incurred in connection with the blight and IPHS compensation schemes would be added to HAL's RAB and recoverable, with the airlines noting this as an exceptional agreement given the specific circumstances.
- 3.19 HAL submitted further information to the CAA on 1 April 2021 in response to queries we had around cost estimates and proposed governance arrangements for the IPHS. The estimated per annum costs of the scheme are about £6m.
- 3.20 We have written to HAL and airlines to indicate that we are minded to approve the addition of such expenditure to HAL's RAB provided that:
- HAL complies with appropriate governance arrangements for the panel and manages its costs within the budgets set out in the further information provided;
  - HAL takes reasonable steps to maximise the rental revenues from these properties (and this will be taken into account at the H7 price control review, most likely as part of the single till calculations); and
  - any future sale proceeds from these properties will be deducted from HAL's RAB.

## **Views invited**

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- 3.21 Views are invited on our approach to allowing the recovery of HAL's early costs incurred from 1 March 2020, including our proposal to carry out an efficiency assessment later this year, and on any other issues raised in this chapter.

## Chapter 4

## Assessing the efficiency of early costs

## Introduction and high-level principles

- 4.1 In this chapter we explain our approach to assessing the efficiency of early expansion costs incurred by HAL before 1 March 2020. We also set out our initial findings from that assessment. This chapter does not cover the assessment of costs incurred from 1 March 2020.
- 4.2 As explained in the June 2020 Consultation, Category B costs incurred by HAL before the end of 2018 have already been subject to annual reviews and scrutiny by the IPCR. These reviews considered whether:
- HAL had appropriate evidence to support its planning costs; and
  - those costs had been appropriately categorised and efficiently incurred.
- 4.3 We have used the IPCR's advice to inform our annual efficiency reviews to determine the level of efficient planning costs that should be added to HAL's RAB.<sup>11</sup>
- 4.4 We said in the June 2020 Consultation that, given improvements in HAL's reporting arrangements, we would not appoint an IPCR for 2019 and 2020, or undertake the review of the Category C costs incurred to date. Instead, we decided to undertake this assessment ourselves, keeping the option of seeking specialist input and advice as needed.
- 4.5 The costs in scope of our assessment are set out in Table 4.1 below.

**Table 4.1: Early costs in scope of our assessment**

£m	2017	2018	2019	Jan-Feb 2020 <sup>12</sup>	Total
<b>Category B</b>	Reviewed by the IPCR	Reviewed by the IPCR	167	21	<b>188</b>

<sup>11</sup> See Appendix D of the June 2020 Consultation.

<sup>12</sup> January-February 2020 data is based on HAL's internal accounting data. For 2020, only costs incurred between January and February are in scope of our review. Based on information provided by HAL, we have been able to identify those costs at the category level (that is, at the level of categories identified in Table 4.2). For some cost categories, for example Integrated Design and DCO ("IDT"), we have undertaken our assessment at a lower level of disaggregation, specifically at the task order level. The quantitative and narrative information provided by HAL in relation to IDT task orders typically relates to Q1 2020 costs (January to March



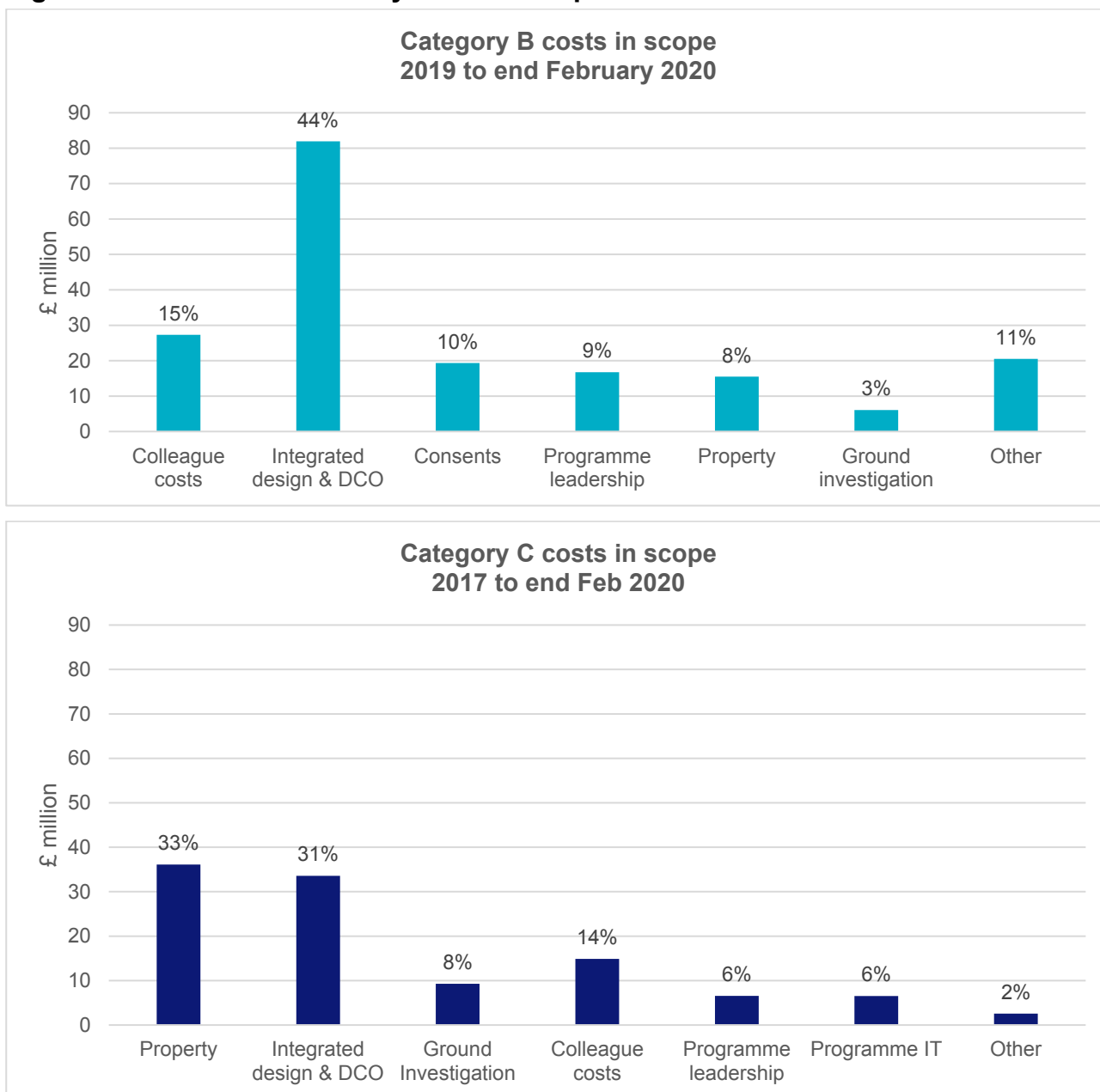
<b>Category C</b>	<b>6</b>	<b>11</b>	<b>71</b>	<b>21</b>	<b>110</b>
<b>Total</b>	<b>6</b>	<b>11</b>	<b>238</b>	<b>42</b>	<b>297</b>

Source: HAL data.

Totals in this table may not reconcile due to rounding.

4.6 The diagrams in Figure 4.1 below show the most material cost categories within each of Category B and Category C costs.

**Figure 4.1: Breakdown of early costs in scope of our review**



2020). Therefore, throughout our assessment tables there are references to Q1 2020. However, we note that our findings from this assessment will only apply to costs incurred up to the end of February 2020, at the point at which we make proposals for the magnitude of costs to be added to HAL's RAB.



Source: HAL data.

Note: Category C property costs shown in the chart above include major commercial acquisitions and residential compensation only. They exclude the costs of seeking agreement as shown in Table 4.4 below.

4.7 In developing our approach for the review of early expansion costs, we have identified several overarching principles to guide our assessment. These are:

- **Drawing on lessons from previous IPCR reviews:** the IPCR's reviews have demonstrated the difficulties in reviewing and assessing the efficiency of expansion planning costs. As part of our review, we have learned from, and built on, the IPCR reviews, to ensure we focus on the key issues and cost areas.
- **Drawing on existing analysis:** we have considered the information that HAL has provided as part of the wider existing airport/airline governance processes. This includes reports produced on HAL's expansion costs by the IFS on behalf of the airlines and HAL.
- **Proportionality:** we have taken a proportionate approach to our review. We have set out clear expectations for the level of information and evidence we expect HAL to provide in support of its early expansion costs. Where appropriate and necessary we have requested further information from HAL in key areas.
- Applying a structured analytical approach consistent with good practice: we have used an assessment template to ensure that:
  - (i) we cover key questions and issues across all cost categories, and
  - (ii) we are able to identify any cross-cutting issues.

Where possible, we have compared costs to available external benchmarks (but acknowledge that the scope for this will be limited).

4.8 The rest of this chapter is structured as follows:

- 1) overview of the high-level assessment approach and key issues for our deep dive assessment;
- 2) overview of the deep dive assessment, including the use of an assessment template;
- 3) initial findings for Category B costs;
- 4) initial findings for Category C costs;
- 5) cross-cutting issues;
- 6) summary of our engagement with stakeholders during the assessment process; and

- 7) consultation questions.

## Assessment approach

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- 4.9 In this chapter, we are setting out our approach to assessing early expansion costs incurred by HAL before 1 March 2020, and initial findings from this assessment. The initial findings are based on our work to date. However, we have not concluded our assessment work, and so there are elements of our assessment which we describe in this section for which we have not set out findings (for example the review of invoices and payslips).
- 4.10 In determining whether expansion costs are in the interest of consumers and so should be added to HAL's RAB, building on previous IPCR reviews, we are considering whether costs are:
- supported by appropriate evidence;
  - have been categorised correctly between “business as usual” (“BAU”) and “expansion” activities (to guard against potential “double counting” of costs); and
  - efficiently incurred (or more precisely whether there is evidence of inefficiency).
- 4.11 Based on these three criteria, and similar to the approach used by the IPCR, we have identified two questions that our review needs to answer in relation to the costs submitted by HAL:
- 1) Are the costs submitted by HAL supported by appropriate evidence and correctly categorised as expansion costs? and
  - 2) Is there evidence to indicate that costs submitted by HAL have not been efficiently incurred?
- 4.12 Our assessment is based on a structured approach to our assessment, which consists of two main stages:
- An **initial assessment phase** which involved reviewing the evidence submitted by HAL in its Statement of Costs and supporting document to clarify the scope of our assessment, our approach and resource needs. This phase of the assessment is now complete. During this phase, we considered all the costs submitted by HAL. We also considered whether we would need to involve external advisors in the review (other than by exception, as considered in the second phase) and identified a series of key issues for the deep dive assessment, which are discussed in more detail below.

