British Airways plc
Waterside
PO Box 365
Harmondsworth UB7 0GA

Civil Aviation Authority
Westferry Circus
Canary Wharf
London EH14 4HD

cc: economicregulation@caa.co.uk

17th November 2020

British Airways Response to CAP1964: Q6 Capital Efficiency Review

Thank you for the opportunity to respond to your latest consultation on the Economic Regulation of Heathrow; we set out our views on the issues raised by you as requested as well as providing further comments on both this consultation and implications for the wider policy environment.

Executive Summary

The key messages from British Airways in this response are as follows:

- Capital efficiency is vital to ensuring that airport charges remain appropriate. In line with our response to CAP1951, we support the introduction of clear ex-ante incentives alongside limited ex-post reviews as proposed by the CAA, which should ensure Heathrow is better incentivised to plan and deliver projects.

- Whilst we recognise the difficulty of conducting an ex-post review of efficiency, we are clearly disappointed with apparently low initial assessment of inefficiency set out in CAP1964. This is particularly the case, as the airline community has provided abundant evidence of inefficient practices on the Main Vehicle & Cargo Tunnel projects, T3 Integrated Baggage, and Western Baggage Upgrade projects.

- The costs of the Tunnel projects have risen from £[redacted].[redacted]m to £[redacted].[redacted]m, with little having been achieved on the cargo tunnel project, poor contractor performance, duplication of work due to errors and an inability to control costs despite a commitment to airlines to deliver both tunnels to the already agreed scope and price.

- T3 Integrated Baggage costs inflated in Q6 from £[redacted].[redacted]m to £[redacted].[redacted]m, with £[redacted]m of spending already deemed inefficient in the Q5 capital efficiency review. Further cost inflation was not approved at Airline Governance, and insufficient contractor resources were in place to complete the project.

- This created a knock-on impact on the Western Baggage Upgrade project, where Heathrow unilaterally stood down the contractor to support the completion of T3

Integrated Baggage. This created a further £[redacted]m inefficiency due to re-mobilisation costs and price increases, alongside significant delay.

- We are supportive of the Demonstrably Inefficient or Wasteful Expenditure criteria adopted for use in this review, particularly the explicit recognition that Heathrow cannot contract out responsibility for project development and delivery. However, the framework should be adopted as a whole, and Heathrow must always demonstrate that its spending represents efficient expenditure.

- Therefore, an initial presumption of efficiency would be inappropriate. Instead the burden of proof must remain on Heathrow to demonstrate efficiency in planning and delivery of the projects under assessment, as has been implemented in CAP1910 for NATS En-route Ltd ("NERL").

- We welcome working with Heathrow, the CAA and the airline community in further assessing capital efficiency and developing the framework for H7 to ensure greater efficiency in the future.

Broad comments on capital efficiency

1. It is crucial that all capital expenditure introduced to the Regulated Asset Base ("RAB") is incurred efficiently. Airport charges within the "single till" comprise both an investment return and incur depreciation costs from the RAB, therefore **if past capital expenditure is not efficiently delivered, resulting airport charges paid by consumers are higher** than would otherwise be the case.

2. Incentives therefore need to be effective to ensure that economy and efficiency are encouraged, and that services are provided to consumers at minimum cost. As a result, **ex-post assessments of capital expenditure should ensure that only efficient spending is introduced to the RAB**, to ensure that efficiency is promoted.

3. **Inefficiency not only costs consumers directly, but also acts as a drag on the economy**, limiting productive output in cases where envisaged outcomes have not been delivered. We agree with the statement in the Transport Infrastructure Efficiency Strategy ("TIES") report that "we must pursue efficiency – making sure that transport users get the best possible return on every pound we spend on our transport network."[1]

4. Spending is not efficient if a greater output could have been delivered with the same inputs. In a well-functioning market, competitive pressures ensure expenditure is driven to the minimum average total cost[2], supporting productive efficiency and

[1] Transport Infrastructure Efficiency Strategy report, December 2017
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/664432/transport-infrastructure-efficiency-strategy.pdf
[2] Sickles, R., & Zelenyuk, V. (2019). Measurement of Productivity and Efficiency: Theory and Practice. Cambridge: Cambridge University Press

hence national productivity. In the absence of competition, **regulation provides the backstop to ensuring that expenditure remains efficient**, meeting the production-possibilities frontier to mimic the effects of a competitive market.

