Appendices to Economic regulation of Heathrow Airport Limited: Consultation on the Way Forward

CAP 2139A

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Appendix A – Our Duties

1. The CAA is an independent economic regulator. Our duties in relation to the economic regulation of airport operation services ("AOS"), including capacity expansion, are set out in the CAA12.
2. CAA12 gives the CAA a general ("primary") duty, to carry out its functions under CAA12 in a manner which it considers will further the interests of users of air transport services regarding the range, availability, continuity, cost and quality of AOS.
3. CAA12 defines users of air transport services as present and future passengers and those with a right in property carried by the service (i.e. cargo owners). We often refer to these users by using the shorthand of "consumers".
4. The CAA must also carry out its functions, where appropriate, in a manner that will promote competition in the provision of AOS.
5. In discharging this primary duty, the CAA must also have regard to a range of other matters specified in the CAA12. These include:
   - the need to secure that each licensee is able to finance its licensed activities;
   - the need to secure that all reasonable demands for AOS are met;
   - the need to promote economy and efficiency on the part of licensees in the provision of AOS;
   - the need to secure that the licensee is able to take reasonable measures to reduce, control and/or mitigate adverse environmental effects;
   - any guidance issued by the Secretary of State or international obligation on the UK notified by the Secretary of State; and
   - the Better Regulation principles.
6. In relation to the capacity expansion at Heathrow, these duties relate to the CAA's functions concerning the activities of HAL as the operator at Heathrow.
7. CAA12 also sets out the circumstances in which we can regulate airport operators through an economic licence. In particular, airport operators must be subject to economic regulation where they fulfil the Market Power Test as set out in CAA12. Airport operators that do not fulfil the Test are not subject to economic regulation. As a result of the market power determinations we completed in 2014 both HAL and GAL are subject to economic regulation.

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

Appendix B – Glossary

Acronym/term	Definition
ABP	Alternative Business Plan.
AOC	Airline Operators' Committee (for Heathrow), a private company limited by guarantee.
APOC	The Airport Operations Centre.
The April 2020 Update	CAA publication CAP1914 "Economic regulation of Heathrow: programme update". See: www.caa.co.uk/CAP1914.
The August 2019 Working Paper	CAA publication CAP1832 "Economic regulation of Heathrow Airport Limited: working paper on financial resilience and ring fencing" See: www.caa.co.uk/CAP1832.
The August 2020 Working Paper	CAA publication CAP1951 "Economic regulation of Heathrow Airport Limited: working paper on capital expenditure efficiency incentives" See: http://www.caa.co.uk/CAP1951.
BA/IAG	British Airways plc/International Airlines Group (owner of British Airways).
BBU	Building Block Update.
BPG	Business Plan Guidance.
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 www.caa.co.uk/CAP1651.
CAA ("us"/"we")	The Civil Aviation Authority.
CAA12	Civil Aviation Act 2012.
CAA Consumer Panel	A non-statutory body established to act as a "critical friend" to the CAA. It provides expert advice to make sure that the consumer interest remains central to CAA policy development.
Capex	Capital expenditure.

Acronym/term	Definition
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.
CCB	Consumer Challenge Board: in order to strengthen the link between consumer outcomes and priorities and the regulation of Heathrow, the H7 Consumer Challenge Board (CCB) was established by the CAA in partnership with HAL and the airlines that currently use Heathrow.
CE	Constructive Engagement: a process mandated by the CAA that requires the airport operator to discuss its business plan with the airlines before we need to reach a decision on the appropriate price control.
CMA	The Competition and Markets Authority.
CMA Provisional Findings	CMA provisional findings report in relation to the NERL RP3 regulatory appeal.
Commercial revenues	Revenues HAL derives from services to passengers, such as retail, food and beverage, *bureaux de change*, advertising, car parking and car rental, or from services to airlines, check-in desks, office rental, airline lounges and warehousing.
Consumers	As defined in CAA12, consumers are passengers and cargo owners, both now and in the future.
Core and development capex	Core capex is capex that has been through Gateway 3 (investment decision stage) of capex governance, in line with the approach for the Q6 price control. Development capex is capex at an earlier stage of development.
The December 2019 Consultation	CAA publication CAP1871 "Economic regulation of Heathrow Airport Limited: policy update and consultation on early costs of capacity expansion". See: www.caa.co.uk/CAP1871.

Acronym/term	Definition
The December 2017 Consultation	CAA publication CAP1610 “Economic regulation of capacity expansion at Heathrow: Policy update and consultation” See: www.caa.co.uk/CAP1610.
DfT	The Department for Transport.
Early costs	Expansion-related costs that are incurred by HAL prior to obtaining planning consent.
Equity beta	Company specific estimate of risk relative to the whole market.
Expansion	HAL’s programme to expand Heathrow airport by the construction of a new northwest runway and associated infrastructure in accordance with the Airports National Policy Statement NPS.
FAC	Forecourt Access Charge.
The February 2021 Consultation	CAA publication CAP2098 “Economic regulation of Heathrow Airport Limited: response to its request for a covid-19 related RAB adjustment”. See: http://www.caa.co.uk/CAP2098.
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.
Heathrow West	Heathrow West Limited, a company set up by the Arora Group to promote the “Heathrow West” proposal.
IATA	International Air Transport Association, a global trade association representing airlines.
iBoxx indices	The Markit iBoxx Corporates Indices represent investment grade fixed-income bonds issued by public or private corporations and are produced by IHS Markit. For the purpose of calculating HAL’s cost of debt, we have used two of these indices corresponding to A-rated and BBB-rated bonds respectively. Both of these comprise sterling-denominated bonds of 10-year or greater maturity.
IBP	HAL’s Initial Business Plan. This was published in December 2020 in response to the Updated Business Plan Guidance.

Acronym/term	Definition
	See: https://www.heathrow.com/company/about-heathrow/economic-regulation/h7-update.
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.
iH7	Interim H7 price control. Runs from 1 January 2020 until 31 December 2021.
Initial tests	Tests which the CAA considered Arora should meet for the CAA to undertake detailed work on the regulatory framework that might apply to any element of capacity expansion developed by The Arora Group/Heathrow West. For more information see Appendix E of the March 2019 Consultation.
IPCR	Independent Planning Costs Reviewer appointed by the CAA under the Planning Costs Recovery Policy Statement.
LASAM	London Airports Surface Access Model.
The January 2020 Consultation	CAA publication CAP1876 "Economic regulation of Heathrow Airport Limited: further consultation on regulatory framework and financial issues" See: www.caa.co.uk/CAP1876.
The July 2019 Consultation	CAA publication CAP1819 "Economic regulation of capacity expansion at Heathrow: consultation on early costs and regulatory timetable". See: www.caa.co.uk/CAP1819.
The June 2020 Consultation	CAA publication CAP1940 "Economic regulation of Heathrow: policy update and consultation". See: www.caa.co.uk/CAP1940.
The June 2017 Consultation	CAA publication CAP 1541 "Consultation on the core elements of the regulatory framework to support capacity expansion at Heathrow". See: www.caa.co.uk/CAP1541.
LAANC	Local Authorities Airports Noise Council for Heathrow, an umbrella local authority organisation representing the interests of residents around Heathrow.
LACC	London (Heathrow) Airline Consultative Committee, set up by IATA to implement a collaborative consultation framework for Heathrow airport.
The March 2016 Consultation	CAA publication CAP1383 "Strategic themes for the review of Heathrow Airport Limited's charges: A discussion document". See: http://www.caa.co.uk/CAP1383.

Acronym/term	Definition
The March 2019 Consultation	CAA publication CAP1782 “Economic regulation of capacity expansion at Heathrow: policy update and consultation”. See: www.caa.co.uk/CAP1782.
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.
OBR	Outcomes Based Regulation. Our policy was set in our Guidance for Heathrow Airport Limited in preparing its business plans for the H7 price control (see www.caa.co.uk /CAP1540) and updated in the Updated Business Plan Guidance.
The October 2018 Consultation	CAA publication CAP 1722 “Economic regulation of capacity expansion at Heathrow: policy update and consultation”. See: www.caa.co.uk/CAP1722.
The October 2020 Consultation	CAA publication CAP 1966 “Economic regulation of Heathrow Airport Limited: response to its request for a covid-19 related RAB adjustment”. See: http://www.caa.co.uk/CAP1966.
Opex	Operational Expenditure.
ORCs	Other Regulated Charges.
PCM	Price Control Model.
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: www.caa.co.uk/CAP1513.
PSG	Passenger Services Group, part of the HCEB.
PR19 determination	Ofwat’s December 2019 decision in relation to the five year price control settlement for water companies in England and Wales. See: https://www.ofwat.gov.uk/wp-content/uploads/2019/12/PR19-final-determinations-Overview-of-final-determinations.pdf.
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.
RAG	Red, Amber, Green Status.

Acronym/term	Definition
RBP	Revised Business Plan.
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).
RFR	The risk-free rate.
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).
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, September 2020". See: http://www.caa.co.uk/CAP1964.
SQRB	Service Quality Rebate and Bonus scheme.
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: www.caa.co.uk/CAP1819.
TMR	Total Market Return.
VAA	Virgin Atlantic Airways.
WACC	Weighted Average Cost of Capital.
Wind-down costs	Expansion-related costs that HAL has incurred since the Court of Appeal's judgement in February 2020.

Appendix C – H7 Timetable

Date	Item
April 2021	- Consultation on H7 Way Forward - Working Paper on Q6 capex and early expansion costs - CAA decision on covid-19 related RAB adjustment
May 2021	- CAA workshops on key issues
June 2021	- Updated information from HAL
Summer 2021	- Initial Proposals for the H7 price control
August/Sept 2021	- HAL building block update
December 2021	- CAA final proposals for the H7 price control and proposed licence modifications
February 2022	- CAA final decision on the H7 price control and notice making the licence modifications
March/April 2022	- Licence modifications take effect and applied retrospectively to 1 January 2022

Appendix D - Other aspects of the regulatory framework

Introduction

1. This appendix considers the overall regulatory framework and addresses some aspects of the framework that are not discussed in detail elsewhere in this consultation.

2. In 2016, at the start of the H7 review, we said that we intended to retain the overall approach to setting price caps that we had used for Q6 and in previous periods.[1] This included:
   - the approach of remunerating HAL's investment through its RAB and an estimate for its WACC; and
   - the "single till" approach to calculating allowed revenues.

3. In the June 2017 Consultation, in addition to confirming the overall approach as described above, we said that:[2]
   - our general approach should be to continue to set five-year price controls for HAL;
   - we saw no compelling case for changing the incentives on opex and commercial revenues, under which HAL would continue to bear 100 per cent of the risk of under/over performance within the price control period; and
   - our initial policy was that we should continue to use RPI (rather than another measure of inflation) for calculating the allowed return and inflating the RAB during the next price control period.

4. In 2017, we also set out our intention to consider some of the changes to the regulatory framework discussed elsewhere in the current document, including the introduction of *ex ante* efficiency incentives for capex, indexation to update the cost of debt allowance, and the transition towards outcome-based regulation.

Stakeholders' views

5. Many aspects of the regulatory framework were discussed during the course of CE. There was broad agreement between HAL and airlines on the overall approach, in particular that:

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1 See paragraph 4.20 of the March 2016 Consultation.

2 See paragraphs 3.13, 3.31, 4.11, 4.15, 5.28 and B14 of the June 2017 Consultation.

- there should continue to be a RAB-based RPI-x price cap;
- this should continue to be calculated on a single till basis;
- the price control period should last for five years, although stakeholders also acknowledged the risk that significant and persistent uncertainty could threaten this ambition;
- the current incentives applying to opex should be retained; and
- the core and development framework for capex should also be retained.

6. Some potential changes to aspects of the regulatory framework were also discussed, although in many cases stakeholders did not agree. In its RBP, HAL proposed a number of specific changes to the current framework. We discuss in the main document issues around the financial framework, traffic/revenue risk sharing, capex incentives and OBR. In addition to proposals in relation to these matters, HAL has suggested:
   - an expanded 'S-factor' to allow the pass through of costs arising from unexpected health and safety requirements (as well as unexpected security requirements which are covered by the current S-factor);
   - new pass through arrangements for business rates (through ORCs), CAA licence fees and revenues from the new forecourt access charge;
   - re-categorisation of ORCs and the removal of fixed costs (allocated costs and annuities) from the ORC recovery mechanism; and
   - a process for triggering work to establish the regulatory framework for expansion.