- The **deep dive assessment phase** which has involved reviewing the evidence submitted by HAL in more detail to address the questions in paragraph 4.11 above. This is discussed in more detail in the next section below.

## Deep dive assessment

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4.13 In undertaking the deep dive assessment, we have focused on the most material cost categories, as shown in Figure 4.1. This means we have undertaken an in-depth review of 89% of Category B costs and 89% of Category C costs. Table 4.2 provides an overview and description of the types of activities undertaken, and costs included within each of these categories.

4.14 Our deep dive assessment involved:

- reviewing HAL's **Statement of Costs reports** (for each of Category B and Category C costs, and a separate report for Category C Property costs). These provide:
  - i. context for how HAL set budgets for different cost categories;
  - ii. the scope of work within each cost category;
  - iii. an overview of the work undertaken during the period in scope of our review for each cost category; and
  - iv. an explanation of any differences between actual spending and budgets and any efficiencies HAL argues it has achieved.
- reviewing the data submitted in the **Statement of Costs spreadsheets**;
- reviewing the data submitted in the **Schedule of Costs spreadsheets**;
- reviewing a **sample of payslips and invoices** relating to the Schedule of Costs spreadsheets, to establish whether the costs submitted by HAL are supported by appropriate evidence;<sup>13</sup>
- reviewing a **sample of Monthly Status Reports** and any other similar information submitted by HAL; and
- asking clarification questions and requesting further data and information from HAL.

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<sup>13</sup> Our review of payslips and invoices covers all costs categories (rather than only the ones set out in Table 4.3 and Table 4.4) and is ongoing. We have not set out findings in relation to this review in this document. We will set out findings in relation to whether the costs HAL submitted are supported by appropriate evidence in our next publication on this topic.

- 4.15 In conducting our deep dive assessment, we have used an assessment template which provides a structured analytical approach to reviewing different cost categories.
- 4.16 Table 4.2 shows a further level of detail for the cost categories we have focused on as part of our deep dive assessment, for both Category B and Category C costs. It provides a description of the types of activities undertaken within each of these categories.
- 4.17 Unless stated, the category description relates to both Category B and Category C costs.

**Table 4.2: Description of early expansion cost categories for costs incurred before March 2020**

<b>Cost category</b>	<b>Description</b>
<b>Integrated Design and DCO Team (IDT)</b>	<p>The IDT provides design, engineering, modelling and planning consultancy services to support the entire Heathrow Expansion Programme and enable it to deliver the Development Consent Order (“DCO”) application. The IDT covers three primary areas:</p> <ul style="list-style-type: none"> <li>• masterplan and design (architectural and engineering consultancy services);</li> <li>• surface access (strategy and modelling; transportation consultancy services); and</li> <li>• environmental assessment (environmental and planning consultancy services)</li> </ul>
<b>Colleague costs</b>	<p>HAL staff costs for those working on expansion related activities. Also includes complementary Programme Client Partners (“PCPs”) resources provided by four external consultants/contractors – Mace, Turner &amp; Townsend, Arup and Ch2M.</p>
<b>Consents</b>	<p>The Consents Team was responsible for the successful delivery of the Development Consent Order (DCO) and other planning consents for Expansion.</p> <p>For Category C costs, the budget included legal support for HAL’s engagement with the commercial, residential and agricultural property land interests required for the expansion project.</p>
<b>Programme Leadership</b>	<p>Programme Leadership encompasses a range of workstreams and functions. The majority related to the overall running of the programme including financial management, cost estimating, schedule management and the Programme Management Office. The recharge of expenditure from the CAA resided within Programme Leadership as did the cost of paying for the IFS</p>

	which is jointly contracted by Heathrow and the airline representative body, the AOC.
<b>Property – land referencing (Category B)</b>	Land referencing activities in relation to the acquisition of residential and commercial property to support the Expansion Programme.
<b>Property (Category C)</b>	Costs incurred in relation to developing property compensation schemes and acquiring a small number of properties (both commercial and residential) and land.
<b>Ground investigation</b>	Ground investigation and subsequent monitoring works required for the development of the masterplan (Category B) and more detailed design work and to inform delivery (Category C).
<b>Programme IT (Category C)<sup>14</sup></b>	The cost of developing IT systems and solutions to support the expansion programme.

Source: CAA analysis of information provided by HAL.

## Initial findings from the deep dive assessment

4.18 In this section, we provide a high-level summary of our deep dive assessment of each of Category B and Category C costs. This focuses on the outcomes of our assessments of whether:

- we found possible inefficiency in any specific cost category; and
- the costs were categorised correctly as expansion or BAU.

Our assessment of whether the costs submitted by HAL are supported by appropriate invoice/payroll evidence is ongoing.

4.19 Appendix C provides more detail of our assessment to date, including how we have taken account of additional evidence provided by HAL in response to some of our queries. The findings in this chapter should be read in conjunction with the detailed assessment in that appendix.

4.20 There is further work to do to build on these initial findings and set out any proposed range of inefficiency in relation to early expansion costs incurred before 1 March 2020. Any proposed range of inefficiency will also need to take into account views provided by stakeholders, particularly HAL and airlines, who were closely involved in the expansion programme at the time.

4.21 In this chapter, as well as in Appendix C, we have used one of three categories to describe the initial findings from our assessment of HAL's expenditure. We have also assigned a "RAG" (red-amber-green) status to the three categories. These give an indication of potential for inefficiency within each cost category,

<sup>14</sup> Category B programme IT costs fell below the threshold for deep dive assessment.

based on our assessment to date. However, we note that they do not constitute a formal finding at this stage. The categories we have used, and their indicative RAG status, are:

- potential inefficiency identified – RED;
- more investigation required – AMBER; and
- limited concerns regarding potential inefficiency – GREEN.

4.22 We start by providing a high-level break down of the costs in scope (both Category B and Category C) and indicating which cost categories we selected for the deep dive assessment. This is shown in Tables 4.3 and 4.4 below.

4.23 We undertook a deep dive assessment of 89% of Category B costs in scope. Table 4.3 below shows a breakdown of these costs, and highlights the cost categories in scope for the deep dive assessment. Ground investigation costs were selected for deep dive assessment despite representing a lower percentage of Category B costs because of links to Category C ground investigation expenditure, which formed a larger percentage of Category C costs.

**Table 4.3: Breakdown of Category B costs in scope of our review**

Category B costs (£ million)	2019	Jan-Feb 2020	Total costs in scope	%	Deep dive
Colleague costs	23.49	3.81	27.30	15%	Yes
Programme Leadership	14.43	2.31	16.75	9%	Yes
Future Heathrow	7.61	1.11	8.72	5%	
Consents	18.42	0.94	19.35	10%	Yes
Community and Stakeholder	1.67	0.06	1.73	1%	
IT	3.57	0.92	4.48	2%	
Ground Investigation	6.07	0.00	6.07	3%	Yes
Regulation and Strategy	1.06	0.52	1.58	1%	
IDT	74.41	7.51	81.92	44%	Yes
Property	12.51	2.98	15.48	8%	Yes
Surface access*	2.50	0.42	2.92	2%	
Cat B opex	1.76	0.30	2.06	1%	
Recategorisations and adjustments	-0.38	0.00	-0.38	0%	
<b>Total Cat B costs</b>	<b>167.11</b>	<b>20.57</b>	<b>187.68</b>	<b>100%</b>	

Source: CAA analysis of HAL data.

- 4.24 For Category C costs, we also selected 89% of costs in scope for the deep dive assessment. As shown in Table 4.4, we decided to review some of the lower materiality cost categories (e.g. programme leadership and programme IT) given this was the first time we have formally reviewed Category C costs, to ensure we have a reasonably complete picture of HAL's approach to Category C activities and expenditure.
- 4.25 In its submission, HAL presented Category C costs grouped into three high level categories (in contrast with the presentation of Category B costs). We have also used that presentation in the table below, however we note that many of the sub-categories are the same as in the Category B submission (such as colleague costs and IDT).

**Table 4.4: Breakdown of Category C costs in scope of our review**

Category C costs (£ million)	2017	2018	2019 Total	Jan- Feb 2020	Total costs in scope	% of total	Deep dive
Major Commercial Acquisitions	1.13	2.77	4.70	1.18	9.78	9%	Yes
Residential Compensation	1.50	4.07	6.79	4.20	16.56	15%	Yes
Commercial Property Other	0.00	0.00	2.00	0.00	2.00	2%	
Seeking Agreement	0.25	0.45	6.68	0.40	7.78	7%	
<b>Total Property</b>	<b>2.88</b>	<b>7.28</b>	<b>20.18</b>	<b>5.78</b>	<b>36.12</b>	<b>33%</b>	
IDT	0.00	0.00	26.24	7.35	33.59	31%	Yes
Ground Investigation	1.95	2.20	4.24	0.88	9.28	8%	Yes
Future Heathrow	0.00	0.00	0.06	0.05	0.11	0%	
Surface Access	0.00	0.00	0.39	-0.06	0.33	0%	
<b>Detailed Design &amp; Site Prep</b>	<b>1.95</b>	<b>2.20</b>	<b>30.93</b>	<b>8.22</b>	<b>43.31</b>	<b>40%</b>	
Colleague costs	0.99	0.82	9.84	3.23	14.88	14%	Yes
Programme leadership	0.00	0.06	4.53	1.96	6.56	6%	Yes
Finance	0.03	0.00	0.04	0.00	0.06	0%	Yes
Executive Director Overheads	0.37	0.00	0.37	0.00	0.74	1%	Yes

Category C costs (£ million)	2017	2018	2019 Total	Jan-Feb 2020	Total costs in scope	% of total	Deep dive
Consents	0.00	0.00	0.87	0.44	1.31	1%	
Community & Stakeholder	0.00	0.00	0.00	0.02	0.02	0%	
Programme IT	0.00	0.53	4.31	1.69	6.53	6%	Yes
Regulation and Strategy	0.00	0.00	0.00	0.00	0.00	0%	
<b>Total programme</b>	<b>1.38</b>	<b>1.41</b>	<b>19.97</b>	<b>7.34</b>	<b>30.10</b>	<b>27%</b>	
<b>Total Cat C costs</b>	<b>6.22</b>	<b>10.89</b>	<b>71.08</b>	<b>21.35</b>	<b>109.53</b>	<b>100%</b>	

Source: CAA analysis of HAL data.