5. Furthermore, in the absence of competitive markets, X-inefficiencies[3] occur if there are few incentives to control costs. This is the basis for regulation: allowing inefficient spend on the RAB in excess of that achievable in an efficient market **would perpetuate inefficiency by reinforcing moral hazard during project management**.

6. A lack of incentives on monopolies to make good decisions results in organisational slack, and as noted by recent Nobel laureates, "**Individuals make pretty bad decisions in many cases [when] they do not pay full attention in their decision-making**"[4]. In the case of Heathrow, adding inefficient costs to the RAB rewards Heathrow for poor decision-making, and results in worse consumer outcomes than in a competitive market.

7. It is for these reasons that capital efficiency is so important, however we recognise the **difficulty in judging and applying this through an ex-post capital efficiency review**, which is reflected both in this response to CAP1964, our response to CAP1951, and previous letters sent by the airline community setting out our aligned views on inefficiencies, which should be read alongside this response.[5]

8. It is important to establish the definition of efficiency to be able to establish whether any inefficiency does exist in the delivery of any infrastructure project. As set out in CAP1964, ex-post assessments of capital efficiency in other regulated sectors typically incorporate a **used-and-useful test, ex-post assessment against a benchmark, or some form of assessment of open market asset value** to the asset.

9. This is crucial in the context of the regulatory environment, where existing UK principles operate based upon price cap regulation. If significant inefficient expenditure were accumulated within the RAB, **this would appear to suggest rate of return regulation operating in practice, with little risk to Heathrow in spending inefficiently**. This might be the result if information available for an ex-post review is less clear following the passage of time.

10. It also raises important questions over the **nature of the equity risk to which Heathrow is exposed in practice** versus that assumed in calculation of the Weighted Average Cost of Capital ("WACC"). If it is not possible to pinpoint inefficiency that is clear to stakeholders, this suggests an actual out-turn equity risk that was in reality lower than might have been originally assumed in determining that WACC.

---

[3] Leibenstein, Harvey (1966), "Allocative Efficiency vs. X-Efficiency", American Economic Review 56 (3): 392–415

[4] Thaler, Richard H., and Cass Sunstein (2008). Nudge: Improving Decisions about Health, Wealth, and Happiness. New Haven and London: Yale University Press

[5] Letter to Jon Clyne and Mantas Aleksa (CAA), "Airline Community Feedback re Arcadis CAA Report Q6 Capital Efficiency Review", dated 30th April 2020

11. We recognise the **difficulty in identifying inefficient expenditure years after decisions were made**, as set out by CEPA in their analysis of capital incentives[6], hence our support for clear and transparent incentives as part of an ex-ante regime in our response to CAP1951, in conjunction with some ex-post assessment where required. This should inform a lower WACC in future regulatory periods by creating clarity for all parties and a reduction in regulatory risk for Heathrow's investors.

12. We therefore welcome the work done by the CAA to develop ex-ante incentives for Heathrow, however, we must reiterate that during Q6, it remains clear to us that inefficiency is evident in these projects selected for ex-post review, particularly **given the failure to control any elements of cost, time and scope within some**.

13. It is our experience that where projects have exceeded their cost estimates, time projections or failed to deliver original scope, that **inadequate planning has primarily been the singular issue**, supporting "long held views by academics and experts that inefficiency and cost are built into projects at the earliest stages of development"[7].

14. It is also our view that the **Airline Community Governance is central to the process** at which Heathrow's capital expenditure plans are scrutinised. Airline engagement allows the development of efficient capital expenditure by providing challenge to Heathrow's plans.

15. Airline approval allows capital expenditure to move from development to core, and ultimately onto the RAB. To **allow expenditure to be introduced to the RAB, which has not been fully scrutinised and approved in airline governance meetings makes that engagement meaningless**.