7. As well as challenging HAL's forecasts and assumptions for the main regulatory building blocks, airlines also made a number of comments on the issues noted in paragraph 6 above:
   - they referred to the substantial increase in cargo revenues since the start of the pandemic, and suggested that cargo-only flights should be incorporated into any risk sharing mechanism and the underlying regulatory regime on an equivalent basis;
   - they made a number of comments on mechanisms to review or adjust the price control, including that they should not come at the expense of ensuring incentives have appropriate strength, that HAL should be accountable for its own actions, and that any re-opening should be explicit and clear in its intent. They disagreed with the application of any revenue-based trigger that might allow the price control to be reopened;
   - they suggested that specific uncertainties (such as changes in VAT, the introduction of forecourt access charging, and the opening and

closing of key infrastructure) might be best considered within a set of "Notified Items";[3]

- they supported HAL's proposed restructuring of the ORC recovery mechanism but that pass-through of business rates should be outside of the ORC process and combined with a stronger governance process, and were open to some expansion of the 'S-factor' provided it is supported by a robust and appropriate definition; and
- they said that HAL's proposed expansion trigger is unnecessary and inappropriate, although they are open to the joint development of a "Notified Items" mechanism upon the triggering of jointly agreed milestones.

CAA views

8. We confirm that we intend to set a price control for HAL that is calculated on a single till basis using RAB-based building blocks. This is backed by stakeholders and the RAB-based approach has supported low cost and resilient financing arrangements across a range of regulated sectors. The single till has been applied in our previous price cap determinations and is an approach that allows consumers to share in the benefits from HAL's commercial activities.
9. We currently intend to set a price control for a five-year period from 2022 to 2026. We consider this will provide stability for stakeholders and provide appropriate efficiency incentives that will benefit consumers in the long run. However, we will keep this under review as the outlook for traffic volumes over the next few years continues to develop.
10. We note that the current incentives on HAL's opex and commercial revenues may change if business rates are classified as an ORC and if we introduce revenue risk sharing. We discuss in the main document our proposals to retain the core and development framework for capex governance.
11. Consistent with our previous statements, we are considering changes to our treatment of traffic risk (and reopeners), capex incentives, indexation of debt costs and service quality regulation. These are discussed in chapters 4 and 5 of the main document and in Appendices J, M and N. We have also made clear that the focus of this review is a two-runway airport.
12. As for other more detailed aspects of the regulatory framework, we will engage with stakeholders and consider the case for other possible changes, including:
    - the possible expansion of the S-factor;
    - the introduction of other uncertainty mechanisms;

[3] 'Notified Items' are included in Ofwat's price control determinations to identify specific issues that have not been allowed for in the determination. A lower materiality threshold applies to these cases than the threshold for other changes ('substantial effects') that might lead to an in-period adjustment to a price control.

- changes to the categorisation of ORCs and the ORC recovery mechanism; and
- the treatment of cargo revenues.

Appendix E - Assessment of the RBP against the June 2020 Business Plan Guidance criteria

HAL set out its assessment of how it has complied with the criteria in the June 2020 Business Plan Guidance in Chapter 11 of the RBP. The following table sets out our assessment of compliance against these criteria.

Criteria #	Detailed Criteria	Our assessment of compliance
C01 (General) (partially compliant)	The RBP should be: • Transparent, and publicly available to all stakeholders; • Supported by a robust evidence base, drawing on industry best practice; • Well-structured and well-integrated between different elements of the plan; • Designed to reflect consumers' views and preferences to the fullest extent practicable; • Based on efficient costs and financing assumptions; • Affordable (including in terms of affordability of charges to airlines); and • Deliverable (including in respect of financeability).	HAL published a full, redacted version of the RBP on its website on 25 February 2021. HAL's plan is overall well-structured and covers the areas and building blocks we expect it to. However, some parts of the plan are not supported by a strong enough evidence base (for example the capex plan). In some instances, we understand some of this evidence is available, and we have been working with HAL to obtain it. We also appreciate that a number of areas within the capital plan for example are still in development, and HAL is currently engaging with airlines on prioritising and developing more detailed plans. As set out in relation to criterion C02, the RBP plan is not well integrated, and specifically HAL has not set out clear relationships between the traffic scenarios and key building blocks in its plan. More detail on the specific criteria is provided in the rest of this table, in relation to specific building blocks.

C02 (General) (non-compliant)	Link revenues and costs clearly to recovery scenarios for passenger numbers, taking account of recent developments including, in particular, the impact of the Covid-19 pandemic. HAL should also clearly identify risk, contingency and efficiency assumptions throughout its plan	The traffic scenarios HAL has developed (low, mid, and high) are not well integrated across the plan. They do not clearly drive differences in scenarios across the building blocks. For example, it is not clear how the traffic scenarios are integrated with the opex, capex and commercial revenue forecasts. Furthermore, there is no evidence of disaggregation into markets where appropriate (e.g. Commercial Revenues). The main RBP document is only based on the mid-case forecast. The high and low-case forecasts are only used for high-level sensitivity analysis on the average H7 passenger charge.
C03 (General) (compliant)	Present all financial, cost and revenue data in the RBP in nominal and real prices, with real values in 2019 prices (or an alternative price base with clear justification provided). HAL should specify what price index it has used (for each item if different indices have been used) to convert data from nominal to real prices. We also require HAL to use a consistent base year when forecasting any quantified elements of the plan. HAL should provide a clear justification and evidence for the choice of base year as part of its forecasting methodology.	Overall compliant – HAL has set out what price base is used in the plan and why it has selected this specific price base. We also note that HAL changed the base year for opex and commercial revenues forecasting to 2019 in response to airline feedback. We agree with HAL that this updated approach improves the forecasts because it excludes the significant changes and one-off impacts brought about by the covid-19 pandemic. These can be dealt with more transparently and consistently with a 2019 base year.
C04 (General) (partially compliant)	Ensure its Board reviews and approves the RBP, certifying that it is consistent with the criteria set out in this guidance and fully explaining any divergence from these criteria.	The RBP was reviewed and approved by HAL's board. HAL made a statement in chapter 11 about the status of the RBP document in terms of it not being a formal regulatory submission. We queried this with HAL and they provided an explanation for this statement. In our assessment, we have treated the RBP and supporting evidence as a regulatory submission.
C05 (Scenarios)	Jointly agreed scenarios should take account of the following factors:	Whilst the scenarios in HAL's RBP were not jointly agreed with airlines, good and constructive dialogue took place during CE, in

(partially compliant)	• Scenarios or forecasts of economic activity, both for the UK economy as a whole and for the economies of the key passenger destinations served by air transport services from Heathrow; • The impact on passenger demand of current and potential future quarantine measures, or other restrictions of movement across borders, by both UK Government and other governments; • The impact of other restrictions in airports or on board aircraft (such as social distancing requirements) on airport and airline fleet capacity.	relation to forecasting methodology and key drivers, and there was an understanding of the significant uncertainty around these. Given the volatility around the evolution of the pandemic, any agreed scenarios are likely to have become out of date very quickly. With the benefit of hindsight, it appears appropriate that HAL has sought to develop its methodology to better take account of volatility and to develop several scenarios that should aim to capture a reasonable range of possible outcomes, and which can be updated as and when there is more evidence and certainty.
C06 (Scenarios) (partially compliant)	Jointly agreed scenarios should be developed in a way that presents integrated outcomes for passenger numbers, capex, opex and commercial revenues in the RBP at a suitable level of disaggregation. Given the requirements of criterion C05, scenario analysis should be disaggregated, as a minimum, into key geographic markets.	There is a lack of transparency over how HAL demand forecasts are integrated with the opex, capex and commercial revenues building blocks. There is no evidence of disaggregation of passenger forecasts into markets where appropriate, for example for use in commercial revenues, where it is noted in the RBP that different passenger markets have a different degree of spend per passenger. The RBP is based on a 'Mid' case passenger forecast only. The 'High' and 'Low' cases are used for very high-level sensitivity analyses on the average passenger charge for the H7 period.
C07 (OBR) (partially compliant)	HAL should develop an OBR strategy over the short term, recovery period and longer term. As a minimum, this should focus on delivering consumers' and airlines' core needs and priorities so that they continue to receive an appropriate level of service over this time. HAL's focus should be on two areas which must be progressed in parallel:	HAL has proposed an updated OBR framework and a high-level proposal for continuous improvement. We note that HAL has updated one of its consumer outcomes to reflect new consumer insights. HAL has also made progress since the IBP in proposing a new set of measures that reflect an improved "golden thread" linking to consumer research.

	• update the SQRB scheme for the short term and recovery period; and • develop the H7 OBR framework and plan for continuous improvement of the framework over the longer term. Any modified form of the SQRB scheme should be appropriately brought together with longer term work to develop HAL's H7 OBR framework. The H7 OBR framework should be developed to take account of new consumer insights and other developments in the sector so that OBR remains responsive to consumers' evolving needs. A section of the RBP should set out HAL's strategy and a methodology for bringing this work together as well as the progress made in doing so.	Taken together, HAL proposed targets and incentives, would result in a more generous service quality framework in terms of financial exposure in H7 compared to Q6. We also note that limited information has been provided on HAL's proposed targets. Regarding HAL's proposed approach to continuous improvement, we welcome the principle of reviewing and updating the OBR framework during H7. We note that HAL's proposal to escalate areas of disagreement to the Consumer Panel for resolution is not consistent with the Consumer Panel's remit. While HAL and the airlines have invested significant time engaging on SQRB performance and alleviations in light of covid-19, some of this engagement has been challenging. We note that no short-term modifications have been made to the SQRB scheme.
C08 (Consumer engagement) (partially compliant)	In ensuring the RBP is fully informed by consumers' core needs, priorities and preferences. HAL should: • consider which elements of its existing consumer research and engagement remain relevant for the RBP; • refine and build on its existing consumer evidence base with emerging intelligence and, where appropriate and practicable, through new research and engagement; • update its existing consumer research and engagement strategy, setting out how it intends to engage with consumers to understand their core needs, priorities and preferences; • consider airlines' consumer research and insights; and	HAL has made a clear effort since the IBP to understand consumer priorities in a post-covid-19 environment, where undertaking research and interpreting the implications for the future are considerably more challenging. There is a clearer attempt at referencing consumer research and linking its plans to consumer outcomes compared to the IBP. While we welcome HAL's efforts, there is scope to better use its research findings within the RBP to support its proposals. Overall while there are some areas of improvement since the IBP, the RBP as a whole still lacks a clear "golden thread" and evidence of value for money for consumers. HAL has undertaken an interim update of its consumer engagement strategy. HAL states that it will undertake a fuller update of its strategy in 2021 which will set out its consumer approach for 2022. We expect

	• address relevant findings and recommendations in the CCB's IBP report on consumer research and engagement and continue to follow the CCB's principles of good consumer engagement. In doing this, HAL should consult the CAA and airlines on its future research and engagement plans and reflect the feedback it receives in its work on the RBP. HAL should also demonstrate how it will manage practical issues on consumer participation and results that may have been distorted by the impact of the Covid-19 pandemic.	the full update of the strategy to reflect feedback from the CAA's Consumer Panel and the CCB's principles of good consumer engagement.
C09 (Consumer engagement) (partially compliant)	HAL should consider what the implications of its future scenarios might be for the service quality that consumers and airlines will expect and should receive. To the extent practicable, HAL should demonstrate a clear link between its consumer insights and future plans under the range of scenarios being assessed, drawing on existing consumer insights, new intelligence and research to support these scenarios where possible.	HAL sets out what impact its RBP plans, and other sensitivities will have on the delivery of consumer outcomes at a high level. Further detail on the impact these sensitivities could have on service quality (measures and targets) is not provided in the RBP. We note limited information on the impact some of these sensitivities could have on service quality is set out in HAL's response to CAP2098.
C10 (Capex) (non-compliant)	The RBP should set out capex proposals at a sufficiently detailed level of dis-aggregation. For each project at a sufficiently advanced stage of development, HAL should identify key categories of costs, such as: • leadership and logistics; and • risk and contingency. We will discuss and agree the full list of	HAL has proposed a capital plan that is designed around three capital portfolios totalling £3.5bn of spend over H7 (in the central scenario). Each of these portfolios includes a series of programmes; for most of the programmes, HAL has only provided high-level cost estimates. For some of the programmes, the estimates provided are flat over the course of the regulatory period, which is an indication that they have not been derived from bottom-up estimates (e.g. unit costs), but instead from top down allowances. We have subsequently confirmed with HAL that this is the case. The estimates provided in HAL's plan are not disaggregated beyond the programme level, and clear outputs are not specified for most of them.