4.26 The tables below provide a summary of the findings from our deep dive assessment for the categories highlighted in the two tables below. More detail on our assessment is provided in Appendix C.

**Table 4.5: Initial findings from the review of Category B costs**

Category B costs	Findings (more detail in Appendix C)
<b>Colleague costs</b>	<p>Overall, there appears to have been a clear need and rationale for the expenditure incurred. Colleague costs underpin the expansion programme with a combination of in-house Heathrow colleague resources and complementary Programme Client Partners (“PCPs”) resources.</p> <p>However, we consider that HAL has not provided enough evidence around the reallocation of Colleague costs between Category B and Category C activities. This is relevant because while our overall policy approach for Category B and Category C costs is the same (namely to allow HAL to add efficiently incurred costs to the RAB), the detailed approach to our assessment of efficiency differs, due to the different nature of the activities (planning versus early construction costs) and the timing of expenditure relative to key expansion milestones. This is discussed in more detail in the next section on cross-cutting issues. Considering this, our assessment for this cost category is that <b>more investigation is required</b>.</p>
<b>Programme leadership</b>	<p>Assessment of Category B and Category C costs was done jointly, due to the centralised approach to procuring and delivering aspects of this service. This table picks up Category B issues, and allocation issues. Category C issues are picked up in the next table.</p> <p>We have identified <b>potential inefficiency in relation to financial management activities</b> within this category. HAL overspent against its budget in relation to financial advisory and has not provided sufficient evidence to demonstrate the</p>



	efficiency of this spend, including in response to our queries. Specifically, HAL has not clearly explained what outputs some of its contractors were working towards in this area.
<b>Consents</b>	We have <b>limited concerns regarding potential inefficiency</b> in this area. There appears to be a clear need and rationale for the work undertaken by the consents team.
<b>Ground investigation</b>	Covered in Category C section.
<b>IDT</b>	<p>General findings</p> <ul style="list-style-type: none"> <li>▪ HAL appears to have had a clear and relatively effective procurement strategy for IDT overall. However, we have identified some overlap between different IDT task orders (“TO”s) in terms of areas the different consultants were working on and outputs they were contributing to. HAL’s Statement of Costs included little narrative to describe the activities relating to costs incurred in Q1 2020 in relation to individual TOs.</li> </ul> <p>Findings by task order:</p> <ul style="list-style-type: none"> <li>• <b>More investigation is required in relation to TO 5.3 Environmental Impact assessment.</b> HAL has not demonstrated the need for the increased level of activity in 2019 when it decided to change its approach of working towards a Preliminary Environmental Information Report (“PEIR”) in 2019, and to instead move to a draft Environmental Statement.</li> <li>• We have <b>limited concerns regarding inefficiency in relation to TO 4.7 Surface Access.</b></li> <li>• <b>More investigation is required for TO 1.5 Masterplan Design and Guardianship</b> in the light of the approach taken by HAL to setting the budget for this TO during 2019 (HAL only placed into contract at the beginning of 2019 those elements of this TO which it saw as defined enough to control).</li> <li>• We have <b>limited concerns regarding inefficiency in relation to TO 3.1 Terminals, Aprons and Satellites.</b></li> </ul>
<b>Property</b>	<b>Limited concerns regarding potential inefficiency.</b> Costs appear to consist entirely of contractors/consultants and, therefore, appear to be categorised correctly as expansion costs. Costs relate to land referencing activities which appear to be in line with requirements for submitting a DCO application.

**Table 4.6: Initial findings from the review of Category C costs**

<b>Category C costs</b>	<b>Findings from our assessment</b>

<p><b>Property – Major Commercial Acquisitions and Residential Compensation</b></p>	<p>HAL appears to have followed a generally transparent and well-structured approach to these Property activities. However, we have some concerns over the efficiency of expenditure incurred for particular activities:</p> <ul style="list-style-type: none"> <li>▪ HAL incurred material sums on 3<sup>rd</sup> party feasibility and design studies in 2019. We do not currently have evidence on what outputs or benefits these studies delivered.</li> <li>▪ HAL may be obliged to acquire a particular strategic site in future, resulting in a material contingent liability until the end of 2023. HAL has not provided evidence in support of the business case for this transaction.</li> <li>▪ HAL has acquired a site with a material asset value and has not explained how revenue generated from the site will be captured in the single till calculations that will support the H7 price control review.</li> </ul> <p><b>More investigation is required</b> in relation to this cost area, and specifically commercial property acquisitions.</p>
<p><b>IDT</b></p>	<p>Approach to procurement and management of IDT was the same as for Category B costs.</p> <p>Findings by task order:</p> <ul style="list-style-type: none"> <li>▪ TO 3.1 Terminals, aprons and satellites – there is <b>potential inefficiency in relation to this TO</b> as early progression of terminal design work may not have been required for DCO;</li> <li>▪ TO 3.7 Airline occupancy, capacity and forecasts – there is <b>potential inefficiency</b> as activity under this TO was closely linked to TO 3.1 which may not have been required for DCO stage.</li> <li>▪ <b>More investigation is required in relation to TO 4.6 Motorways, junctions and local roads</b>, because (i) the evidence that HAL has provided on efficiency is limited, particularly given the materiality of spending; and (ii) there was significant overspending against HAL's initial budget and significant increases in the scope of works.</li> <li>▪ <b>More investigation is required in relation to TO 3.4 Connectivity</b>: this is a material cost area and HAL made significant scope changes which the IFS suggested may indicate inefficiency although it could not be sure with the information it was provided.</li> <li>▪ <b>More investigation is required in relation to TO 9.1 Immigration Removal centre</b>: it is unclear why this activity was moved from the Property workstream to Category C IDT. Costs incurred under this TO appear to have mostly been driven by external factors, mainly outside of HAL's control.</li> </ul>

<p><b>Ground investigation (including Category B costs)</b></p>	<p>There appears to be a clear need and rationale for the activity. HAL needed to undertake ground investigation (“GI”) on a timely basis in order not to delay the overall progress the expansion programme.</p> <p>However, our review of the evidence provided suggests that the number of borehole locations delivered per month was significantly lower than anticipated in 2019. Despite that, the outturn GI expenditure did not fall to a level consistent with the reduced scope of GI activities. The GI activities were also £0.6m above budget in Q1 2020 representing a more than 30% cost overrun.</p> <p>We have identified this as a cost category where there is <b>potential inefficiency</b>.</p>
<p><b>Colleague costs</b></p>	<p>There appears to be a clear need and rationale for the expenditure incurred. Colleague costs underpin the expansion programme with a combination of in-house Heathrow colleague resources and complementary Programme Client Partners (“PCP”) colleague resources.</p> <p>HAL overspent against its budget in 2019 and Q1 2020 by about 10%. Based on our review of the evidence provided, we consider that HAL has not provided sufficient evidence of efficiency and appropriate allocation between Category B and Category C costs.</p> <p>This cost category is one where <b>more investigation is required</b>.</p>
<p><b>Programme leadership</b></p>	<p>There appears to be a clear need and rationale for the expenditure incurred. Category C Programme leadership costs were incurred on essential programme support services that were facilitating expansion including PMO, Estimating, Logistics/Schedule and Procurement.</p> <p><b>Nonetheless, more investigation is required in relation to this cost category</b>, as HAL has not provided sufficient evidence of the efficiency of its spending in 2019 and Q1 2020.</p>
<p><b>Programme IT</b></p>	<p>There appears to be a clear need and rationale for the expenditure incurred. The Programme IT category was split into several sub-programmes to create and utilise various IT solutions to support HAL’s Category C expansion activities.</p> <p>HAL underspent significantly compared to the budgets for Programme IT activities in 2019 and Q1 2020. However, the evidence we have reviewed suggests that this was at least partly driven by scope reduction with programme deliverables which were budgeted for being delayed.</p> <p><b>We have limited concerns regarding potential inefficiency</b>, but <b>more investigation is required in relation to the allocation of costs</b>. HAL has not provided sufficient evidence to explain the allocation between expansion Programme IT activities and BAU IT activities for the purposes of setting the Programme IT budget.</p>

## Cross-cutting issues

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- 4.27 Based on our review of Category B and Category C costs, we have identified several cross-cutting issues which apply to expansion costs in general.
- 4.28 These issues have emerged from our assessment of historical costs, but we consider they are relevant for any expansion programme going forward. Some of these issues have also previously been highlighted by the IPCR reviews, or by the IFS:
- Most of the issues we have identified following our assessment to date relate to **HAL not having provided sufficiently comprehensive evidence to enable us to establish that the costs incurred were efficient**. However, in some areas, we have identified specific issues which could suggest inefficiency, in the absence of additional evidence. If HAL provides better evidence during the next stage of our assessment, this may reduce the extent of our concerns.
  - **Approach to Colleague Costs allocation:** HAL has not had a timesheet system in place to record the time of internal staff that was spent on the Expansion Programme. Instead, it has relied on an allocation of FTEs for staff working on both Expansion and BAU activities. This approach is inherently less precise than a timesheet system and means that the allocation of costs between Expansion and BAU in this area is less precise. As part of the 2018 IPCR review, PwC recommended that HAL implement a timesheet system going forward (i.e. from 2019 onwards). In the 2018 IPCR report, PwC stated that it had been advised that HAL was considering implementing a timesheet system during 2019. The CAA has not seen any evidence of that happening by the end of the assessment period.<sup>15</sup>

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<sup>15</sup> We note that, given expansion costs can be capitalised (subject to our efficiency review), HAL in theory has an incentive to over-estimate the proportion of colleague allocated to expansion. Non-expansion related HAL staff costs are otherwise treated as opex and not capitalised. A timesheet-based approach would provide more assurance around the accuracy of the proportion of colleague costs allocated to expansion and align more closely to best practice.