16. In addition, if expenditure were allowed onto the RAB that had not been fully subject to airline oversight and approval, **it would be inconsistent with past decisions to exclude capital expenditure on the same basis**, such as that in Q4, Q5 and Q6 for the Personal Rapid Transport system.[8]

17. An ex-post review of capital efficiency is by nature a process both of determining **whether risks were adequately accounted for in developing plans, and whether appropriate decisions were made to mitigate risks as they arose**.

18. Development of capital expenditure plans to P80 level of confidence at development and P50 at core is a process of accounting for the unknown by capturing and

[6] CEPA "Possible ways of implementing ex-ante efficiency incentives for Heathrow's capital expenditure" March 2019 https://www.caa.co.uk/uploadedFiles/CAA/Content/Accordion/Standard_Content/Commercial/Airports/CAA_ExAnteCapexIncentives_310319.pdf

[7] Transport Infrastructure Efficiency Strategy report, December 2017 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/664432/transport-infrastructure-efficiency-strategy.pdf

[8] CAP1910, Para B.13

quantifying potential risks. If the risk budget is inadequate to account for the risk that materialises, **this indicates a fundamental error at the heart of the planning process**.

19. It is entirely appropriate to use hindsight to assess a project for efficiency, particularly if it has exceeded original and/or revised budgets, having consumed all risk provisions, operated outside of airline approval, or delivered few tangible outcomes. **If decisions made at the time turn out not to have been efficient, that is the very definition of inefficiency** and this should be reflected in an ex-post review.

20. It is therefore our view that **inefficiency must be borne by Heathrow, who is ultimately responsible** for all aspects of all capital projects, including supplier management, project planning, budgeting and control, and has been paid to bear the performance risk of doing so in the WACC assumed at the outset of Q6.

The use of the DIWE framework

21. We note the demonstrably inefficient or wasteful expenditure ("DIWE") framework has been developed by the Northern Ireland Utility Regulator and has also been proposed by Ofgem within areas of its RIIO framework in the past.[9]

22. We particularly welcome the explicit recognition that **Heathrow cannot contract out responsibility for project development and delivery** to third parties. It cannot ever be the case that ultimate responsibility for project management is outsourced, or responsibility passed onto consumers when management of third-party contractors has been ineffective.

23. This is **consistent with normal commercial practice, where ultimate responsibility always remains with the contracting party**, and ensures that the regulated company is incentivised to put in place a strong risk management framework that operates throughout the project lifecycle.

24. The alternative would be that every aspect of Heathrow's operations could be outsourced, no responsibility taken for poor performance, and **consumers charged in full for all costs, suggestive of rate of return regulation**.

25. Whilst under the DIWE framework, expenditure incurred is presumed to be efficient as a starting point for the review, the CAA should bear in mind that the Utility Regulator also notes that **before** the start of the price control (i.e. at the previous Q6 periodic review) "**it is usually for the Licensee to show that the allowances that it seeks represent efficient expenditure**."[10]

---

[9] Utility Regulator "Guidance on the interpretation and application of the Demonstrably Inefficient or Wasteful Expenditure (DIWE) Provision", 27th July 2017 https://www.uregni.gov.uk/news-centre/guidance-interpretation-and-application-demonstrably-inefficient-or-wasteful-expenditure
[10] Ibid.

26. We note that **the CAA does describe this nuance in CAP1910** in relation to the Competition and Markets Authority ("CMA") decision relating to NATS En-route Ltd ("NERL"), where it is noted that "Where NERL is requesting allowances – whether before the start of the price control period, or by way of approvals for expenditure incurred in period – it is usually for NERL to show that the allowances that it seeks represent efficient expenditure."[11] It should also be noted that NERL did not benefit from a similar Capital Efficiency Handbook ("CEH") and that this change was applied for the RP3 price control rather than retroactively.

27. However, this nuance is not noted in CAP1964; its explicit application would be in keeping with the definitions of efficiency as set out in the CEH. Application of the DIWE criteria **should not therefore absolve Heathrow from its responsibility to ensure that capital expenditure had been both efficiently planned and budgeted**, when establishing capital expenditure plans and taking them through the relevant Gateway approvals process for those projects.