	categories with HAL and airlines in advance of the publication of the RBP.	The current plan cannot be meaningfully assessed, and would not allow us to set an overall capex envelope for the H7 price control, or an indicative capex baseline for each capex programme linked to delivery objectives, to enable us to assess and incentivise capex delivery during H7. Based on discussions with HAL, we understand that the capex plan submitted as part of the RBP is less developed than the other building blocks. HAL is currently working with airlines through governance forums to develop this plan by prioritising programmes and producing more detailed forecasts and business cases for specific projects.
C11 (Capex) (non-compliant)	HAL should clearly identify risk, contingency and efficiency assumptions in its capex proposals, both • at the project level; and • at the overall portfolio level.	HAL's plan did not include a breakdown of risk, contingency or Leadership and Logistics costs. We do not agree that it is necessary for us to have finalised our capex incentives proposals in order for HAL to identify risk and contingency assumptions in its plan.
C12 (Capex) (non-compliant)	HAL should identify expected outputs and benefits associated with each project. The RBP should set out how the capex programme delivers value for money, on a whole life cost basis, for customers and consumers during H7. This should include an estimation of measurable benefits.	HAL has presented no details in the RBP on business cases to support its capex plan, even for projects which should be well-developed e.g. asset management projects in early H7, of projects which are continuing from the current regulatory period (iH7). This is a priority area for future business plan updates.
C13 (Capex efficiency incentives) (partially compliant)	HAL should set out its understanding of our proposed broad approach to capex incentives and how it has taken account of this in the RBP, including any key assumptions.	HAL has set out an alternative approach for capex incentives. Our assessment of HAL's proposal is outlined in Appendix M. As noted in the appendix, we do not consider that HAL's proposed approach fully meets our RBP criteria or that it addresses all of the issues that we highlighted in the June 2020 Consultation and the August 2020 Working Paper.

C14 (Capex efficiency incentives) (non-compliant)	The RBP should contain detail on the capex portfolio and, where capex programmes are sufficiently developed, initial views on: • capex categories, and “core” and “development” capex; • delivery obligations (“DOs”) and quality requirements; and • any timing incentives.	HAL has presented a top-down capex plan which sets out its proposed capex programmes but has provided limited explanation on why it considers that these programmes reflect appropriate capex categories for the purposes of the H7 incentive framework. HAL did not provide information on the maturity of each capex category i.e. the level of core or development capex, and some programmes are not clear (e.g. opex avoidance, commercial revenue generation). Whilst HAL has included high level delivery objectives for each programme, these lack detail and are at an early stage in development. Limited detail provided on timing incentives for H7. HAL makes reference to changing the existing triggers mechanism so that it has a broader focus but unclear how the timing incentives would change for H7 under this proposal.
C15 (Capex efficiency incentives) (partially compliant)	HAL should provide details of the proposed governance process to support the capex incentives, including how it will address the issues arising from the Q6 arrangements identified by the IFS and CAA.	HAL has provided initial thoughts on how governance arrangements could be updated for H7 e.g. programme level review of expenditure for programmes that are subject to ex ante incentive arrangements. HAL has not addressed the detailed improvements to the Q6 governance arrangements that we proposed in the June 2020 Consultation.
C16 (Opex and commercial revenues) (partially compliant)	HAL should consider whether its forecasting methodology remains appropriate in the context of the impact of the covid-19 pandemic and the Court of Appeal’s judgment. Forecasts should be fully explained, taking account of past performance, the impact of measures to address the impact of the covid-19 pandemic and expected operational efficiency and commercial revenue generation.	HAL relies on a driver-based forecasting methodology which has been heavily challenged by airlines with a number of additional downside overlays. Covid-19 and other large policy impacts are not fully explained in the RBP narrative in the opex and commercial revenue chapters. Some forecasts are the same as in the IBP (e.g. in relation to input price inflation).

C17 (Opex and commercial revenues) (partially compliant)	We expect the RBP to set out consistent historical and forecast data at a level of detail that supports appropriate scrutiny by the CAA and airlines. We expect historical data to cover the Q6 period as a minimum and we expect HAL to ensure that all historical data included in its RBP submission is fully reconcilable to its published Regulatory Accounts.	The reconciliation between the RBP and the Regulatory Accounts was not readily available in the RBP. We obtained some additional detail on this reconciliation in response to our RBP queries. However, it does not provide sufficient information to reconcile the two breakdowns of opex and commercial revenues at a granular level. Historical data beyond 2019 is only set out in the accompanying opex and commercial revenues driver-based forecasting model.
C18 (Opex and commercial revenues) (partially compliant)	HAL should demonstrate that its forecasts of opex and commercial revenues are integrated with other areas of the RBP: opex forecasts should be clearly linked to anticipated operational activity (e.g. increased use of a particular terminal by passengers) and changes in service quality during the H7 period. HAL should show that its opex and commercial revenue forecasts are consistent with planned capital investment. Evidence should be provided to demonstrate that a range of operating and capital solutions have been considered to deliver the activities and levels of service planned for H7 efficiently. The RBP should clearly show how the best and most efficient options have been selected, and how optimum value for money will be achieved.	Links between opex and commercial revenues and the capex plan are not well evidenced. The link to reduced terminal utilisation is taken account of through an overlay which is based on estimates that we can't corroborate. There are no details on the optioneering process that HAL has gone through to assess the best options to deliver activities and levels of service in H7 efficiently.
C19 (Cost of capital) (non-compliant)	HAL's proposal for the WACC should be consistent with efficient financing and its assumptions on risks and incentives. HAL should assume a cost of capital for H7 no more than the efficient level necessary to	The RBP remunerates tax costs through a pre-tax WACC. The use of a pre-tax WACC is not justified within the RBP. We note that there was some discussion of the issue in the IBP but even that rationale falls short of demonstrating that the WACC is "no more than the efficient level necessary to compensate HAL for the business and regulatory risks it faces" as required in the business plan guidance.

	compensate HAL for the business and regulatory risks it faces.	
C20 (Cost of capital) (partially compliant)	In estimating the efficient cost of capital for its business plan, HAL should align this with: • recent UK regulatory precedent (including the CMA decisions on RP3 and Ofwat's PR19 determinations wherever available); • market evidence on cost of capital parameters; and • the business risks it faces.	HAL's approach is inconsistent with the CMA's position on the PR19 appeal.
C21 (Financeability) (partially compliant)	HAL should provide robust evidence that its RBP is financeable and affordable. Analysis of affordability and financeability should be conducted under the same range of planning scenarios as provided in the RBP. This assessment should also be undertaken with reference to the CAA's statements on financeability policy and we would expect HAL to examine the same key metrics. Stress testing is not required for the RBP but will be necessary in 2021.	The assessment of equity financeability was qualitative only and omitted any examination against the range of metrics described in previous CAA consultations. HAL have assessed financeability for a number of sensitivities. Under these sensitivities key model inputs are changed individually. There is no assessment against a range of planning scenarios as required in the business plan guidance.
C22 (Financeability) (partially compliant)	HAL should outline what structural and regulatory options and/or changes would best support the credit rating it targets in the RBP, while being consistent with the interests of stakeholders. The assessment of the targeted credit rating for each relevant scenario should consider the net impact of having a higher or lower credit rating.	The assessment of credit ratings focused solely on the strengths of a higher credit rating and the disadvantages of having further downgrades such as higher cost of debt. There was no assessment of the costs related to having to maintain a higher credit rating. In summary, there was no assessment of the net impact of different levels of credit rating as required in the business plan guidance.

C23 (Financeability) (partially compliant)	HAL should consider the appropriate notional financial structure taking into account the guidance provided on financeability and cost of capital in chapter 4. Analysis should include an evaluation of the advantages and disadvantages of different notional financial structure options developed by HAL.	The RBP assumed a 60% notional gearing citing the interest of regulatory consistency. There was no analysis provided to evaluate the advantages and disadvantages of different notional financial structures as required in the business plan guidance.
C24 (Financial Modelling) (partially compliant)	Analysis of affordability and financeability should include a baseline assessment using the CAA's price control model ("PCM"). If assumptions are not detailed in the business plan itself, a data book detailing the rationale for the assumptions adopted in the RBP should be provided. HAL should discuss with the CAA any structural and formula changes required to the PCM in advance of submitting the RBP to agree a version of the PCM for HAL for use in the submission. If HAL uses models other than the PCM in the RBP, they should be accompanied with commentary and analysis reconciling the results to those of the PCM.	HAL conducted analysis for its RBP using its own model. To be consistent with the requirements of the business plan guidance HAL had to provide a reconciliation between the PCM and their own model. This reconciliation was provided only in March.
C25 (ORCs) (partially compliant)	The rationale for any cost reallocation needs to be clear and robust, with the implications for changes in risk and incentives explained. HAL needs to highlight why these changes would be in the interests of consumers.	HAL has provided a clear rationale for its proposals. However, further discussion is needed on whether Business Rates should be recovered as an ORC, including how this changes the incentives on HAL and how the costs and risks should be split between HAL, airlines and non-airline users. More information is needed on why prices are forecast to rise by £50m over the H7 period despite some £56m of annuities and other charges being moved to the airport charge.

C26 (ORCs) (partially compliant)	For each ORC, HAL needs to explain the rationale for the proposed treatment of over and under-recovery mechanisms clearly and demonstrate why this would be in the interests of consumers.	HAL proposes to include ORCs in the proposed revenue risk sharing mechanism in Chapter 9.1 but gives no indication of how this would work in practice. Further discussion is needed, through both the ORC and the risk sharing discussions, on whether this is the right solution for ORCs, particularly with the proposed move to a marginal cost approach.
C27 (Resilience) (compliant)	HAL should explain how it plans to maintain resilience as passenger numbers increase through H7.	We are supportive of the proposal for a joint resilience plan. We note HAL's plans to pause investment in several High Integrity asset projects and risk of 20-30% of Business Critical assets failing in H7 due to degrading resilience. We will look at this as part of our work on the capital plan prioritisation.
C28 (Resilience) (compliant)	HAL needs to set out its plans for terminal management and accommodating a recovery of passenger numbers over the H7 period.	We note that HAL has agreed with airlines the plans and triggers for reopening Terminals 3 and 4 when passenger volumes recover, although no details of this are provided. We also note the intention to re-establish existing scheduling and capacity limit processes to ensure the operation and resilience are protected and to explore opportunities for further cost savings in relation to T4 consolidation.

Appendix F - Assessment of other elements of the RBP

Introduction

1. This appendix contains further details of our assessment of HAL's RBP for elements of the RBP not covered in detail in chapters 1 and 2 of this consultation. Specifically, we describe our assessment of the following topics:
   - Other Regulated Charges (ORCs);
   - resilience;
   - cargo; and
   - surface access.

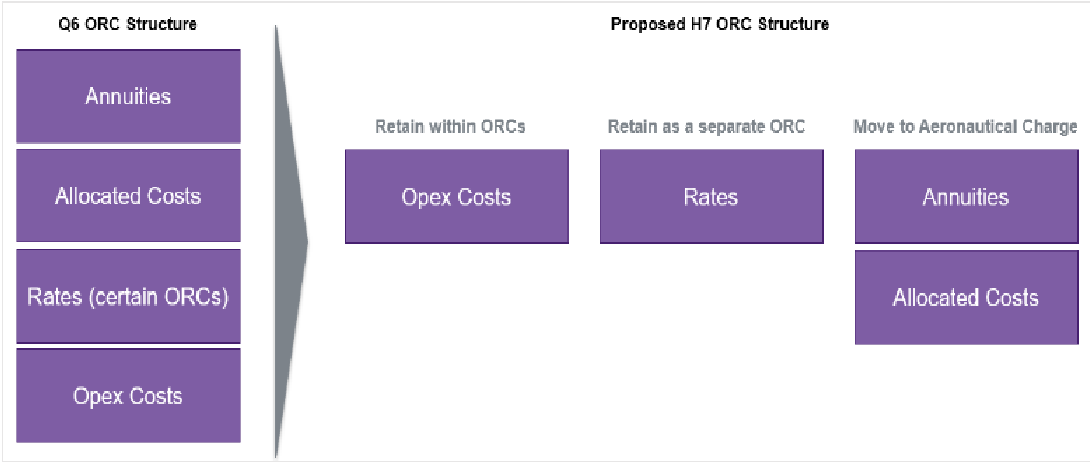
Other Regulated Charges

2. HAL passes on the costs of certain services (such as baggage, check-in desks, passengers requiring assistance, utilities, airside passes and staff car parking) to airlines on a "cost pass-through" basis. The charge for these services, known as ORCs, are separate to the regulated airport charges and are largely apportioned to airlines on a "user pays" basis. HAL's licence requires that it is transparent about the costs it incurs and there is a formal governance process for HAL and airlines to manage these charges.