- **Allocation of costs between Category B and Category C:** for some cost categories, for example IDT task orders, or Programme Leadership, the approach HAL took to allocating costs between Category B and Category C activities was not always as clear as it could have been. In addition, there was at times during 2019 substantial re-allocation of costs between Category B and Category C, with limited obvious controls. The “masterplan scheme chill” date in September 2019 appeared to be a key one in terms of transitioning activities to Category C. However, there were reallocations that did not appear to be driven by this date and general issues of allocation between the two categories. This is relevant because while our overall policy approach for Category B and Category C costs is the same (that is, to allow HAL to add efficiently incurred costs to the RAB), the assessment of efficiency for the two types of costs generally differs. This is because Category B and Category C costs cover different types of activities (design as opposed to early construction activities), the scale and timing of which can be driven by different milestones and requirements. A clear allocation of costs between Category B and Category C would also provide evidence as to the effectiveness of HAL’s management of expansion (although allocation issues do not inherently mean inefficiency).
- **The level of development of HAL’s baseline plan:** a consistent issue across many cost categories was the level of development of HAL’s baseline plan for 2019/Q1 2020. For example, for some IDT task orders, there was no budget allocated at the beginning of 2019. For others, HAL stated that the budget was constantly being revised during the year. While some flexibility in the way the work is delivered is appropriate, we would have expected to see a more mature baseline plan from HAL, given the point at which it was in the expansion process. When reviewing expansion costs, we looked at HAL’s performance against its own budgets. However, given the overall level of development of the baseline plan, we used this comparison generally to inform which areas to investigate in more detail. We did not assume that under-spend against budget was efficiency, or that overspend was inefficiency, as we did not consider the budget figures to be robust enough to enable us to do so.

- **Clear link between spend and specific outputs:** for some cost categories (for example some task orders within IDT) it was difficult to establish clear outputs/deliverables linked to the expenditure being reviewed. While this is to be expected for some of the activity undertaken, given it related mostly to design and planning (rather than the delivery of physical assets), we would have expected a clearer definition of outputs by HAL. In some areas, HAL set out the scope of the work (the areas that the task order was working towards), but it would have been useful to see a clear mapping of outputs/deliverables that were envisaged at the start of the budget period, and the actual outputs delivered, to allow us to undertake an effective assessment of the spend. We would expect HAL to set out outputs/deliverables more clearly in future.
- **Scope change versus efficiency:** when comparing actuals to budgets across HAL's submission, it was often difficult to clearly identify, based on the information provided, what proportion of the difference was due to scope changes, or over/under-spending due to inefficiency/efficiency respectively. This is also linked to the issue of HAL not having always had a well-developed baseline plan when it started undertaking work, which resulted in big scope changes during the year (which were usually reflected in actual spending, without a corresponding adjustment to budget data provided to us).

## Engagement with stakeholders

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- 4.29 As part of our assessment of Heathrow's expansion costs, we have been engaging with various stakeholders on these topics, including both HAL and airlines.
- 4.30 We have also had regular discussions with the IFS, which has had a key role in reviewing expansion costs on behalf of the airlines and HAL. The scope of the IFS's review of HAL's expansion costs includes a review of the relevance, timeliness and efficiency of the activities undertaken, and corresponding costs incurred, by HAL. The IFS's reports have been a key input into our own assessment.
- 4.31 The IFS has produced the following reports, which we have reviewed as part of our assessment:
- four quarterly reports for 2019 Category B expenditure;
  - a Category C expenditure report covering the period 2017 to Q1 2020; and
  - a Category C property-related expenditure report.

Appendix C explains in more detail how we have taken the IFS's findings for specific cost categories into account in our assessment to date.

## Next steps

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- 4.32 We will continue our review of costs over the next few months, particularly focusing on reviewing the sample of evidence of costs (invoices and payslips).
- 4.33 We will set out updated findings, taking into account responses to this consultation, in our Initial Proposals, to be published in summer 2021.

## Views invited

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- 4.34 Views are invited on any aspect of our approach to the efficiency assessment of early costs and in particular:
- the initial findings of our review of Category B and Category C costs, including in relation to the findings of potential inefficiency;
  - the cross-cutting issues we have identified and any implications of these for our assessment of efficiency; and
  - whether there is any additional evidence you think we should consider in relation to our initial findings.

## APPENDIX A

## Our duties

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1. The CAA is an independent economic regulator. Our duties in relation to the economic regulation of airport operation services (“AOS”), including capacity expansion, are set out in the CAA12.
2. CAA12 gives the CAA a general (“primary”) duty, to carry out its functions under CAA12 in a manner which it considers will further the interests of users of air transport services regarding the range, availability, continuity, cost and quality of AOS.
3. CAA12 defines users of air transport services as present and future passengers and those with a right in property carried by the service (i.e. cargo owners). We often refer to these users by using the shorthand of “consumers”.
4. The CAA must also carry out its functions, where appropriate, in a manner that will promote competition in the provision of AOS.
5. In discharging this primary duty, the CAA must also have regard to a range of other matters specified in the CAA12. These include:
  - the need to secure that each licensee is able to finance its licensed activities;
  - the need to secure that all reasonable demands for AOS are met;
  - the need to promote economy and efficiency on the part of licensees in the provision of AOS;
  - the need to secure that the licensee is able to take reasonable measures to reduce, control and/or mitigate adverse environmental effects;
  - any guidance issued by the Secretary of State or international obligation on the UK notified by the Secretary of State; and
  - the Better Regulation principles.
6. In relation to the capacity expansion at Heathrow, these duties relate to the CAA’s functions concerning the activities of HAL as the operator at Heathrow.
7. CAA12 also sets out the circumstances in which we can regulate airport operators through an economic licence. In particular, airport operators must be subject to economic regulation where they fulfil the Market Power Test as set out in CAA12. Airport operators that do not fulfil the Test are not subject to economic



regulation. As a result of the market power determinations we completed in 2014 both HAL and GAL are subject to economic regulation.

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

## APPENDIX B

## Glossary

Acronym/term	Definition
AOC	Airline Operators' Committee (for Heathrow), a private company limited by guarantee.
BA/IAG	British Airways plc/International Airlines Group (owner of British Airways).
Budget	Annual budget that HAL submits to the CAA and other stakeholders on expansion-related costs. Further detail on the annual budget and statement of costs associated with obtaining planning permission (Category B costs) is set out in the Budget Guidance.
Budget Guidance	CAA publication CAP1651 "Guidance on preparation of the annual budget and statement for those costs associated with obtaining planning permission for a new northwest runway" See <a href="http://www.caa.co.uk/CAP1651">www.caa.co.uk/CAP1651</a> .
CAA ("us"/"we")	The Civil Aviation Authority.
CAA12	Civil Aviation Act 2012.
Capex	Capital expenditure.
Category A costs	Costs which are incurred by HAL during the Airports Commission process, or before Heathrow was named as the preferred location for new runway capacity on 25 October 2016. For more information please see Appendix C to the July 2019 Consultation.
Category B costs	Costs associated solely with seeking planning permission for the delivery of new runway capacity at Heathrow. For more information please see Appendix C to the July 2019 Consultation.
Category C costs	Costs incurred by HAL in connection with implementation and construction of new capacity, up to entry-into operation. For more information please see Appendix C to the July 2019 Consultation.
CMA	The Competition and Markets Authority

Acronym/term	Definition
Consumers	As defined in CAA12, consumers are passengers and cargo owners, both now and in the future.
DCO	Development Consent Order under the Planning Act 2009
The December 2019 consultation	CAA publication CAP 1871 “Economic regulation of Heathrow Airport Limited: policy update and consultation on the early costs of capacity expansion” See: <a href="http://www.caa.co.uk/CAP1871">www.caa.co.uk/CAP1871</a> .
DfT	The Department for Transport.
DIWE	Demonstrably Inefficient or Wasteful Expenditure.
Early costs	Expansion-related costs that are incurred by HAL prior to obtaining planning consent.
Ex ante	Based on forecasts/before an event.
Ex post	Based on actual/after an event.
Expansion	HAL’s programme to expand Heathrow airport by the construction of a new northwest runway and associated infrastructure in accordance with the NPS.
The Capital Efficiency Handbook	One of a number of documents produced by HAL with airlines as part of the airport/airline capex governance protocol for Q6. The other documents include the Q6 Capital Investment Triggers Handbook, and the Capital Investment Protocol. The documents are intended to provide detail and guidance to those involved in the Heathrow project Gateway lifecycle process.
H7	The next HAL price control, assumed to be in place from 1 January 2022. If set for the usual five year period, this will run for the years 2022-2026.
HAL	Heathrow Airport Limited, the licence holder and operator of Heathrow airport.
HCEB	Heathrow Community Engagement Board: the Airport Consultative Committee and the Community Engagement Board for Heathrow Airport.
IATA	International Air Transport Association, a global trade association representing airlines.

Acronym/term	Definition
IBP	HAL's Initial Business Plan. This was published in December 2020 in response to the Updated Business Plan Guidance. See: <a href="https://www.heathrow.com/company/about-heathrow/economic-regulation/h7-update">https://www.heathrow.com/company/about-heathrow/economic-regulation/h7-update</a> .
IFS	The Independent Fund Surveyor for Heathrow, which is jointly appointed by HAL and the airlines, with a duty of care to the CAA. The scope of the IFS role is broadly to assure that capital funds are invested efficiently to meet agreed project objectives. The role is undertaken by Gardiner & Theobald LLP.
iH7	Interim H7 price control. Runs from 1 January 2020 until 31 December 2021.
IPCR	Independent Planning Costs Reviewer appointed by the CAA under the Planning Costs Recovery Policy Statement.
IPHS	The Interim Property Hardship Scheme is a discretionary expansion-related policy relating to blight whereby HAL can, subject to eligibility criteria, purchase residential properties from individuals who have a compelling reason to move, but who are unable to sell their property except at a substantially reduced price.
The January 2020 Consultation	CAA publication CAP1876 "Economic regulation of Heathrow Airport Limited: further consultation on regulatory framework and financial issues" See: <a href="http://www.caa.co.uk/CAP1876">www.caa.co.uk/CAP1876</a> .
The July 2019 Consultation	CAA publication CAP1819 "Economic regulation of capacity expansion at Heathrow: consultation on early costs and regulatory timetable" See: <a href="http://www.caa.co.uk/CAP1819">www.caa.co.uk/CAP1819</a> .
The June 2017 Consultation	CAA publication CAP 1541 "Consultation on the core elements of the regulatory framework to support capacity expansion at Heathrow" See: <a href="http://www.caa.co.uk/CAP1541">www.caa.co.uk/CAP1541</a> .
The June 2020 consultation	CAA publication CAP1940 "Economic regulation of Heathrow: policy update and consultation" See: <a href="http://www.caa.co.uk/CAP1940">www.caa.co.uk/CAP1940</a> .