28. The comparison between the DIWE framework and the CEH as set out in appendix C is crucial in demonstrating its appropriate use as a tool to conduct ex-post efficiency reviews, and we broadly support it as being appropriate. However, it should be noted the CEH states "**'Inefficient Capex' is Capex which is not Efficient as defined above [six key criteria] and 'which has directly resulted in a financial or benefit loss'**."[12]

29. We believe this starting position for defining efficiency remains more appropriate than an initial presumption of efficiency, and question whether **CAP1964 may inadvertently have shifted the burden of proof. It does not seem appropriate that efficiency is assumed as the starting point given the CEH definition was used to inform analysis provided in the Arcadis report and has been in operation throughout Q6 to date**[13].

30. As previously mentioned, we have presented evidence through the airline community that **spending has not been efficient based upon our direct involvement in those projects, drawing from associated Airline Community Governance ("Governance") meetings during Q6**, and that over £[redacted]m of spending in Q6 has been inefficient due to the actions (or lack of) by Heathrow in controlling those projects.

31. In order to use the DIWE criteria effective, we therefore believe it is important to ask (a) has Heathrow demonstrated efficiency or inefficiency under the CEH definition for all the projects in question, (b) did Heathrow demonstrate efficiency when setting out plans during the Q6 periodic review or when introducing new plans using the flexible capital framework, and most importantly (c) **did Heathrow demonstrate efficiency during the Governance approval process for the projects that have been assessed for this review?**

---

[11] CAP1910, Paragraph 6
http://publicapps.caa.co.uk/docs/33/CAP1910CAAresponsetoCMAProvisionalFindings.pdf
[12] CAP1964, Appendix C.11
[13] CAP1964A, Paragraph 2.1

32. This is significant for the cargo tunnel project, where **nearly £40m of spending to date has resulted in little output of any value to consumers**. Whilst we comment further on this project below, we note that this clearly meets the definition of inefficiency within the CEH in having not delivered any benefits for consumers.

33. In addition, we reiterate the point above that **Airline Community Governance is central both to the process and also the definition of project governance in the DIWE criteria**, and that interactions with the airline community that form part of that governance process are as important as Heathrow's internal governance process. Any definition of the DIWE criteria used should reflect this dual definition of governance as a result.

34. As always, **British Airways supports Heathrow in the delivery of efficient capital expenditure** that delivers tangible consumer benefits in the context of the single till regulatory environment, and we support adoption of frameworks that ensure greater clarity is available to all parties.

35. **Implemented as a whole** from planning through to ex-post assessment, **the DIWE criteria as set out by the Utility Regulator do not appear to be an unreasonable approach** for determining that expenditure has been inefficient.

36. However, we reiterate that **if used, the DIWE framework should be implemented as a package**, and that to start with an ex-post presumption of efficiency, there is also a required **burden of proof on Heathrow that capital expenditure had been planned on an efficient basis, which only then can allow an initial presumption of efficiency during a subsequent ex-post review**.

The Arcadis review

37. **We agree with the intended approach** of the Arcadis report to determine whether "whether HAL had been efficient in its spending on capex on the selected projects during Q6, using the Handbook as a reference source of guidance."[14]

38. However, the subsequent statement that "the output of its report was to support the CAA to focus any further analysis that may need to be undertaken rather than trying to determine the exact quantum of any inefficiency"[15] **appears to contradict that intended approach**.

39. Furthermore, the subsequent use in CAP1964 of the ranges and figures from the Arcadis report in relation to all selected projects appears to **suggest it has in fact been used as a starting point to determine the quantum of any inefficiency**.

40. We are therefore **concerned that complete analysis on the selected projects has not yet been completed**, and that the efficiency or otherwise of those projects needs to

[14] CAP1964, Para 1.28
[15] CAP1964, Para 1.29

be established and quantified based upon full application of the CEH and DIWE criteria across the selected projects.

41. This is important since, when applying the DIWE criteria to an ex-post efficiency review, the guidance issued by the Utility Regulator suggests that **all factors listed should be taken into account to determine whether any inefficiency has occurred**[16].

42. In conclusion, **it appears that further analysis is still required to determine both the exact quantum of any inefficiency and whether Heathrow had been efficient** in its spending and management on the selected projects, and we welcome the opportunity to provide input to this process as a result.