HAL's proposals

3. HAL has made several proposals in the RBP for changes to the ORC framework, following discussion with airlines, including:
   - moving all capital repayment (annuities) and HAL administrative costs (allocated costs) elements of the current ORCs into the airport charge, so that ORCs would only include the operating costs that airlines are most able to influence through the ORC governance framework; and
   - consolidating business rate costs into a single separate ORC (currently, the majority of business rate costs are included in the airport charge with the rest allocated to relevant ORC services).

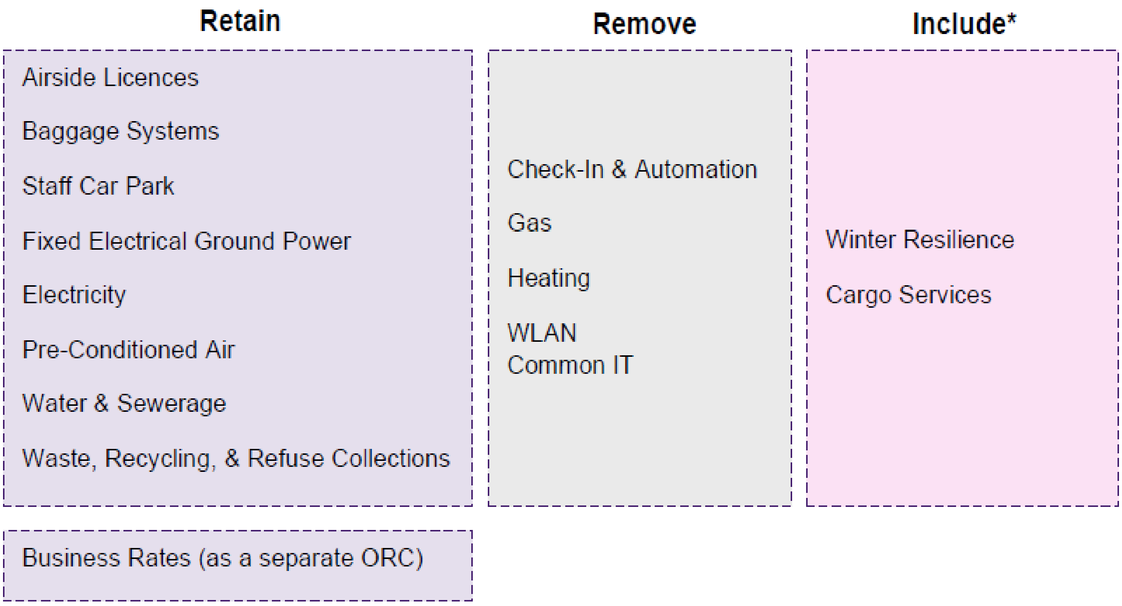
Figure F1: Proposed changes to structure of ORCs for H7



Source: Heathrow

4. HAL has also proposed moving some services that are used by most passengers, such as check-in facilities, gas, heating and some IT services into the airport charge and allowing some flexibility for new services, such as de-icing services, to be added to ORCs during H7 if appropriate.

Figure F2: Proposed changes to ORC services for H7



*Subject to future consultation with relevant parties

Source: Heathrow

5. HAL has also proposed:

- reversing its IBP proposal to move recovery of its CAA fees into the ORC framework: it now proposes that this cost remains within the airport charge but as a cost pass-through item; and

- including ORCs within the wider risk-sharing mechanism that HAL has proposed would apply to all revenues, to deal with the type of significant under recovery experienced in 2020 and 2021.

Airline views

6. Airlines support the proposal to move annuities, allocated costs and some services into the airport charge, provided there are adequate controls on service quality. Airlines are working with HAL to refine the governance framework going forward and have also said that they:

   - consider that HAL has misinterpreted airline views on how business rates should be recovered and do not agree with HAL's proposal that business rates should be recovered as an ORC. Instead airlines consider that business rates should be recovered through regulated airport charges;
   - agree that costs related to CAA licence fees should be included in the calculation of regulated airport charges, but not treated as a cost pass through term; and
   - disagree with HAL's proposal to include ORCs within HAL's wider risk sharing mechanism, as they consider that the switch to marginal cost pricing should help address the issue of significant over and under recovery of ORCs during the price control period.

CAA assessment

7. HAL has, for the most part, provided a clear rationale for its proposals for ORCs, which it has developed collaboratively with the airlines. In principle, we support HAL's approach, but we will need to assess the implications of its proposals on the incentives on HAL to ensure that costs are efficient and service quality is maintained. We will focus our assessment on areas where there is disagreement between HAL and airlines. For example, we will need to consider whether it would be better to consolidate business rates in the regulated airport charge or as a separate ORC. We will also need to consider the treatment of the CAA fees.
8. However, HAL's RBP forecasts significant increases in ORCs over H7 compared to Q6 levels, despite removing the recovery of investments and allocated costs. HAL has not provided a clear explanation on how it has forecast these costs or provided adequate evidence to support its ORC forecasts. We are asking HAL for further information on these matters and intend to assess HAL's projections in more detail.
9. We note that HAL and airlines are planning to develop the governance arrangements in the light of the proposed changes. We will contribute to this process, especially on the treatment of over or under recovery and dispute resolution. We will also look at arrangements HAL has in place for consulting non-airline users of the ORC services.

Next steps

10. We will continue to work with HAL and airlines both bilaterally and trilaterally through the ORC Group to inform our views on the issues above for the Initial Proposals, as well as considering the treatment of business rates and the CAA's fees through our work on the regulatory framework for H7.

Resilience

11. Ensuring that the airport is resilient to disruption is an important part of the overall service delivery, especially at a capacity constrained airport. Taking proactive steps to minimise disruption as much as possible, and to be prepared for when it does happen, helps to ensure that passengers' journeys are smooth and reliable. We made it clear in our June 2020 Business Plan Guidance that HAL needed to maintain good levels of resilience as passenger numbers start to recover.

HAL's proposals

12. HAL has included several proposals for improvements to its resilience planning, most notably seeking to develop joint resilience plans with the airlines. It plans to retain and refine its processes for dealing with capacity constraints, including continuing its work on airspace improvements.

13. HAL has highlighted that the constraints it sees on capital investment, particularly in the early part of H7, has meant it has had to reprioritise some asset management spending. HAL has said that this will have an adverse effect on its ability to maintain a subset of its Business Critical assets to the same level of resilience as in Q6 and it anticipates that there could be failures that cause disruption to passengers.

Airline Views

14. The airlines did not make any specific comments on HAL's proposals for resilience.

CAA assessment and next steps

15. We are supportive of HAL's proposals for joint resilience plans, which should lead to a more collaborative approach to managing disruption, and of its plans for airspace and runway resilience. We will expect to see that other capacity constraint issues can be addressed quickly through good resilience planning.

16. We note the trade-off between investment and prioritisation. HAL must keep this balance under review to minimise the risk of significant failures in H7. We will take this forward as part of the capital plan workstream.

Cargo

17. Most cargo at Heathrow is shipped in the belly hold of passenger aircraft so that there are, normally, very few cargo only flights. Therefore, revenues from cargo only flights from airport charges are normally very low and the main direct interaction HAL has with cargo in relation to the licence is through its management of control posts for access to airside. During the covid-19 pandemic, there have been significantly more cargo only flights which has increased this revenue stream and put added pressure on some control posts.

HAL's proposals

18. HAL's main discussion of cargo in the RBP is in relation to commercial revenues. HAL has forecast that cargo revenues will return to pre-covid-19 levels within the first two years of H7 as passenger flights increase and cargo only flights decrease. HAL also discusses proposals for control posts as part of the H7 OBR framework.

19. HAL sets out several initiatives it is working on with other parties for improvements to the cargo facilities at the airport, including a lorry park and call forward facility and airside transhipment facilities. It anticipates these will be funded by the other parties or government grants.

Airline views

20. Airlines noted that cargo revenues are treated as commercial revenues but that cargo only flights are included in the 480,000 cap on annual air traffic movements and should be included within the price cap and any traffic risk sharing mechanism that is introduced in H7.

CAA assessment and next steps

21. We understand the importance of high-value, time critical cargo getting to the aircraft on time. Therefore, our focus for cargo in H7 will be on ensuring that the proposals for control posts as part of the H7 OBR framework provide appropriate incentives on HAL to provide the service that airlines require for their operations and for consumers. We will also discuss the forecast for cargo only movements, as passenger numbers increase, with HAL and the airlines through the commercial revenue workstream.

Surface Access

22. Getting to and from the airport quickly and reliably is essential for passengers, staff and cargo. Although surface access provision is not an airport operation service, it is important that HAL as airport owner is able to work with other transport providers so that there is a coordinated approach to improvements in

road and rail access. We have developed a surface access policy[4] that sets out the criteria that we would expect to see addressed before we agreed that any contribution to a surface access project can be funded from airport charges, based on the need for the project and the benefits it would bring to consumers.

HAL's proposals

23. In the RBP, HAL has said that it intends to retain similar "mode share" targets to those set in the NPS to focus on more sustainable options. It has retained many of the initiatives that it included in the IBP to help it achieve these targets and to help moderate a recovery in access to the airport led by the use of cars. Many of these initiatives rely on working with other transport providers rather than direct capital investment by HAL.

24. Heathrow Express services will continue through H7 but any investment in the Western Rail Link to Reading has been put on hold until H8. Many of the initiatives are focussed on reducing colleague car journeys and developing better and affordable local public transport options. HAL is also planning to introduce a new forecourt access charge ("FAC") in its drop off zones.

Airline views

25. On the Western Rail project, airlines said that HAL's overall approach appears sensible, but they reiterated their requirements following CE that they would need to understand the actual costs and evidenced business case for a contribution, including any conditions attached by Government. They also requested a broader review by the CAA as to how HAL would be renumerated for any contribution to the project.

26. Airlines noted there was still uncertainty over the forecast costs and revenues of the proposed new FAC and suggested that this could be dealt with through a "Notified Item" mechanism within the regulatory framework which would allow for an in-period adjustment.

27. The airline response to the RBP also included a report on commercial revenues from their advisors Taylor Airey. That report commented on surface access revenues, by raising concerns over the clarity and consistency of mode share assumptions by transport mode, and hence the resulting estimates of surface access revenues.

Our assessment

28. We will need to understand the implications of retaining the mode share targets better and how they might influence the prioritisation of capital projects during the H7 and future periods.

29. Key considerations for the H7 review will be the operating costs of, and potential revenues from, the forecourt access charge, including the regulatory

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[4] Economic regulation of Heathrow Airport Limited: an update on the CAA surface access policy. October 2019 at https://www.caa.co.uk/CAP1847.

treatment of these revenues. We will also need to understand better the impact of the start of the Elizabeth Line services on the Heathrow Express revenues.

Next Steps

30. We will work through the issues noted above through the individual building block workstreams and maintain a cross-cutting view through the Surface Access Airlines Stakeholder Committee.

Appendix G - requirements for HAL to provide further information

The table below summarises those areas of the RBP where there would be advantages in HAL providing further information, either in its Business Plan Update or in separate formal submissions. We recognise the substantial task that HAL will have in responding to these requirements and are happy to discuss with HAL how it prioritises its efforts to best support the CAA in the development of robust Initial Proposals. In particular, we are happy to discuss options for providing alternative information to meet our requirements where appropriate.

Table G1: requirements for HAL to provide further information

Category	Information requirements
Passenger numbers and scenarios	HAL should provide the following information to explain how the various aspects of the plan derive from integrated scenarios based on a range of forecasts for passenger numbers: ▪ explain how and why the cost and revenue building blocks vary for each scenario, with details of key assumptions and cost or revenue drivers for each element or line item. For example, we expect passenger forecasts to be provided by market segment, with clear links through to forecasts of relevant commercial revenue elements (such as retail) by market or passenger type; ▪ explain the relationship, including detailed narrative on cost drivers and key assumptions, between estimated opex, capex and OBR targets for the "low" passenger numbers scenario. ▪ provide context for the relative importance of each of the key assumptions and more information around the relative sensitivities to changes in these assumptions; ▪ update any information sources that rely on external data such as GDP forecasts used and any other outdated assumptions; and ▪ compare any updated passenger forecast scenarios with those in the RBP and explain the key contributing factors for the differences between them.