Acronym/term	Definition
LACC	London (Heathrow) Airline Consultative Committee, set up by IATA to implement a collaborative consultation framework for Heathrow airport.
NERL	NATS En Route plc
NPS	The Airports National Policy Statement published on 5 June 2018 produced by the Government under the Planning Act 2008.
Opex	Operational expenditure.
The Planning Costs Recovery Policy Statement	CAA publication CAP1513 “The recovery of costs associated with obtaining planning permission for a new northwest runway at Heathrow Airport: Policy statement” See: <a href="http://www.caa.co.uk/CAP1513">www.caa.co.uk/CAP1513</a> .
Q5 or Q5 price control	The “Q5” price control is the price control for the period from 2008 to 2014.
Q6 or Q6 price control	The “Q6” price control is the price control for the period from 2014 to 2018, the approach to which has subsequently been successively extended to cover 2019-2021.
RAB	Regulatory Asset Base.
Regulatory Year	Means for each of the seven years from 2015 to 2021, the twelve month period beginning on 1 January and ending on 31 December (as defined in HAL’s licence granted under CAA12).
RHC	Richmond Heathrow Campaign, a joint initiative of The Richmond Society, Friends of Richmond Green and The Kew Society to combat Heathrow expansion and its effect on Richmond Town, Richmond Hill and Kew.
RP3	The NERL Reference Period 3 price control that was originally expected to run from 1 January 2020 to 31 December 2024 (currently under regulatory appeal to the CMA).
Schedule of Costs	Supporting spreadsheet for the Statement of Costs which details all invoices and accruals relating to that years’ Statement of Costs.

Acronym/term	Definition
The September 2020 Working Paper	CAA publication CAP 1964 “Economic regulation of Heathrow: working paper on the efficiency of HAL’s capital expenditure during Q6” See: <a href="http://www.caa.co.uk/CAP1964">www.caa.co.uk/CAP1964</a> .
Statement	Annual year end statement that HAL submits to the CAA which outlines expansion-related costs that it has incurred. Further detail on the annual budget and statement of costs associated with obtaining planning permission (Category B costs) is set out in the Budget Guidance.
The Updated Business Plan Guidance	Guidance included as an Appendix in CAA publication CAP1819 “Economic regulation of capacity expansion at Heathrow: consultation on early costs and regulatory timetable” See: <a href="http://www.caa.co.uk/CAP1819">www.caa.co.uk/CAP1819</a> .
Transport Infrastructure Efficiency Strategy (the “Transport Study”)	Transport Infrastructure Efficiency Strategy, 2017. Publication can be found <a href="#">here</a> .
WACC	Weighted Average Cost of Capital.
Way Forward Document	CAA publication CAP 2139 “Economic regulation of Heathrow Airport Limited: Consultation on the Way Forward” See: <a href="http://www.caa.co.uk/CAP2139">www.caa.co.uk/CAP2139</a> .
Wind-down costs	Expansion-related costs that HAL has incurred since the Court of Appeal’s judgement in February 2020.

## APPENDIX C

## Detail on our assessment of Category B and Category C costs incurred before March 2020

1. This appendix provides more detail on our assessment of Category B and Category C costs incurred by HAL before 1 March 2020. It provides context for the initial findings set out in chapter 4 of this working paper and should be read alongside that chapter.
2. In this appendix, as in chapter 4, we have used one of three categories to describe the initial findings from our assessment of HAL's expenditure and have assigned a "RAG" (red-amber-green) status to the three categories. These give an indication of potential for inefficiency within each cost category, based on our assessment to date. However, it is important to note that these do not constitute a formal finding at this stage. The categories we have used, and their indicative RAG status, are:
  - potential inefficiency identified – RED;
  - more investigation required – AMBER; and
  - limited concerns regarding potential inefficiency – GREEN.

### Initial findings: Category B costs incurred between January 2019 and February 2020

**Table C.1: Initial findings from the review of Category B costs**

Category B costs	Findings from our assessment	Potential inefficiency
Colleague costs	<ul style="list-style-type: none"> <li>▪ There appears to have been a clear need and rationale for the expenditure incurred. Colleague costs underpin the expansion programme with a combination of in-house HAL colleague resources and complementary Programme Client Partners (PCPs) resources.</li> <li>▪ HAL underspent against its budget in 2019 and Q1 2020 by approximately 14%.</li> <li>▪ Based on our review of the evidence provided, we consider that HAL has not provided sufficient evidence for the appropriate allocation of costs between Category B and Category C.</li> <li>▪ There were a number of reallocations from Category B to Category C and associated rebasing of spending which were not well evidenced. This was</li> </ul>	<p><b>More investigation is required:</b> HAL has not provided enough evidence to show the efficiency of its Category B colleague cost spending in 2019 and Q1 2020, particularly in relation to reallocations between Category B and Category C activities.</p>

Category B costs	Findings from our assessment	Potential inefficiency
	<p>clearly identified as not being best practice in the IFS report on Category C colleague expenditure.</p> <ul style="list-style-type: none"> <li>▪ The scale of costs appears to have been driven by the opposing impacts of a high proportion of costly PCP resource being used to cover mid-level positions (relative to budget) and hiring a lower overall number of colleague resources than anticipated.</li> <li>▪ HAL answered several queries from us, which aimed to get a better understanding of the detailed colleague expenditure evidence provided, including providing additional evidence to complement its submission and providing clarifications on aspects that lacked clarity.</li> </ul>	
Programme leadership	<ul style="list-style-type: none"> <li>▪ Assessment of Category B and Category C costs was done jointly, due to nature of the activities and the approach to contracting. This table sets out Category B issues identified, and some allocation issues. Category C issues are set out in Table C.2.</li> <li>▪ <b>Executive director overheads:</b> there appears to be a clear need and rationale for the expenditure incurred. The expenditure primarily covers accommodation costs associated with expansion, including refurbishment and rent costs. HAL provided sufficient evidence of a methodology to allocate central office costs to expansion by calculating annual rates per desk and forecasting costs depending on the budgeted number of colleagues working on expansion.</li> <li>▪ <b>Financial management:</b> There appears to be a clear need and rationale for the expenditure incurred. The expenditure covers essential services related to undertaking a financial assessment of the expansion project, including in relation to affordability and financeability. These were key outputs to support the development of HAL's initial business plan ("IBP") which put forward the financial basis on which it proposed to progress expansion and the DCO more generally.</li> </ul> <p>Although there was an underspending of £1.4m in 2019, this was mainly due to not purchasing professional indemnity insurance at a cost of £1.7m as budgeted. Removing this impact, HAL overspent by c.£0.3m. This was driven by higher than forecast consultancy costs in relation to financing advisory.</p>	<p><b>There is potential inefficiency in relation to financial management activities within this category:</b> HAL overspent on financial management activities and has not demonstrated the efficiency of its financial advisory spending.</p>



Category B costs	Findings from our assessment	Potential inefficiency
	<p>HAL underspent significantly in Q1 2020 due to some of the scope being delayed and the halt of activities after the judicial review announcement in February. We asked HAL to clarify the allocation of costs given the potential synergy of the financial works undertaken with BAU aspects of the preparation of the IBP. HAL had sufficient explanation of the separation of expenditure between expansion and BAU activities.</p> <p>Finally, we also queried the financial advisory overspending in 2019 which was more than £0.6m, equivalent to more than 30% cost overrun compared to budget. In order to understand if this spend was efficient, we asked HAL to provide more detail around the outputs each of its contractors were delivering or working towards. HAL provided some additional context around the purpose of the activities of some of its contractors in response to our queries. However, we consider that HAL's responses did not cover all the relevant areas / contractors and therefore do not show that all of these costs were efficiently incurred.</p> <ul style="list-style-type: none"> <li>▪ <b>Programme costs:</b> There appears to be a clear need and rationale for the expenditure incurred. Programme costs include core activities that support the successful delivery of the expansion programme including estimating, procurement, PMO/Logistics and IFS/CAA activities. HAL underspent marginally on this category in both 2019 (£0.9m) and Q1 2020 (£0.05m). It is notable that there was a significant overspending on CAA-driven activities of £2.2m with many of the outputs not anticipated at the time of setting the budget. HAL explained that the budget was based on the incurred expenditure over the previous 12 months which has resulted in the overspending. We raised several queries to understand cost allocation between the two categories (Category B and Category C). HAL provided sufficient evidence to clarify its approach on the allocation across the different cost lines.</li> </ul>	
Consents	<ul style="list-style-type: none"> <li>▪ There appears to be a clear need and rationale for the work undertaken by the consents team.</li> <li>▪ We originally identified a potential significant overlap between Consents activities and the activities undertaken by some of the IDT Task Orders.</li> <li>▪ HAL explained that the DCO process required the project design (for which the IDT was responsible) to</li> </ul>	<p><b>Limited concerns regarding potential inefficiency.</b></p>