43. **Whilst we agree with the CAA that changes to a project – in themselves – are not necessarily an indicator of inefficiency;** uncertainty is accounted for in the risk that is built into and managed throughout a project. **The extent of the cost over-runs has in fact been caused by inadequate planning and delivery**. This is doubly inefficient and must be reflected in an ex-post assessment of those projects.

44. Project management of infrastructure spending is not about risk elimination, but risk mitigation, **ensuring that the risk profile of a project is appropriately shaped so that it can be managed throughout its implementation stage**. This requires appropriate management skill to manage risks as they inevitably materialise and prevent them from spiralling out of control.

45. Heathrow's risk management process in the CEH[17] sets out the approach to providing estimates at a P80 level of confidence for early stage development capital and P50 level of confidence for scope that has progressed through the G3 gateway at Airline Community Governance**.**

46. If risks are being assessed appropriately at the planning stage, **divergence of out-turn project costs within a programme should be normally distributed around a mean**, allowing risk to be centrally managed. From this, it could be interpreted that project costs presented throughout Governance had been built up from cost estimates with appropriate rigour, allowing Governance decisions to be made with confidence, and risk to be appropriately drawn down through the project lifecycle.

47. However, in the case of the selected projects, the extreme nature of the over-spend on projects such as T3 Integrated Baggage is **suggestive of inadequate planning, lack of supplier and contract management, and lack of end-to-end risk management throughout the lifecycle of the projects in question**.

---

[16] Para 13, Utility Regulator "Guidance on the interpretation and application of the Demonstrably Inefficient or Wasteful Expenditure (DIWE) Provision", 27th July 2017 https://www.uregni.gov.uk/news-centre/guidance-interpretation-and-application-demonstrably-inefficient-or-wasteful-expenditure

[17] Heathrow Capital Efficiency Handbook, Section 8, Risk Management

48. Cost over-runs that fall far outside estimates developed at P50 and even P80 confidence levels suggest **risks were either not accounted for at the outset, or risks were grossly mismanaged when they materialised, <u>both of which are manifestly inefficient</u>**.

49. Since risks built into original cost estimates and scoping that were presented to airlines in Governance have been so divergent from those experienced in practice, original risk and scope must have been inadequately assessed, **leading us to conclude that both scoping and cost estimates were inherently flawed and inefficient at the outset, along with the basis of Governance decisions**.

50. Information presented at Governance must form the basis of any assessment of inefficiency. **If information presented has shortcomings in identifying risks and quantifying them, the process is inherently inefficient at the outset**, and invalidates the basis upon which Governance decisions have been made.

51. As previously mentioned, **disallowing expenditure that has not been fully supported within Governance would be consistent with previous disallowances**, such as that for the Personal Rapid Transport system, for which all capex in Q4, Q5 and Q6 was excluded.[18]

52. In conclusion therefore, whilst we agree that changes to a project do not necessarily make it inefficient, **any initial presumption of efficiency is invalidated both by the quantum of changes experienced** on the selected projects, **alongside the mismanagement of risk during execution** that led to the scale of the cost over-runs.

53. The margin by which cost estimates have been missed whilst supposedly managed within Heathrow's project risk management framework is therefore demonstrative of **inefficiency through mismanagement of risk, which must therefore be reflected in the RAB**.

54. Arcadis sets out how it has approached the review and documents the process in section 2.3 of its report[19]. We must highlight that the insight of the airline community was only sought on one occasion during the period of review, and we are **disappointed that our perspective was not sought more frequently by Arcadis** throughout that process given our presence in Governance meetings that were critical to assessing and approving capital projects.[20]

55. Nevertheless, we welcome Arcadis' comments relating to clarity of scope and contract model, both of which are clear indicators of inefficiency. These observations are in line with our experience on inefficient projects, and there is **clear inefficiency in failing to scope projects before engaging contractors, along with choosing inappropriate contracting models** that required change during the course of works.