Category	Information requirements

Opex	We consider that HAL needs to provide clearer evidence in future updates to justify key assumptions, cost overlays and how it has derived its opex estimates. We expect HAL to provide the following key information to inform our analysis of opex:
	▪ provide estimates using a granular format consistent with the regulatory accounts and a reconciliation between this analysis and HAL's statutory accounts opex breakdown: the regulatory accounts breakdown is already prepared on an annual basis and has been presented in previous HAL business plans in Q6;
	▪ evidence that clearly demonstrates the materiality of adjustments made to the 2019 base year. Our initial analysis suggests that there is a risk of locking in expansion and other impacts for the entire duration of H7, and HAL has not been able to provide sufficient assurance that these impacts have been removed;
	▪ further evidence in relation to input price inflation (IPI), considering the following three dimensions:
	  ▪ controllability of input prices;
	  ▪ materiality of any potential real price effect; and
	  ▪ methodology to apply any potential real price effect to different cost lines.
	▪ clearer information on how opex is forecast to vary under different passenger traffic scenarios to help calibrate the traffic/revenue risk sharing mechanism;
	▪ fully explore linkages with other building blocks and provide better information on activity and deliverables that HAL expects its forecast opex to achieve during the H7 period, for example in relation to service quality (improved OBR targets) and the capex plan;
	▪ clearer justification to support the proposal to move the business rates from the airport charge to an ORC; and

Category	Information requirements
	▪ update any information sources that rely on external data e.g. on Input Price Inflation and any other outdated assumptions.
Commercial revenues	HAL should provide the following information on commercial revenues: ▪ forecast data in a more granular format for categories where this additional information is already used or available, for example, retail revenues should be split into categories similar to the breakdown analysed in the Pragma report that considered historical performance;[5] ▪ articulate and quantify the business case for the proposed significant capex programmes of £700m with the main outcome of maintaining (£100m) or improving (£600m) commercial revenue generation, introducing positive overlays that arise directly as a result of these programmes as appropriate; ▪ draw on insights from existing passenger forecasting modelling such as Origin and Destination (O&D) passenger share and passenger mix to enhance commercial revenue forecasting. We expect HAL to consider the interactions between the two building blocks (passenger numbers and commercial revenues) more robustly to ensure consistency in key assumptions; ▪ clearer information on how commercial revenues are likely to vary under different passenger traffic scenarios to help calibrate the traffic/revenue risk sharing mechanism; ▪ more evidence to underpin all overlays – this needs to be more robust, clearly explaining how the overlay improves the elasticity forecast and with a focus on the appropriate materiality; and ▪ enhance surface access revenue forecasting and strategy – mode share modelling needs to be updated to recognise the implications of the covid-19 pandemic and the emerging FAC impacts. In addition, the business case for the Heathrow Express (HEX) service in H7 should be evidenced with a transparent

[5] Pragma Q6 benchmark and future trends and challenges, September 2019

Category	Information requirements
	assessment of the net impact on the airport charge of opex, capex and commercial revenues impacts attributable to HEX.
Capex	Future updates from HAL should include a significantly enhanced evidence base in support of an updated capex plan. We accept the need for flexibility, particularly in relation to the capex projects or programmes currently under development: our proposed capex framework for H7 builds on the existing approach to core and development capex and related governance arrangements. However, this process also requires that we can set a reasonable indicative *ex ante* baseline for core capex, based on evidence submitted as part of the H7 control. Unless HAL provides extra information on these matters, it will risk all its capex being treated as development and therefore will be exposed to greater risks in relation to capex and financeability as we would adopt a conservative approach to estimating its capex requirements, but would take a robust approach to setting quality of service targets. To avoid this situation, it is important that HAL provides in its Update at a minimum: ▪ project-level disaggregated cost estimates and outputs for the critical "Protect the Business" portfolio presented in the RBP, at a similar (or higher) level of detail to the projects within the "M&I" portfolio presented in the December 2019 IBP; We also expect HAL to set out its asset management plan for H7 to support these estimates. We recognise that HAL has initiated a process with the airlines over the next few months to develop key elements of the capex portfolio for H7, specifically the projects paused in iH7. We require: ▪ the results of that process to be reflected in future updates, including details of how projects have been prioritised in consultation with airlines. For all projects and programmes other than those in the "Protect the Business" portfolio, we expect HAL in the Update to provide:

Category	Information requirements
	▪ a level of detail on costs and outputs similar (or higher) to that provided in the HAL January 2013 "Q6 Full Business Plan". ▪ an analysis indicating how capex in the H7 period is likely to be split across capital allowance categories for the purpose of setting tax allowances. The requirements and expectations we have set out here are based on the information HAL has provided to date about how it plans to develop the H7 capex plan. These requirements could evolve going forward in light of outputs from the HAL-airline governance forums, and the discussions that are currently taking place in those forums about the prioritisation of the H7 capex plan. We will discuss evolving requirements (for example, additional information we need) with HAL on an ongoing basis following the publication of this document.
Capex efficiency	The Update should clearly set out capex categories for the purposes of the capex efficiency incentives framework. HAL should: ▪ explain how the capex categories it has proposed meet our requirements i.e. that they are based on clearly defined outputs and similar levels of risk and controllability; ▪ for each capex category, clearly indicate level of capex that has already transitioned past Gateway 3 (i.e. the materiality of capex that is core at the time of submitting its Update). ▪ define delivery objectives for each capex category that have been agreed with airlines. Where capex categories are sufficiently developed, HAL should present more detailed objectives that include output, timing and quality requirements. ▪ HAL should propose an updated set of criteria for when triggers could be applied to capex projects during the H7 period which can be discussed with airlines and the CAA so that the criteria can be agreed for H7.

Category	Information requirements
	▪ HAL should provide further details of the improvements that it intends to make to the capex governance arrangements for H7 and how it will address the issues around governance that have been identified by stakeholders. ▪ HAL should separately identify capex that is forecast for the H7 period but that relates to Q6 and iH7 legacy capex projects (that is, projects that started during Q6 or iH7).
Outcome based regulation	HAL should provide further information on: ▪ how HAL's proposed targets link to other building blocks (for instance, how do specific capex projects and specific opex initiatives contribute to the improved targets in the three areas they say matter most to consumers);[6] ▪ HAL's proposed targets in a lower capex business plan scenario; and ▪ how HAL's proposed targets compare with historical performance or performance at other comparable airports. We also note that a number of proposed reputational measures in the RBP do not have targets at this stage due to the need to gather sufficient baseline data and engage with the airlines. As part of HAL's engagement with the airlines on OBR ahead of the Initial Proposals, we expect HAL to provide further information/updates to the CAA and airlines in these areas.
Financial framework	We have identified several key issues and requirements for HAL based on our RBP assessment: ▪ HAL should provide further information on its scenario analysis and provide evidence as to what alternative scenarios imply in terms of financeability;

6 We note some limited information on which capex projects contribute to the three improved areas is set out in HAL's response to CAP2098.

Category	Information requirements
	▪ HAL should provide evidence on the costs and benefits of achieving an A- credit rating, including with respect to access to capital, and comparing these to the costs of a temporary downgrade; and ▪ HAL should provide further information on the treatment of tax, either to demonstrate how a pre-tax approach offers best value for consumers, or to support the implementation of a separately modelled allowance for tax or a pass through of tax costs.

Appendix H - Cost of Change

1. HAL and the airline community jointly wrote to CAA in October 2020 to describe a "Cost of Change" proposal relating to one-off restructuring costs arising in 2020 and 2021 that were estimated to be around £100 million.
2. HAL and the airline community explained that they are seeking to add these costs to HAL's RAB on the basis that this would be the most efficient and economic way of ensuring that the benefits of the business case are delivered and captured, since some of the savings will arise in the next regulatory period (H7).
3. Following review of the business case for this proposal, we explained in our response letter (below) that we are minded to approve this proposal, subject to a formal process of consultation. In particular, we noted that the proposal:
   - should deliver ongoing benefits to HAL and airlines and, through them, consumers, which may otherwise not be delivered; and
   - has been negotiated, and then jointly agreed, with the airlines.
4. HAL's Cost of Change proposal is described in more detail in the Opex section (see section 7.1.6.7) of HAL's RBP.[7]
5. We are, therefore, now seeking views from stakeholders on our proposed treatment of this proposal, as set out in our letter to HAL below.
6. Following responses to this consultation, we will set out further views on our initial "minded to" view on the Cost of Change proposal. If we confirm our initial view at that point and approve the proposal, the proposal would then be included as part of the H7 price control settlement.

[7] See https://www.heathrow.com/content/dam/heathrow/web/common/documents/company/about/economic-regulation/RBP-detailed-plan.pdf.

Consumers and Markets Group

Chris Annetts – HAL

16 March 2021

Dear Chris

Approach to upfront "costs of change" to deliver savings for consumers and airlines

Thank you for your letter to Paul Smith of 8 October 2020 on the proposed approach to upfront "costs of change", and the subsequent evidence provided in support of this proposal. We are encouraged that constructive discussions on this have taken place between HAL and the airlines, despite the challenging circumstances faced by all parties.

Introduction

Your proposal relates to one-off restructuring costs, estimated to be around £100 million. We understand that HAL and the airline community wish to add these costs to HAL's Regulatory Asset Base (RAB). You have said that this would be the most efficient and economic way of ensuring that the benefits of the business case are delivered and captured, since some of the savings will arise in the next regulatory period (H7).

Principles and Process

We note that, while this proposal is novel to airport regulation, capitalising and profiling one-off restructuring costs has been successfully applied in other regulated sectors.

Noting that this proposal is jointly agreed, we have undertaken a relatively "light touch" review process on it. This has not involved detailed assessment of bottom-up cost or benefit estimates. However, your proposed use of the RAB for this proposal requires our specific approval, as it would result in a change in regulated airport charges from the start of H7. This would need to be implemented through our price control review process and the associated licence modifications.

Review and Engagement

We have reviewed the proposal in accordance with our statutory duties. We welcome:

- the potential benefits for consumers of this approach, including estimated reductions in airport charges;
- your inclusion of the Costs of Change as a committed initiative in the December 2020 Revised Business Plan (RBP), and subsequently in the February 2021 redacted version of the RBP, with the aim of setting out the proposal clearly;
- your proposal to take the risk of delivering the cost savings from this proposal, so that consumers will not bear any risk that the savings achieved do not meet your estimates; and
- the proposed audit process, which should provide some assurance that costs have been reasonably incurred and allocated to appropriate categories.

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On the basis of the information you have provided, the financial case for your proposed approach appears to be strong. However, you initially provided less detail on the wider economic case, and on financing options.

We, therefore, sought further information to inform our decision on:

- the nature of incremental benefits to consumers over and above the estimated reductions in airline charges;
- how these benefits will be delivered and monetised;
- why you propose to use the RAB for this proposal rather than pursuing (for example) ring-fencing of the costs of this initiative within the H7 settlement, or short-term financing options.

On the basis of the further information and clarification you and the airlines provided, we are content that you have considered these issues in a reasonable manner at this stage.

Decision and Next Steps

We are therefore minded to approve this proposal subject to the consultation process noted below. In particular, we note that the proposal:

- should deliver ongoing benefits to HAL and airlines and, through them, consumers, which may otherwise not be delivered; and
- has been negotiated, and then jointly agreed, with the airlines.

This is subject to HAL:

- producing updated estimates of costs, savings and benefits when the initiative has been implemented; and
- proposing a form of reporting of ongoing cost savings (and other benefits) consistent with current capex reporting protocols, which can be shared at CPB or a similar monthly forum. This would enable effective monitoring of the proposal, rather than implying that the CAA is treating this proposal on the same basis as a capex project through existing Q6/iH7 capex governance procedures.

We are describing this as a "minded to" decision as there are the formal processes of consultation to complete as part of the price control review and associated licence modifications. These include processes for appeal of our decisions to the CMA. We will therefore consult on this issue as part of our Way Forward consultation planned for the end of March 2021.