Category B costs	Findings from our assessment	Potential inefficiency
	<p>be developed having regard to environmental, planning and community considerations and taking into account feedback from consultations (activities for which the consents team was responsible). This was achieved by ensuring close collaboration and joint working between the IDT consultants and the Consents team and establishing a client-consultant relationship between the two teams in areas of technical expertise overlap. For example, the Consents team provided client-side leadership, direction, scrutiny, review and assurance on planning and environmental aspects, but did not duplicate work carried out by IDT. The consents team only took on primary responsibility for planning and environmental work which was outside the scope of (but complementary to) the IDT's tasks (e.g. leading the overall engagement programme with third parties).</p> <ul style="list-style-type: none"> <li>▪ Overall, the Consents area underspent against its budget in each of 2019 and Q1 2020.</li> <li>▪ The IFS identified some issues relating to the accruals process for this category, which it recommended that HAL addresses for 2020.</li> </ul>	
Ground investigation	<ul style="list-style-type: none"> <li>▪ Covered in Category C section.</li> </ul>	Covered in Category C section.
IDT	<p style="text-align: center;">General findings</p> <ul style="list-style-type: none"> <li>▪ HAL appears to have a clear and relatively effective procurement strategy for IDT overall (see further detail after this table).</li> <li>▪ We have identified significant overlap between different IDT task orders (TOs) in terms of areas the different consultants were working on and outputs they were contributing to. Based on the information submitted by HAL to date, it is difficult to establish there were no overlaps in activity of different consultants on different task orders. For example, multiple TOs were working towards the Airport Expansion Consultation. Some of the TOs appear to have a very wide remit (for example TO 1.5 Masterplan Design &amp; Guardianship).</li> <li>▪ HAL's Statement of Costs included little narrative to describe the activities relating to costs incurred in Q1 2020 in relation to individual TOs.</li> <li>▪ The IFS noted that it was difficult to understand the transfer of scope of IDT activities between Category</li> </ul>	

Category B costs	Findings from our assessment	Potential inefficiency
	<p>B and early Category C (post September 2019 HAL allocated most IDT spend to Category C) and it would have expected more rigorous governance around a budget change of this magnitude.</p> <ul style="list-style-type: none"> <li>▪ IDT covered many different task orders: in this table we have set out findings in relation to the largest task orders, and any smaller task orders where we identified potential issues, inefficiencies, or the need to investigate further.</li> </ul> <p>Specific task order issues</p> <ul style="list-style-type: none"> <li>▪ <b>TO 5.3 Environmental assessment:</b> there appears to be a clear overall rationale for this task order. The spend in this category was driven by the requirements of the Infrastructure Planning (“EIA”) Regulations 2017. The requirements of the EIA and required content of the Environmental Statement (“ES”) are defined within the regulations and form a critical part of the Development Consent Order (“DCO”) application. There was large overspend compared to the budget for 2019 (£5m). In Q1 2020, there was a small underspend compared to budget (£0.4m).</li> </ul> <p>According to HAL’s report, the 2019 budget for this TO was created in 2018. In 2019, the approach to the EIA changed: HAL moved from a plan of producing a Preliminary Environmental Information Report (“PEIR”) in 2019, to producing a draft ES. The variance between actual cost and budget reflects this change in approach. We asked HAL to explain why it decided to change its approach during 2019. HAL stated that in the decision was made in order to drive down the risk at DCO stage, by consulting on detailed environmental information.</p> <ul style="list-style-type: none"> <li>▪ <b>TO 4.7 Surface access:</b> there appears to be a clear overall rationale for this task order. According to HAL’s report, the Surface Access models developed by this TO were deemed by key stakeholders as TAG (Transport Analysis Guidelines) compliant. They were used to test multiple strategy options to ensure that the most efficient and cost-effective surface access strategies were adopted. There was a small underspend against budget in 2019, and an overspend of around £0.5m in Q1 2020, which HAL explained was due to the need to re-run some of the Surface Access models in response to feedback to the Airport Expansion Consultation (AEC).</li> </ul>	<p><b>More investigation is required in relation to TO 5.3 Environmental Assessment:</b> It is not clear whether the approach HAL took, of moving from a PEIR to a draft ES was necessary in order for a successful DCO application.</p> <p><b>Limited concerns regarding potential inefficiency</b> in relation to TO 4.7 Surface access.</p>

Category B costs	Findings from our assessment	Potential inefficiency
	<ul style="list-style-type: none"> <li data-bbox="416 288 1098 1025"> <p>▪ <b>TO 1.5 Masterplan Design &amp; Guardianship:</b> The objective of this TO during 2019 was to lead development of the masterplan to form part of the DCO application in 2020. At the start of 2019, HAL took the approach of only placing into contract the elements of work within this TO which were defined enough to control and drive efficiently. Where there was less certainty, areas were left out and added in at a later stage when there was more clarity. HAL states that its understanding of the requirements and tests needed for the DCO application developed during the year as the programme gained feedback from the planning inspectorate and statutory consultees such as the Environment Agency and Highways England. This drove additional elements of work which largely account for the increase in the budget. In 2019, this TO overspent by almost £1m against the original budget (but as explained there were several revisions to the budget during the year). There was almost no spending in relation to this TO in Q1 of 2020.</p> </li> <li data-bbox="416 1048 1098 1944"> <p>▪ <b>TO 3.1 Terminals, Aprons and Satellites:</b> work undertaken under this TO in 2019 was primarily about ensuring that the terminals and associated circulation zones were designed to the requisite level of detail to inform the DCO application. The design scope comprised the following main components: terminal facilities, passenger concourses and satellites, aprons including building interfaces, landside terminal zones including roads and forecourts and public transport interchanges (excluding rail). The costs associated with the design up to the point where the scheme was 'chilled' at the end of September was defined as Category B. A large majority of the Category B scope was concluded at the end of September. Key activities after at the end of October continued to inform the DCO, but also fed directly into the planning and development of the scheme and were categorised as Category C. This TO underspent in 2019 by around £3.5m. There was a minimal level of spending in relation to this TO in Q1 2020 (less than £100 000). HAL provided a good level of explanation for the 2019 underspending, in terms of scope changes versus cost savings achieved through cost control.</p> </li> </ul>	<p data-bbox="1102 288 1441 533"><b>More investigation is required in relation to TO 1.5 Masterplan Design &amp; Guardianship</b> given approach taken by HAL to defining budget during the year.</p> <p data-bbox="1102 1077 1441 1249"><b>Limited concerns regarding potential inefficiency</b> in relation to TO 3.1 Terminals, Aprons and Satellites.</p>
Property	<ul style="list-style-type: none"> <li data-bbox="416 1951 1098 2072"> <p>▪ Costs relate to land referencing activities which appear at a high level to be in line with requirements for submitting a DCO application. Significant Q1</p> </li> </ul>	<p data-bbox="1102 1951 1441 2072"><b>Limited concerns regarding potential inefficiency.</b></p>

Category B costs	Findings from our assessment	Potential inefficiency
	<p>2020 overspending relates to targeted consultation for which it is difficult to establish any inefficiency.</p> <ul style="list-style-type: none"> <li>Cost appears to consist entirely of contractors/consultants so appears to be categorised correctly as expansion.</li> </ul>	

## Initial findings: early Category C costs incurred between 2017 and February 2020

**Table C.2: Initial findings from the review of Category C costs**

Category C costs	Findings from our assessment	Potential inefficiency
Property – Major Commercial Acquisitions and Residential Compensation	<p>HAL appears to have followed a generally transparent and well-structured approach to these property activities. However, we have some specific concerns over the efficiency of expenditure incurred for particular activities:</p> <ul style="list-style-type: none"> <li>HAL incurred material sums on various feasibility and design studies in 2019 for 3<sup>rd</sup> parties. We do not currently have evidence on what outputs or benefits these studies delivered, although we note that many of the studies would have been required in advance of HAL seeking to acquire the relevant sites.</li> <li>HAL may be obliged to acquire a particular strategic site: this potential obligation results in a material contingent liability until the end of 2023. HAL has not provided evidence in support of the business case for this transaction, which may result in HAL being required to purchase a site for which currently it has no specific need or use.</li> <li>HAL has acquired a site with a material asset value: HAL has not provided evidence to explain how this asset value is treated in its RAB, and how any income generated from the site is treated in the single till. We do not have sufficient information on this transaction to be assured that this expenditure was required and efficient.</li> </ul> <p><b>More investigation is required in this area</b>, and specifically commercial property acquisitions.</p>	<b>More investigation is required.</b>
IDT	<ul style="list-style-type: none"> <li>Approach to procurement and management of IDT was the same as for Category B costs.</li> <li>Similar to the Category B review, we have only covered in this table task orders where we identified potential issues or inefficiency.</li> </ul>	