[18] CAP1910, Para B.13
[19] CAP1964A, Section 2.3
[20] CAP1964A, Section 3.4

We particularly note the comments that "it is clear that the contracts used did not incentivise the Contractors to the degree required".[21]

The Cargo Tunnel project

56. The cargo tunnel refurbishment project was budgeted at £44.9m, part of a £131m combined project to improve asset condition and reduce risks to 'as low as reasonably practicable' ("ALARP") on both the cargo and main vehicle Central Terminal Area ("CTA") access tunnels.

57. The project has experienced **significant cost overruns of around [redacted]00% against its original budget, in addition to being significantly (over 2 years) behind schedule**, with estimated costs at completion ("EAC") increasing further since Arcadis analysis took place to an estimated £[redacted]m.

58. **The original contractor was to deliver both projects under a single programme**, however the contract was separated by a deed of amendment following difficulties experienced under the original contractor.

59. This led to the Independent Funds Surveyor ("IFS") being commissioned in 2018 to prepare a **Chronology Report to explain how Heathrow had managed to spend £[redacted]m yet delivered little in terms of outputs**. Furthermore, despite repeated requests in Airline Community Governance at Capital Portfolio Board ("CPB"), airlines have still not seen a detailed account of spending to date.

60. In addition to this, it should be noted that **work already completed on the project is likely to require re-work when the project restarts**, creating further inefficiency, which must be borne in mind for future Q6+1, iH7 and H7 ex-post reviews. This review can therefore only be considered interim in nature in relation to this particular project.

61. This has resulted in the fact that **Heathrow have returned to the design stage and are not looking to start construction until 2021** (with estimated completion in 2026). Heathrow have attempted to reset Airline Governance back to the start of the project lifecycle, working through a pseudo-G1 (May 2019) and pseudo-G2 (Dec 2019 & Apr 2020). This indicates that **all spending to date – estimated at £[redacted]m – can only be inefficient**.

62. Further reports from the IFS has been commissioned to explain the chronology of events from 2018 to present, and **we expect Heathrow to stand by its commitment to airlines, documented in minutes at G3, to deliver both tunnels to the already agreed scope and price**.

[21] CAP1964A, Paragraph 2.7

63. As noted by the CAA, that there was a lack of alignment between budget and solution, lack of reporting on final costs, and no ongoing review of the schedule. The **resulting loss of benefits indicates a clear inefficiency of all spending on this project**.

The Main Tunnel project

64. Like the above project, the main vehicle tunnel refurbishment project was budgeted as part of the £[redacted]m combined project, this at £[redacted]m. As with the cargo tunnel project, extremely poor performance by the contractor was experienced, with **works already completed containing defects that have required rectification**, with estimated costs rising to £[redacted].[redacted]m, and has since risen further to £[redacted]m.

65. We **fully agree with the CAA that poor levels of contractor performance demonstrate inefficiency**, with continuing discovery of defects within works already completed that have resulted in unnecessary duplication of activity: a clear marker of inefficiency.

66. The comprehensive summary provided by the Airline Community to Arcadis detailed the issues experienced on the Main Tunnel, including why we are clear that there are significant inefficiencies that warrant further analysis.

67. In conclusion there is clear evidence that this project has been inefficient, particularly due to duplication and mismanagement of the contractor, **we expect Heathrow to stand by its commitment to airlines, documented in minutes at G3, to deliver both tunnels to the already agreed scope and price**.

Overall conclusions on other projects

68. The T3 Integrated Baggage ("T3IB") project, already deemed to have £30m of inefficiency resulting from the Q5 ex-post efficiency review, is significant in further exceeding its budget, an **exceedance that was not agreed at Airline Governance**, as documented in CPB minutes.

69. This sum, amounting to £[redacted]m, resulted from a failure to fully appreciate the nature of the project, and led to complications on the West Baggage Upgrade ("WBU") project due to the **significant decision to unilaterally stand down the contractor from that project to support the completion of T3IB**.

70. This overspend was neither 'modest'[22] nor efficient. Given the project was near completion at the outset of Q6, **it is inconceivable that Heathrow was unaware of the difficulties being encountered when a revised £[redacted]m budget was approved for Q6**. The requirement to review this within 6 months after the start of Q6, with costs exceeding budget by a further £[redacted].[redacted]m, demonstrates a fundamental inability to learn from failings in Q5.