Provided that we are able to confirm our minded to decision in the light of the responses to this consultation, the proposal would then be included as part of the H7 settlement, without specific further consultation.

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Considerations for future proposals

We strongly support airport/airline dialogue and agreement on key issues but would also like to take this opportunity to remind you of the importance of due process. Where proposals might impact the calculation of the RAB and these were not considered as part of the previous price review process (in this case Q6), any proposals will require:

- a proportionate approach to due process, to facilitate the smooth integration with other elements of the regulatory framework; and
- the CAA's approval after appropriate consultation.

Any consent we might give will have to be consistent with our statutory duties and due process. Nonetheless, in line with our broader policy on commercial agreements, we would expect to place significant weight on agreements between HAL and airlines, provided these are reasonably transparent and supported by appropriate evidence of benefits to consumers.

Bearing all of the above in mind for future proposals, we would expect that:

- HAL (and airlines, where appropriate) will engage with CAA at an early stage of the process, so that we can get an initial understanding of the likely objectives and form of the proposal. Earlier engagement will also allow us to provide feedback on the viability of any future proposal.
- HAL will produce quantified option analysis, comparing the financial and overall economic case for various potential options or solutions, to demonstrate why a particular option has been pursued. The options analysis should not presume a particular regulatory treatment of the expenditure, but rather should focus on presenting costs, benefits and outputs/outcomes clearly.
- HAL will produce much clearer estimates of expected consumer benefits of the proposal, supported by evidence wherever possible, and linking through to overall H7 expected consumer outcomes.

Yours sincerely

Rob Toal

Rob Toal
H7 Programme Director

CC:
Alex Dawe, British Airways
Nigel Wicking, Heathrow AOC
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Appendix I – Financial Framework

Introduction

1. This appendix sets out further details of the analysis underlying the conclusions reached in the chapter 3 on the financial framework applicable to HAL.
2. This analysis is based on HAL's RBP together with a number of CAA modelling assumptions for certain variables, such as the allowed return, RAB and depreciation. The analysis was conducted using the CAA's price control model ("PCM"). The PCM is the model that we intend to use to calibrate and assess our final price control determination. We expect to refine the PCM further before our final decision. However, an internal review of the model gives us confidence that it already produces meaningful analysis in respect of the notional company.
3. As stated in chapter 3, we remain committed to assessment of financeability on a notional basis. Consequently, our initial analysis has been undertaken in respect of the notional company.

Long-term notional gearing assumption and H7 glide path

4. As noted in chapter 3, we are examining what changes, if any, it may be appropriate to make to our notional gearing assumption in response to the impact of the covid-19 pandemic. In the section below we set out the initial analysis we have completed in respect of these matters.

Analysis

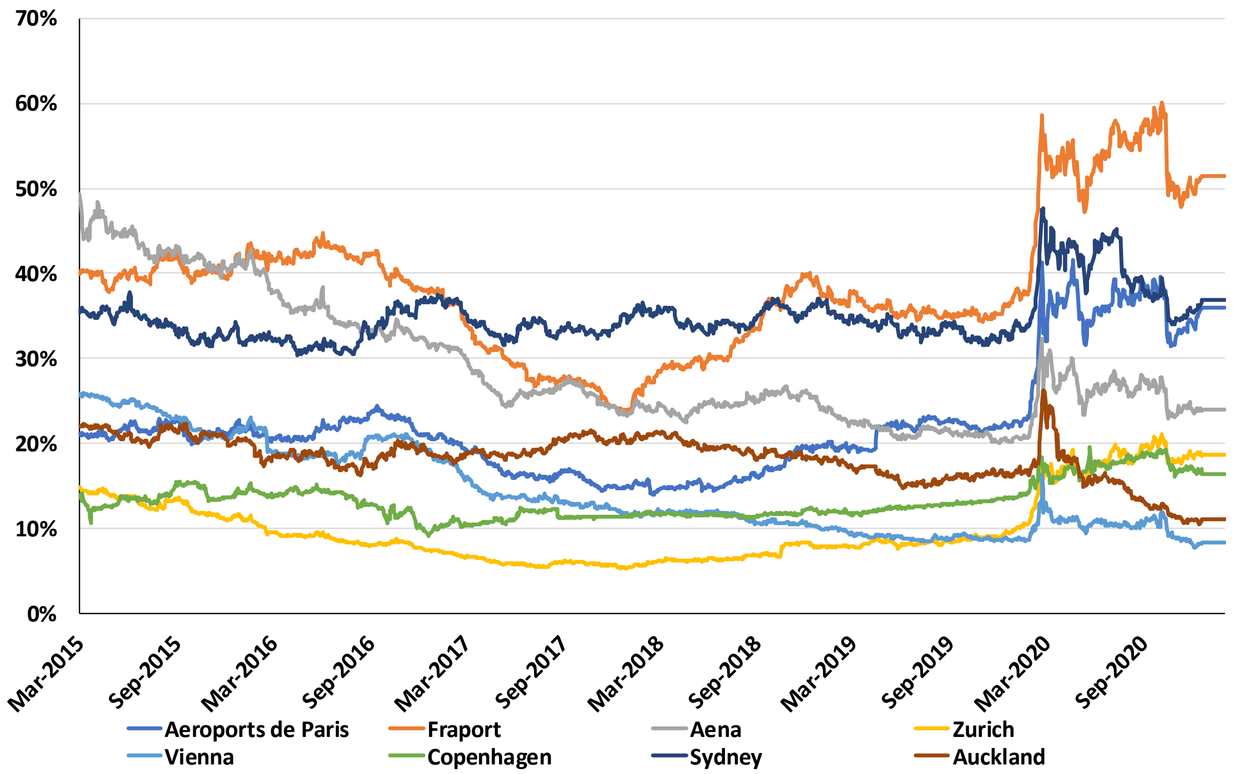
5. In the June 2020 Consultation, we indicated a range for the notional gearing assumption in H7 of 52.5%-60.0%. The lower bound of this range represented a reduction in the notional gearing level compared to Q6/iH7. This was prompted by the CMA's findings in the context of NERL's RP3 price control appeal, in which the CMA proposed reducing the notional gearing for NERL to 30%, in line with the comparator group used for the estimation of asset beta.
6. As noted in chapter 3, one potential consequence of the covid-19 pandemic could be an increase in the risk to which investors perceive the notional entity to be exposed. We note that there is uncertainty over the extent, if any, to which investors will perceive such an increase in risk going forward into the H7 period. Further, our own policy measures, such as the possible introduction of a traffic risk sharing mechanism,[8] could potentially offset any increase in perceived risk.
7. In the analysis described below, we have looked at the extent to which covid-19 related losses might have moved the gearing of the notional company higher during 2020 and 2021. We then consider the scope that there might be for the

[8] See chapter 4 for further detail of our thinking in respect of a traffic risk sharing mechanism.

notional company to de-leverage during the H7 period. We have not, at this stage, constrained the analysis by consideration of whether the de-leveraging would be likely, taking into account the factors described above.

8. We begin our analysis by observing changes in the gearing levels of a range of comparator airports[9] since the start of Q6. Figure I1 below shows that the impact of the covid-19 pandemic has resulted in short-term increases in the level of gearing for the comparator airports.

Figure I1: gearing of comparator airports



Source: Refinitiv Eikon, CAA analysis

9. The gearing values shown in Figure I1 are calculated as the book value of debt divided by market capitalisation. The figures are, therefore, not directly comparable to our preferred measure of gearing which looks at the ratio of RAB to net debt. However, both are measures of leverage and would show similar trends in response to increased levels of debt relative to the perceived value of the business.

10. The increase in gearing is likely to have been driven by similar factors to those that have driven the increases in HAL's gearing, such as management decisions to fund a temporary shortfall in revenues vs costs via borrowing. Another driver of the increase in leverage is the reduction in share prices seen

[9] The airports chosen as comparators for this analysis are not necessarily those that we will use in our beta analysis. For further discussion of which airports may be suitable comparators to use when assessing beta refer to Appendix J

in February 2020. We do not necessarily view these short-term developments as signalling a new, permanently elevated level of gearing in the sector. We observe that while gearing remains elevated for some comparators, such as Zurich and Fraport, others have seen a short-lived increase in gearing or, in the case of Auckland, a reduction in gearing.[10]

11. We have also examined the speed with which any short-term increase in the gearing of the notional entity could potentially be reversed once international borders reopen and traffic starts to return. The rate at which the notional airport's borrowing can be reduced in any given year will be influenced by:

- the trajectory of the growth of passenger volumes and, hence, the airport's ability to start recovering its costs in full;
- the amount of debt that is assumed to mature in each year (that is, assuming that it will not typically be prudent for the airport to redeem existing debt early); and
- the willingness and ability of shareholders to invest new equity, either in the form of retained profits or an equity injection.

12. The airport's cashflows will also depend on a number of the parameters in the price control framework (such as the allowed return and the profiling of revenues) that will be determined as part of the H7 price control process. We note, in particular, the importance of passenger volumes as they are material to this analysis and currently quite uncertain as a consequence of the ongoing impact of the covid-19 pandemic.

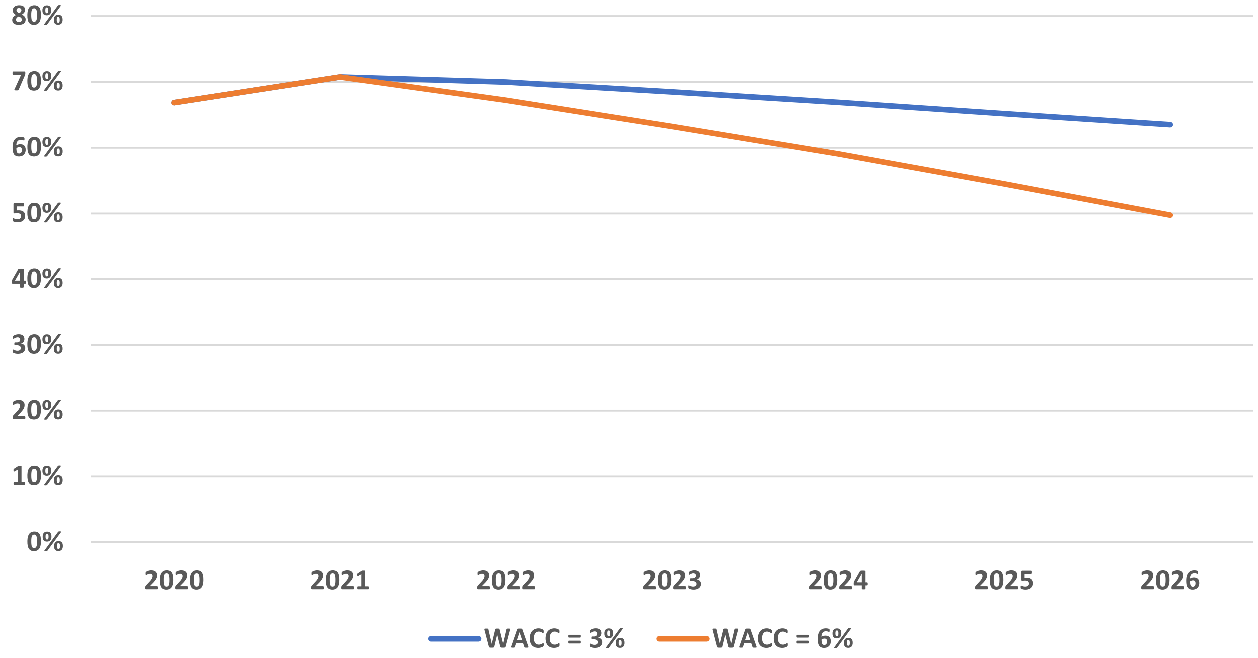
13. For the purpose of illustration, we have examined below the path that would be achievable based on the building blocks shown in HAL's RBP, under its "No Adjustment" scenario[11] and assuming no equity injections and no dividend payments. We assume prices are profiled to inflate in line with RPI inflation.[12] The modelling uses the actual charges per passenger for 2020 and 2021 provided in HAL's RBP.

[10] Auckland International Airport's (AIA's) share price has recovered since the initial falls associated with the onset of the covid-19 pandemic and this contributes to the fall in gearing shown above. However, AIA has also reduced the amount of debt outstanding from approximately £2bn in February 2020 to approximately £1.4bn in February 2021 which also contributes to the reduction in gearing.