	<p>Specific task order issues</p> <ul style="list-style-type: none"> <li>▪ <b>TO 3.1 Terminals, aprons and satellites.</b> It is unclear whether all work within the scope of this TO was necessary pre-DCO. The IFS questioned the timeliness of this activity, particularly terminal design work which they said could have been deferred until after the DCO decision. The IFS noted that, as the runway opening date moved, work associated with new terminals would not start until 2028 at the earliest. The IFS asked HAL why it had completed this work during 2019/20, HAL said that “the airline community was particularly interested in understanding terminal and satellite sizing so more drawn information was provided that perhaps would not have been strictly necessary at this stage”. HAL mentioned feasibility work for a connecting bridge between T2 and T3 that was carried out in response to stakeholder feedback to investigate whether it could enable better utilisation of existing infrastructure in the short term. It is unclear whether 100% of this feasibility work should have been allocated to the expansion programme. Originally there was no budget for this TO so we have been unable to assess whether activity was delivered over or under budget.</li> <li>▪ <b>TO 3.7 Airline occupancy, capacity &amp; forecasts –</b> Unclear whether all work within the scope of this TO was necessary pre-DCO. Activity carried out under this TO are closely linked to TO 3.1 Terminals, aprons and satellites. No budget was originally set for this TO so we have been unable to consider over/under spending against a budget. Limited narrative was provided to justify cost efficiency but some narrative explained that HAL considered that a consolidated approach to occupancy, capacity and forecasting was more efficient than each TO doing its own analysis.</li> <li>▪ <b>TO 4.6 Motorways, junctions and local roads – challenging to assess whether this activity was completed in an efficient way.</b> HAL made some attempt to explain how it has delivered against a set of outcomes, but the information provided is very high-level. Outcomes/deliverables listed include the masterplan, draft ES (with a milestone for 2019) and Statement of Common Ground (both leading to the DCO application), material for HE project gateway process e.g. traffic management plan. Significant overspending against budget (+£2,504k for 2019) occurred. HAL claims that this was due to the original budget (£750k for 2019) was significantly understated because (i) the budget was set as Category B spending but was re-defined as Category C (ii) the scope of the budget was initially limited to delivery related activities</li> </ul>	<p><b>Potential inefficiency in relation to TO 3.1 Terminals, aprons &amp; satellites:</b> Early progression of terminal design work may not have been required for DCO.</p> <p><b>Potential inefficiency in relation to TO 3.7 Airline occupancy, capacity &amp; forecasts</b> : activity under this TO was closely linked to TO 3.1 which may not have been required for DCO stage.</p> <p><b>More investigation required in relation to TO 4.6 Motorways, junctions and local roads:</b> because (i) the evidence that HAL has provided on efficiency is limited, particularly given the materiality of spend; and (ii) there was significant overspend against initial budget and significant</p>
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	<p>but HAL then realised that a complex series of activities were required under this TO including detailed stakeholder views for design development deliverables to address specific stakeholder concerns, detail changes to deliverables (additional lane on the A3044), exploring value adding opportunities (Southern Road Tunnel jacket solution, addition design details to support calculation of maintenance commuted lump sum and engagement with Highways England).</p> <ul style="list-style-type: none"> <li>▪ <b>TO 3.4 Connectivity</b> – Challenging to assess whether this activity was completed in an efficient way. The IFS suggested that the scheduling of work was appropriate but noted the challenges to assess efficiency based on the information provided on this TO. The activity covered a mix of different facilities and systems that enable people and bags to move around the airport. Originally there was no budget for this TO so we are unable to assess whether activity was delivered over or under budget. The IFS noted that the original scope increased which may have resulted in "some inefficiencies" and that the reporting on these challenges could have been improved by HAL. HAL said that stakeholder engagement activity under this TO was larger than anticipated (for example engagement with the Metropolitan Police to replace a police station and rail design which HAL claimed was time critical. Evidence of efficiency is mainly around efficient procurement of services e.g. working with Atkins to reduce original submission scope and Atkins used an offshore design team to reduce costs, working with planning advisors (Quod) to ensure the minimum design necessary to support DCO submission was produced.</li> <li>▪ <b>TO 9.1 Immigration removal centre</b> – HAL claims that this work was on the critical path (so its timing appears acceptable) but has made some unclear statements to justify the level of costs incurred to remove the immigration centre. It is difficult to address cost efficiency based on the information provided. HAL claims that cost incurred during 2019 covered mainly design work and that it planned to carry out a 'like for like' replacement of the facility with a risk allowance for 25% of additional land requested by Home Office: no explanation was provided to support these design/costing assumptions. HAL claims that the facility (and HMCTS Tribunal) were on Crown Land which could not be acquired by compulsory acquisition. Instead all decisions were with the Home Office and subject to negotiation and mutual agreement: again HAL provided no examples of how it negotiated efficient outcomes. Also, external factors meant that there were</li> </ul>	<p>increases in scope of works.</p> <p><b>More investigation required in relation TO 3.4 Connectivity:</b> material cost area and scope changes were made which the IFS suggested may indicate inefficiency, although it could not be sure with the information it was provided.</p> <p><b>More investigation required in relation to TO 9.1 Immigration Removal centre:</b> It remains unclear why this activity was moved from the Property workstream to Category C IDT. Costs incurred under this TO appear to have mostly been driven by external factors, mainly outside of HAL's control.</p>
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	<p>changes in site location decisions and delays in receiving facility briefs from the Home Office. No budget was originally allocated to this TO. HAL first thought that this work would be delivered through the “property workstream” as part of the portfolio of development but instead costs were moved and allocated to Category C IDT. We raised a query to clarify this and HAL’s response was “the transfer was due to the fact that the works needed to be undertaken earlier as the removal of the facility was on the critical path for the programme”.</p>	
Ground investigation (“GI”) (including Category B costs)	<ul style="list-style-type: none"> <li>▪ We have assessed GI costs on a total cost basis because of the notional methodology of allocating between Category B and Category C that HAL implemented. There appears to be a clear need and rationale for the activity. HAL needed to undertake GI on a timely basis in order not to delay the overall progress the expansion programme.</li> <li>▪ However, our review of the evidence provided suggests that the number of borehole locations delivered per month was significantly lower than anticipated in 2019. The programme slowed down in the first half of the year due to difficulties in obtaining land access. It was subsequently stood down entirely from August to October. Despite that, the outturn GI expenditure did not fall to a level consistent with the reduced scope of GI activities. The GI activities were also £0.6m above budget in Q1 2020 representing a more than 30% cost overrun.</li> <li>▪ HAL explained that ongoing monitoring and testing might not take place at the same month as delivering a new borehole location so the relationship between expenditure and locations is not direct. We consider that this does not provide sufficiently convincing evidence of the expenditure profile observed.</li> </ul>	<p><b>Potential inefficiency in relation to this category:</b> HAL has not provided sufficient evidence of the efficiency of its total GI spending in 2019 and Q1 2020.</p>
Colleague costs	<ul style="list-style-type: none"> <li>▪ <b>There appears to be a clear need and rationale for the expenditure incurred.</b> Colleague costs underpin the expansion programme with a combination of in-house Heathrow colleague resources and complementary Programme Client Partners (PCPs) colleague resources.</li> <li>▪ HAL overspent against its budget in 2019 and Q1 2020 by about 10%. Based on our review of the evidence provided, we consider that HAL has not provided sufficient evidence of efficiency and appropriate allocation between Category B and Category C costs. Despite the overall delay of the expansion programme, colleague costs were above the initial budget. This appears to have been driven by a combination of a</li> </ul>	<p><b>More investigation is required:</b> HAL has not provided sufficient evidence of the efficiency and appropriate allocation of its Category C colleague cost spending in 2019 and Q1 2020.</p>



	<p>higher number of FTEs and a higher proportion of much more costly PCP resource to cover mid-level positions compared to budget. In addition, there were a number of reallocations from Category B to Category C and associated rebasing of spend which were not well evidenced. This was clearly identified as not being best practice in the IFS report.</p> <ul style="list-style-type: none"> <li>We also considered the IFS findings that hiring colleague resource consistent with the accelerated scenario 1 delivering expansion in 2026 might have been inappropriate given the ongoing consultation on the preferred scenario in the second half of 2019. This might have resulted in a level of inefficiency due to spend on colleague resources which were subsequently not deployed in the best possible way.</li> </ul>	
Programme leadership	<ul style="list-style-type: none"> <li><b>There appears to be a clear need and rationale for the expenditure incurred.</b> Category C Programme leadership costs were incurred in respect of essential programme support services that were facilitating expansion including PMO, estimating, logistics/schedule and procurement.</li> <li>HAL underspent against the total budget in 2019 but overspent in Q1 2020 so overspent overall, if not significantly. We identified two key themes in the evidence provided by HAL which had opposite impacts on outturn expenditure. First, there was a degree of slippage in the delivery of the planned outputs that were budgeted for, reducing the expenditure incurred. Second, HAL introduced changes in a revised budget in mid-2019 which resulted in additional teams being set up which resulted in additional expenditure.</li> <li>We asked HAL some questions related to these themes but received limited additional detail compared to the initial evidence base. We note that the IFS had similar difficulties in assessing whether expenditure was commensurate with the scope of activities delivered, particularly when actual expenditure and deliverables do not appear to have been tracked against budget. The IFS report also confirmed that mid-budget changes were not explained in the same level of detail as activities within the initial budget.</li> </ul>	<p><b>More investigation is required in relation to this cost category:</b> HAL has not provided sufficient evidence of the efficiency of activities added in the mid-year budget for 2019 and the bundling of various activities into an “Other” cost line in Q1 2020.</p>
Programme IT	<ul style="list-style-type: none"> <li><b>There appears to be a clear need and rationale for the expenditure incurred.</b> The Programme IT category was split into several sub-programmes to create and utilise various IT solutions to support HAL’s Category C expansion activities.</li> <li>HAL underspent significantly compared to the budgets for Programme IT activities in 2019 and Q1 2020.</li> </ul>	<p><b>Limited concerns regarding potential inefficiency be more investigation is required in relation to the allocation of costs:</b> HAL has not provided sufficient</p>

	<p>However, the evidence we have reviewed suggests that this was at least partly driven by scope reduction with programme deliverables which were budgeted for being delayed. We also considered the IFS's assessment of Programme IT costs which suggested that HAL provided sufficient evidence to support the efficiency of the business case for the IT sub-programme with the highest expenditure (the Common Data Environment ("CDE") sub-programme).</p> <ul style="list-style-type: none"> <li>▪ Our initial assessment was that HAL has not provided sufficient assurance that it has appropriately allocated some of the Programme IT costs it incurred. First, HAL confirmed that the CDE programme solutions delivered will be used for BAU IT activities in the wider Heathrow business and as a result, the expenditure was allocated to the Expansion programme and BAU in equal proportions (50/50). However, there was lack of any further evidence to explain how (for example, to which programme) the BAU budget was allocated to and whether it was opex or capex. Second, the scope of the "Programme IT controls" sub-programme included references to supporting BAU IT programmes (such as the Magenta programme). Therefore, it was unclear whether these BAU IT programmes were undertaken using the expansion Programme IT budget. We queried this issue with HAL and we consider that HAL has provided sufficient evidence of how it allocated the expenditure. However, it is still unclear whether that was appropriately reflected in an updated budget to allow like for like comparisons with actual expenditure, particularly given the significant underspending on this cost category.</li> </ul>	<p>evidence to explain the allocation between expansion Programme IT activities and BAU IT activities for the purposes of setting the Programme IT budget.</p>
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### Procurement and management of IDT

3. As part of our assessment, we asked HAL to provide information on its IDT procurement strategy, as this cost category was the single largest category within Category B costs (and also a large proportion of Category C costs).
4. We have summarised some of the information provided by HAL this appendix. As stated in the table above, we consider that HAL has demonstrated that it had an overall clear and effective procurement strategy for its IDT work, given the nature of the IDT activity, and the existing agreements it had in place with various suppliers, as explained below.
5. HAL's approach to delivering the IDT work was to use suppliers it already had relationships with through previously competitively tendered frameworks. It supplemented this with other specialist consultants drawn from within and

outside of the existing frameworks, to form an integrated team (the Integrated Design and DCO Team, or IDT).