[22] CAP1964, Para 1.58

71. The **root cause was its treatment as a building project, underappreciating risks of the technology involved**, with an inappropriate schedule and insufficient initial planning contributing to the difficulties encountered.

72. WBU costs were therefore also **inflated by £[redacted].[redacted]m as a result of re-mobilisation costs and price increases**, with a significant delay resulting. This created a loss of benefits since WBU was supposed to be in place prior to the opening of T3IB, in order to allow T3IB to fully fulfil its functions.

73. This is a **clear example of a double charge resulting from inefficient project management, alongside a failure to manage a contractor**, who appeared to have insufficient resource in place to deliver both T3IB and WBU at the same time.

Broader Issues: Project Sampling

74. We note the CAA comments on extrapolation of results from the sample of projects assessed to make further adjustments for inefficiency, along with the CAA suggestion that it might be inappropriate to do so.

75. In order to consider extrapolation across other projects, it **would be appropriate to consider application of robust sampling techniques in related fields**, such as audit of company financial statements. For example, ISA530 provides guidance on "the reasonable basis for the auditor to draw conclusions about the population from which the sample is selected"[23], which may provide guidance on any application.

76. It should be noted that projects selected for review included extreme examples of overspending, causing these projects to fall far outside their P50 estimates. We are largely comfortable with the risk offsetting that has already occurred across projects not considered in this review, through centrally managing risk. This has resulted in a modest net £[redacted]m of overspend excluding the projects selected for assessment above

77. Therefore, to consider underspend on any of those projects would be double counting since it has already been utilised against other projects that over-spent. **Changing any disallowance related to projects within this review based upon further offsetting evidence would undermine the integrity of the review**, as any underspend achieved elsewhere is managed within established risk provisions.

Broader Issues: Capital Overheads

78. We agree with the CAA that **further work on capital overheads should be undertaken as part of Heathrow's work on its H7 Revised Business Plan**. This will allow a recalibration of incentives to ensure that opex is not capitalised as part of the RAB in

[23] International Federation of Accountants, International Standard on Auditing 530, Audit Sampling, accessible at https://www.ifac.org/system/files/downloads/a027-2010-iaasb-handbook-isa-530.pdf

future, ensuring the most appropriate efficiency incentives are in place for all aspects of Heathrow's expenditure.

Broader Issues: Transport Study

79. We agree with the statement in the Transport Study that "the greatest opportunities to drive efficiency are typically during the early stages of investment planning" and agree that the questions posed[24] are appropriate to ask during an ex-post review. However, **answers to those questions should determine whether capital expenditure was efficient at the outset, rather than being used to refute identified inefficiency**.

80. Our previous contention remains, that an initial presumption of efficiency under the DIWE criteria cannot be established **without first demonstrating that capital expenditure plans represents efficient expenditure**.

81. Further to our previous comments, we are clear that **Airline Community Governance is central to the process at which Heathrow's capital expenditure plans are scrutinised**, and that too should determine compliance with governance that is core to the DIWE criteria.

82. In conclusion, the Transport Study provides some useful guidance as to best practice but should be applied in a manner consistent with the nature of Heathrow's capital expenditure process.

Broader Issues: Other Policy Issues

83. We welcome the suggestion that **Heathrow should enhance its business case development process**, in order to alleviate concerns about its delivery of complex projects.

84. At British Airways, we believe this **clearer focus on the benefits throughout the project lifecycle** is supported by the CAA's ex-ante approach to capital incentives in H7 and should deliver long-term efficiency benefits.

85. In addition, it would be a positive development to **ensure that the monthly IFS reports include tracking on realisation of outcomes towards delivery obligations** defined in future ex-ante incentives alongside reporting on costs and milestones. This will allow the IFS to integrate more fully into the ex-ante regime that is likely to be developed for H7.

[24] CAP1964, para 2.16

We welcome working with Heathrow, the CAA and the airline community in further assessing capital efficiency and developing the framework to ensure greater efficiency in the future.

Yours sincerely,

……………………………

Alexander Dawe
Head of Economic Regulation
Networks & Alliances
British Airways Plc