[11] HAL's RBP includes a submission of the CAA's price control model ("PCM"). The PCM presents forecasts of HAL's performance against key credit metrics under the notional financial structure with and without its proposed RAB adjustment. We are still in the process of reviewing the RBP and expect to engage further with HAL and other stakeholders on a number of the key assumptions that support the RBP. Nonetheless, at this stage our analysis is based on HAL's RBP/PCM submission out of practical necessity, given that it represents the latest submission from HAL. This should not be seen as an endorsement of the RBP.

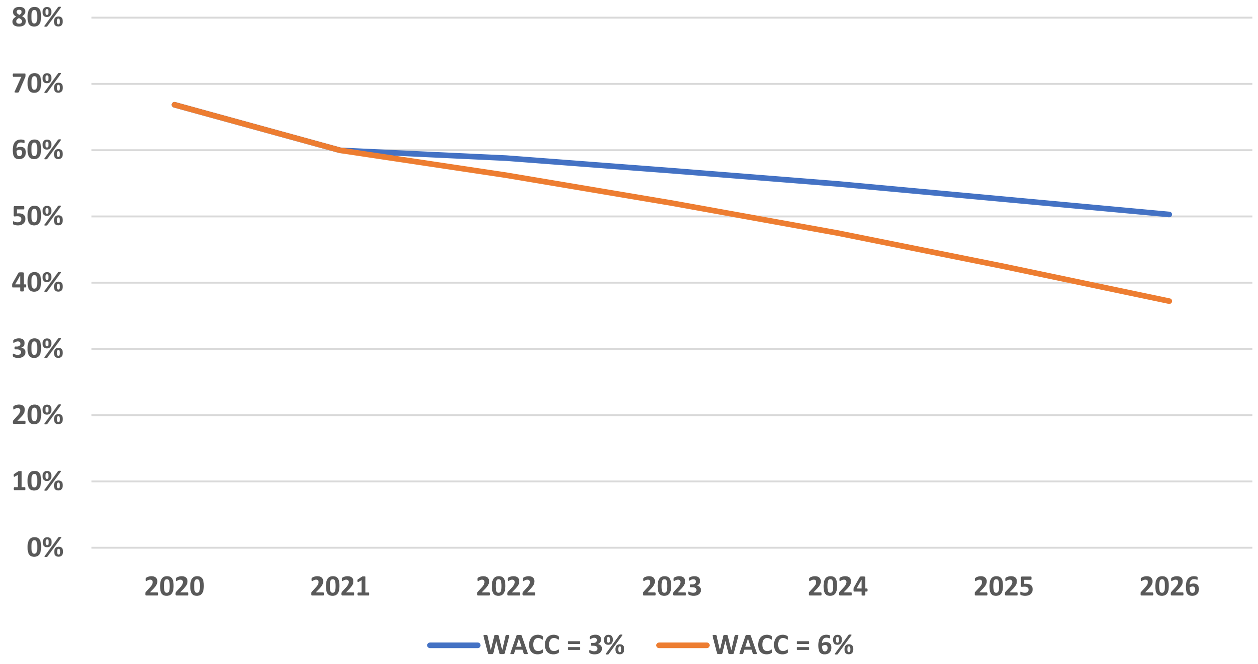
[12] The licence sets prices to increase in line with RPI-x. We have assumed that x=0%.

Figure I2: Illustrative gearing glidepath without RAB adjustment



Source: CAA analysis, note: WACC values are real, vanilla

Figure I3: Illustrative gearing glidepath with RAB adjustment



Source: CAA analysis, note: WACC values are real, vanilla

14. Figures I2 and I3 show the potential evolution of the gearing of the notional entity through the H7 period. The analysis assumes that there are no cash flows to or from shareholders in this period. The rate of deleveraging is influenced significantly by the level of allowed return while the provision of a RAB adjustment would also have a beneficial impact on the level of gearing at the

start of H7. For this illustrative analysis we assume a gearing adjustment in 2021 sized such that it returns the gearing of the notional entity to 60%.

15. In all of the scenarios shown above, gearing decreases steadily over the H7 period, consistent with a notional entity that is issuing little, if any, new debt while seeing growth in the value of its RAB (due to RPI inflation indexation). Table I1 below shows the amount of debt that is issued in each of the cases.

Table I1: summary of debt issued

	2022	2023	2024	2025	2026
No RAB adjustment; 3% WACC	318	168	32	496	169
No RAB adjustment; 6% WACC	-	-	-	-	-
RAB adjustment; 3% WACC	243	87	-	346	61
RAB adjustment; 6% WACC	-	-	-	-	-

Source: CAA analysis

16. While this analysis is illustrative, it does suggest that, across a range of scenarios, the notional entity may need to issue very little, if any, new debt during the H7 period, except to the extent that it chooses to refinance maturing debt with new borrowing. This suggests that it may be appropriate to place limited weight on the cost of new debt when determining the overall cost of debt for H7.

17. This analysis also suggests that in the absence of any intervention, the notional entity could theoretically[13] achieve a closing notional gearing level of 50%-63%[14] in H7, and an average notional gearing level of 59%-67%.[15] Assuming an intervention to return opening notional gearing to 60% by the start of H7, the notional entity could theoretically achieve a closing notional gearing level of 37%-50% by the end of the H7 period, and an average notional gearing level of 47%-55%.

18. To the extent that it is appropriate for the notional entity to have a lower gearing, this lower gearing would provide HAL with greater financial resilience and, therefore, be in the interests of consumers.

19. We will update our analysis of the path for the notional gearing as we develop our Initial Proposals.

Illustrative financeability analysis

20. We set out below our initial analysis of HAL's financeability. As noted in chapter 3, this analysis is intended primarily as a "worked example" of our approach to

[13] As stated in paragraph 13, this analysis assumes that no dividends are paid in H7. The subject of equity financeability is discussed in paragraphs 3.44-3.48 in chapter 3.

[14] Depending on the value of the WACC

[15] Depending on the value of the WACC

financeability. The nature of the assumptions we have had to make, chiefly in respect of allowed return, means the analysis is illustrative. However, we are still able to draw some initial conclusions about the potential scale and timing of any financeability concerns.

Analysis

21. In this analysis, we present the same credit metrics as HAL presented in the financeability assessment in its RBP, namely:

- FFO[16] to net debt;
- net debt to EBITDA;[17] and
- post maintenance interest cover ratio.

These metrics look at both (i) leverage and (ii) ability to cover interest costs and, so, provide a reasonably rounded assessment.

22. We have made relatively cautious assumptions for this illustrative analysis. In particular, we have not assumed any RAB adjustment on the grounds that a RAB adjustment would support financeability and it is more informative to look at a baseline without a RAB adjustment.

23. We have examined key credit metrics for HAL under the notional financial structure, assuming:

- no intervention in respect of HAL's lost revenues caused by the impact of the covid-19 pandemic[18];
- a recovery in passenger demand consistent with the "Mid" case in HAL's RBP submission;
- no equity injection and no dividends;
- that actual costs (such as in respect of operating costs and interest) are equal to the price control assumptions;
- a "glide path" for notional gearing consistent with the discussion above; and
- purely illustrative high and low scenarios for the allowed return of 3% and 6% respectively. The high end of the range is a round up of the Q6 return.[19] The low end of the range is in line with Flint Global's April 2020 estimate.[20]

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[16] Funds from operations

[17] Earnings before interest, tax, depreciation and amortisation

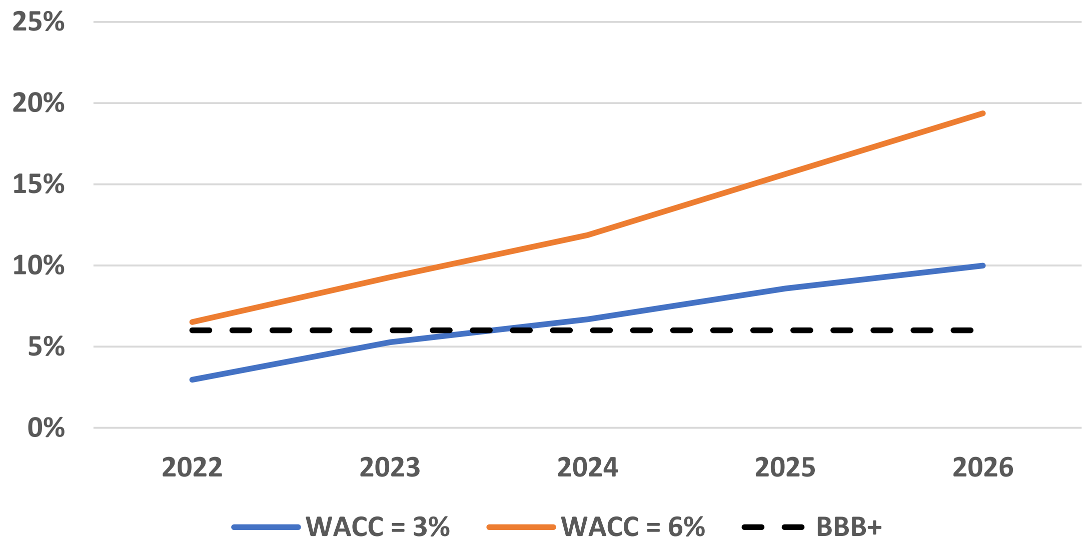
[18] A RAB adjustment would support financeability so it is more informative to look at the baseline without any such intervention.

[19] The allowed return in Q6 was 5.35% on a pre-tax, real basis.

[20] See www.caa.co.uk/cap1940c

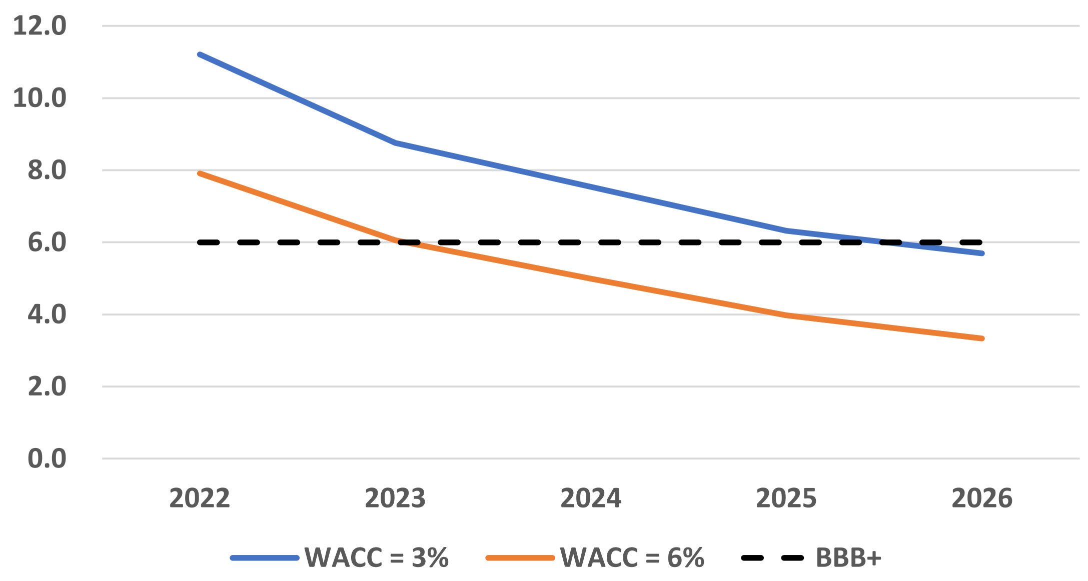
24. The results of the analysis are presented in Figures I4 – I6 below.