6. Consequently, the procurement strategy consisted of a mix of new tender for the concept architect (Grimshaw) and using suppliers on HAL's existing tendered frameworks. HAL argued that this allowed it to achieve a quick start and use suppliers that had experience of Heathrow.
7. For the suppliers drawn from tendered frameworks, each had agreed rates, and HAL also put in place net sales discounts to drive value as the volume of work increased.
8. There were overarching agreements in place covering rates and core employers' requirements, but the work was contracted in stages for each task order. Task orders were run on 3-, 6- or 9 month periods typically with each supplier within the IDT group able to pitch for inclusion at each stage, which drove competition, including on time, which HAL argued was an important factor as the contracts were cost reimbursable.
9. Figure C.1 below shows the structure of the HAL contracting frameworks.

**Figure C.1: Heathrow frameworks**



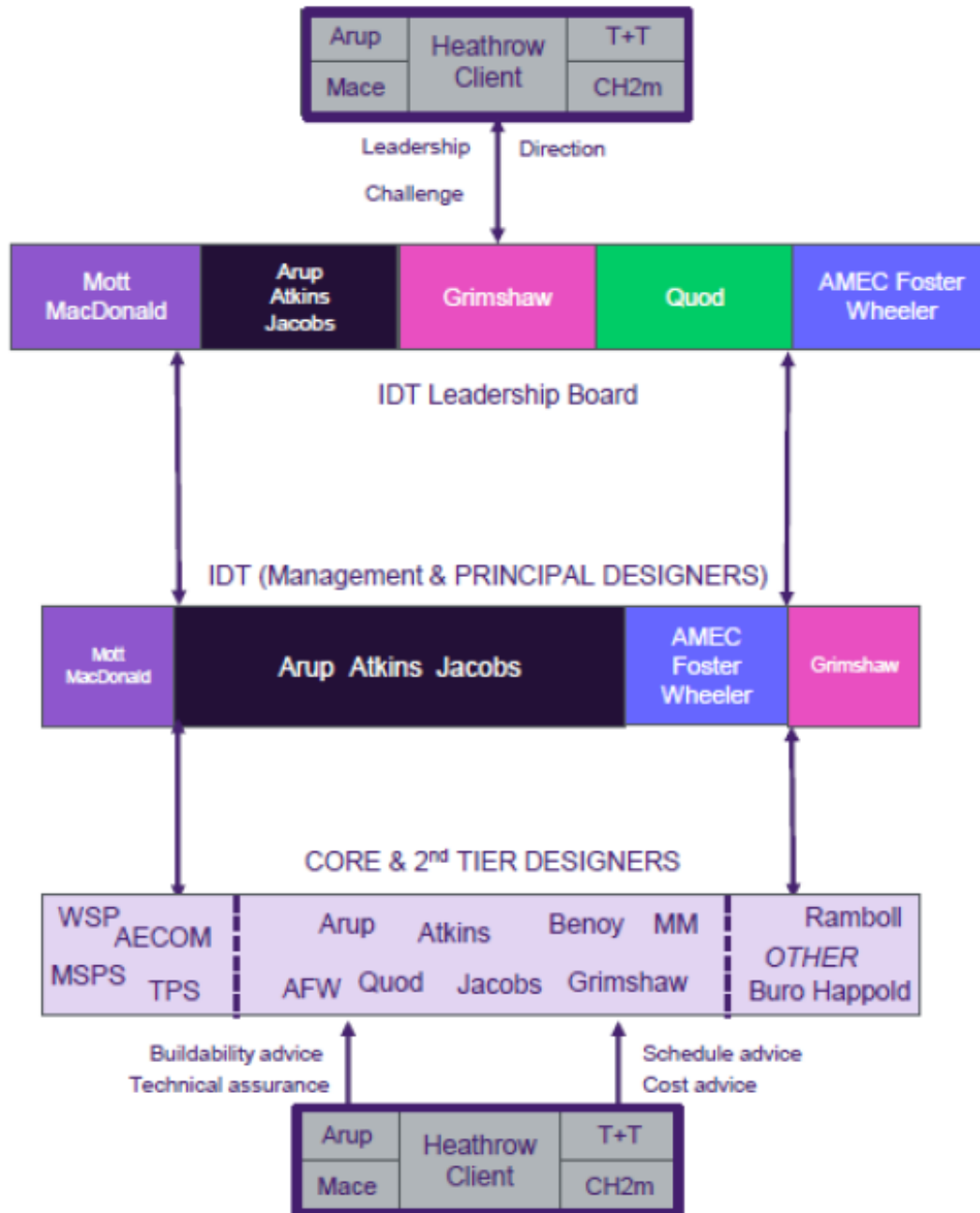
Source: HAL

10. The two diagrams below show how the IDT work was delivered in practice. The Heathrow Client, supported by the four Programme Client Partner (PCP) organisations (Arup, Mace, Turner & Townsend and CH2M) provided leadership, direction and challenge to the IDT.
11. HAL argued that the size and complexity of the expansion programme required a resilient and "best in class" team, and that no single supplier could provide that. The approach HAL choose was to organise the work into task orders. Each of

the suppliers could pitch to be included in a task order using agreed rates, enabling HAL to select the “best athletes” for each technical area. This led to the formation of multi-supplier teams on each task order. This approach also promoted collaborative working and efficient interfaces between task orders as integration on a programme of this complexity is often one of the biggest challenges. We note that each supplier had one contract, regardless of how many task orders they were contributing to.

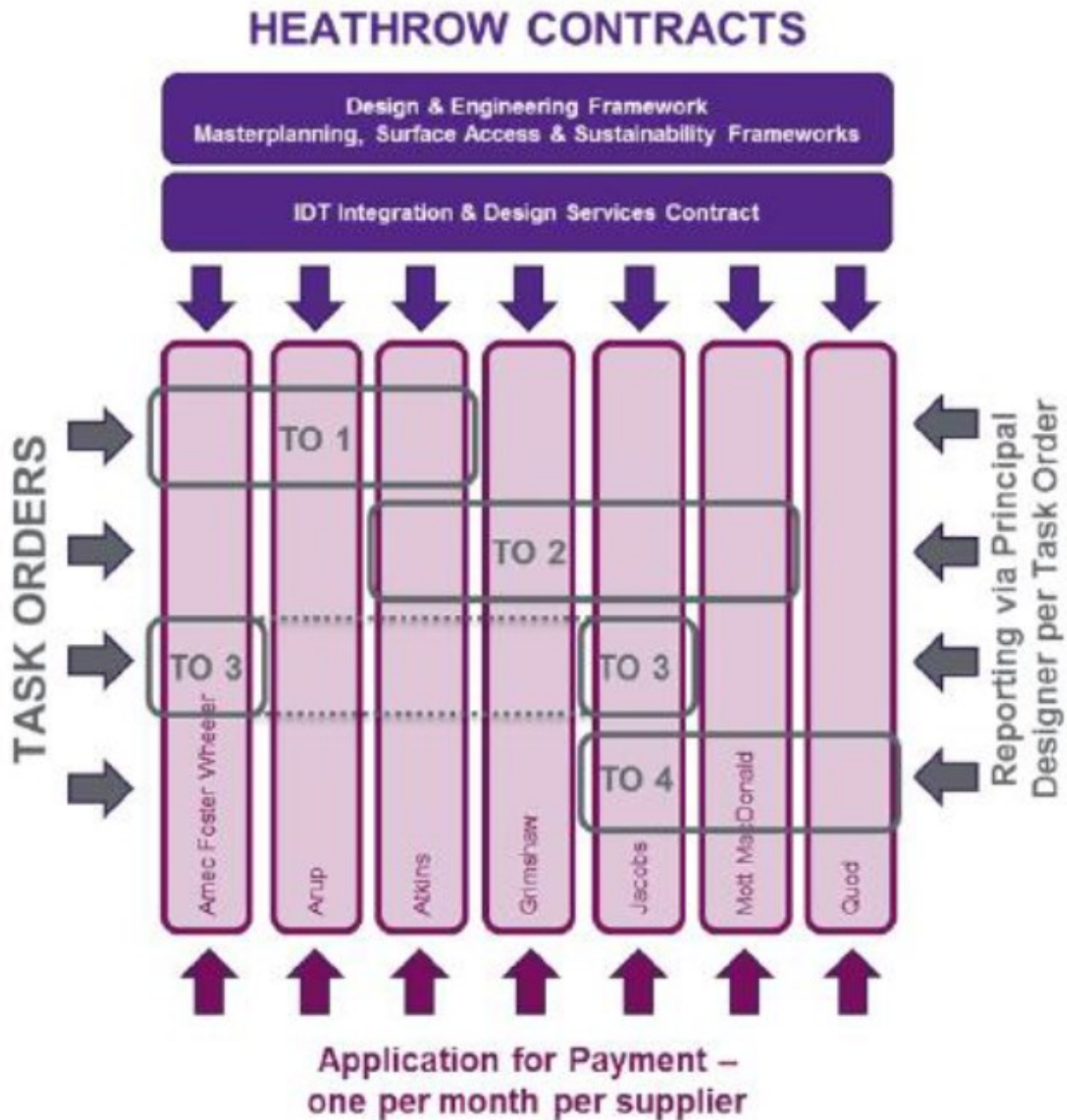
12. There was also an IDT leadership board in place, and a Principal Designer appointed for each task order, responsible for the outputs of that specific task order. This allowed for a single point of contact and accountability for each task order.
13. HAL explained that it also considered other contracting frameworks and structures for IDT, for example having a “thick” client organisation with multiple first tier framework consultants, or a ‘thin’ client and Incorporated Joint Venture/Development Partner/Alliance. HAL identified a variety of disadvantages with the alternative models, compared to its chosen model, for example the longer time it would have taken to mobilise the team, or dynamics between JV partners.

Figure C.2: IDT structure and management



Source: HAL

Figure C.3: IDT – organisation of task orders



Source: HAL