Figure I4: FFO to net debt



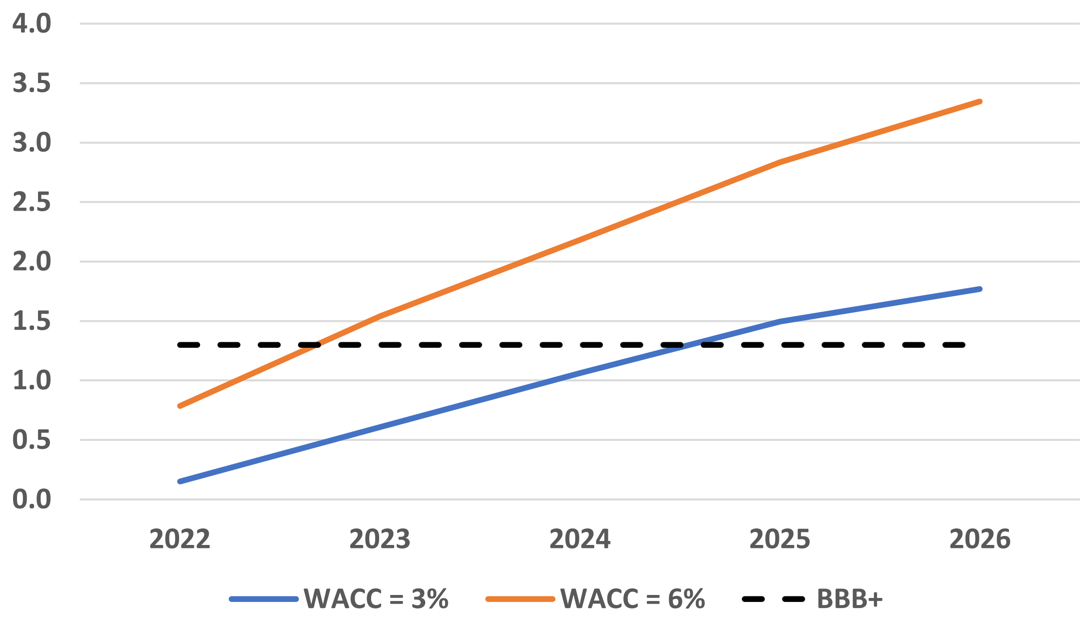
Source: CAA analysis

Figure I5: Net debt to EBITDA



Source: CAA analysis

Figure I6: Post maintenance interest cover ratio



Source: CAA analysis

25. In each case, the thresholds shown in the figures above reflect our understanding of the minimum level required to sustain a BBB+ investment grade credit rating. While this analysis is intended to give an indication of the potential credit quality of the notional entity, we note that rating agencies consider a range of qualitative factors as well. These qualitative factors are likely to be of particular importance at present as rating agencies make their own assessment of the short- and longer-term impacts of the covid-19 pandemic.

26. While the analysis is illustrative, it does indicate a positive trend for all ratios across the H7 price control period. The exact shape of the trend will depend on a range of factors. This analysis assumes a recovery in passenger volumes with an annual average of 63m passengers in the H7 period and 72m passengers in the final year of the price control. We note this is both a key driver of the results shown above, and an area of significant uncertainty given current restrictions on international travel.

27. The analysis also indicates the likely materiality of the allowed return to the assessment of financeability. However, we stress that the allowed return will be assessed based on the approach described in Appendix J. We will conduct our financeability assessment to determine whether the price control as a whole is suitably calibrated.

Affordability and the profiling of revenues

28. In this section, we set our initial analysis of affordability and the profiling of revenues. As discussed in chapter 3, reprofiling of revenues and adjusting depreciation are significant considerations from the perspective of affordability of charges for different cohorts of consumers over time. Reprofiling revenues and adjusting depreciation also has implications for financeability. In this

illustrative analysis, we examine the affordability and financeability considerations in quantitative terms.

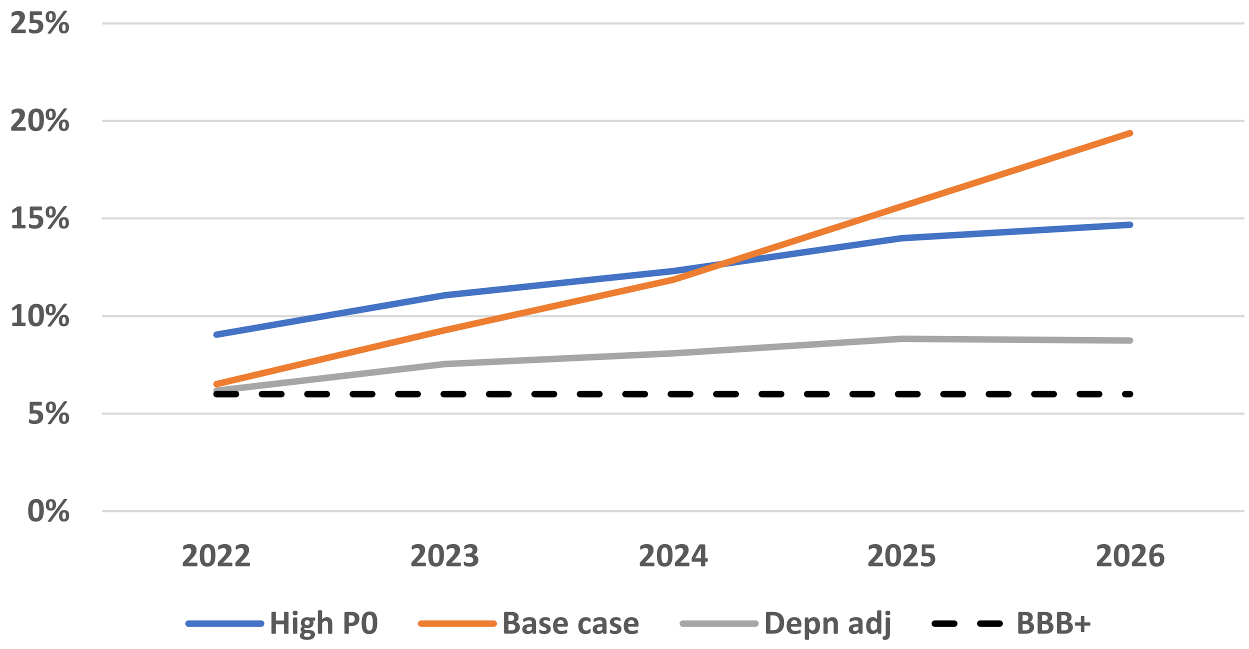
Analysis

29. To assess the impact of depreciation adjustments and reprofiling of revenues on financeability, we have looked at a range of credit metrics. We have examined the same credit metrics that HAL presented in the RBP.

30. In Figures I7 – I9 below, the "base case" assumes a 6% (real, vanilla) WACC and no RAB adjustment with no net cash flows to or from equity and a flat profile of charges, in real terms, throughout H7. The "high P0" case assumes a higher initial level of charges with charges in later years reprofiled to keep the overall NPV of charges in H7 unchanged. The "depn adj" case makes the same assumptions as the "high P0" case with an extra adjustment to depreciation, under which £400m of depreciation each year is deferred into later price control periods.

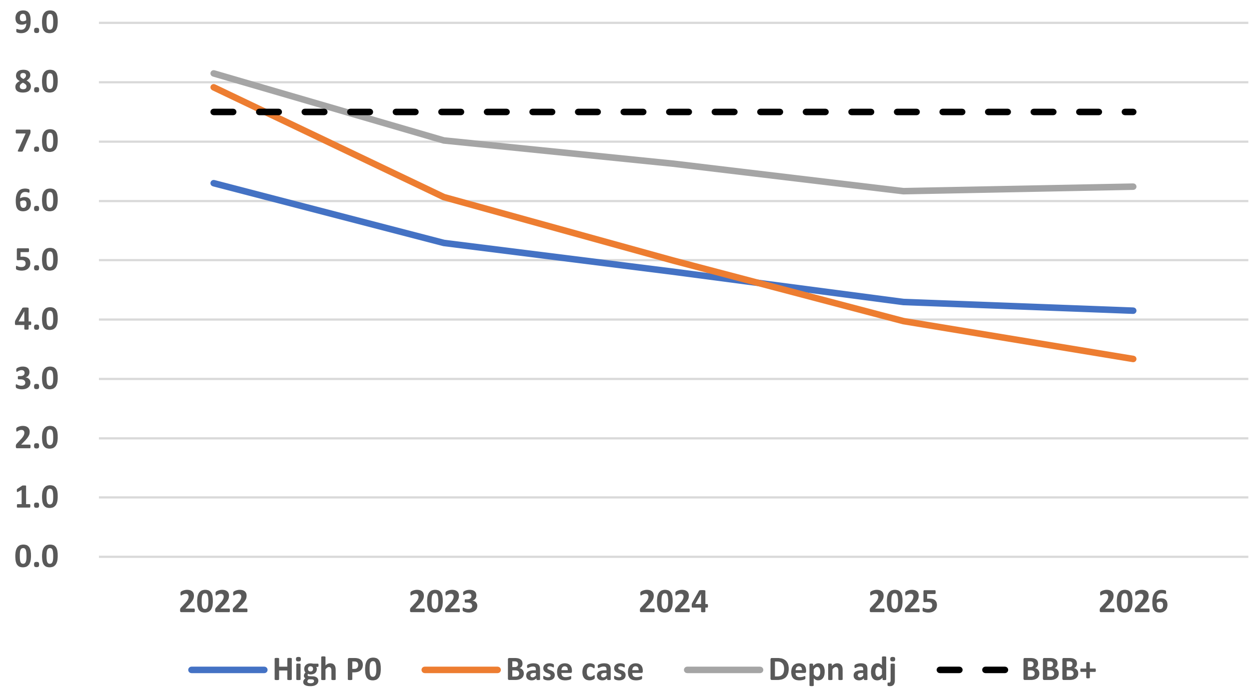
31. The BBB+ line on the charges reflects our understanding of the threshold level consistent with a BBB+ credit rating. We note that credit rating agencies' assessment of ratings is not a purely mechanical exercise. A range of qualitative factors are also important to the ratings assessment and rating agencies will form a judgement based in part on the trend in the credit metrics as well as the absolute levels.

Figure I7: impact of reprofiling on FFO to net debt



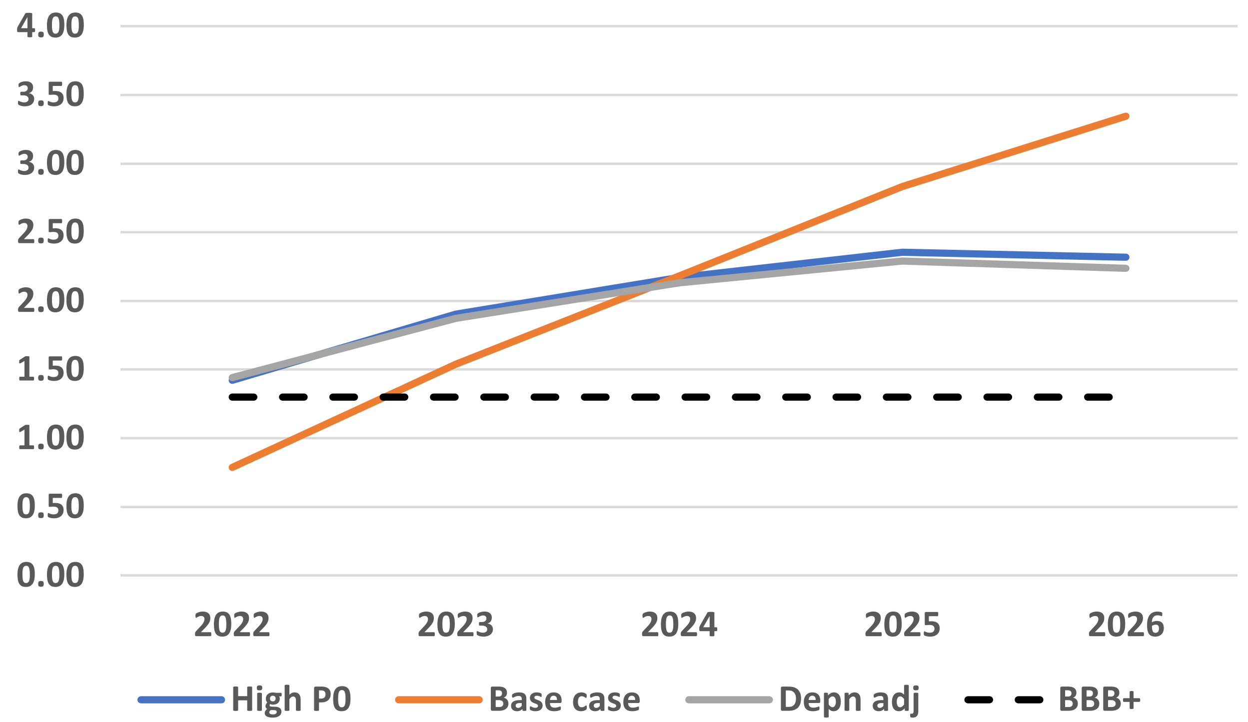
Source: CAA analysis

Figure I8: impact of reprofiling on net debt to EBITDA



Source: CAA analysis

Figure I9: impact of reprofiling on post maintenance interest cover ratio



Source: CAA analysis

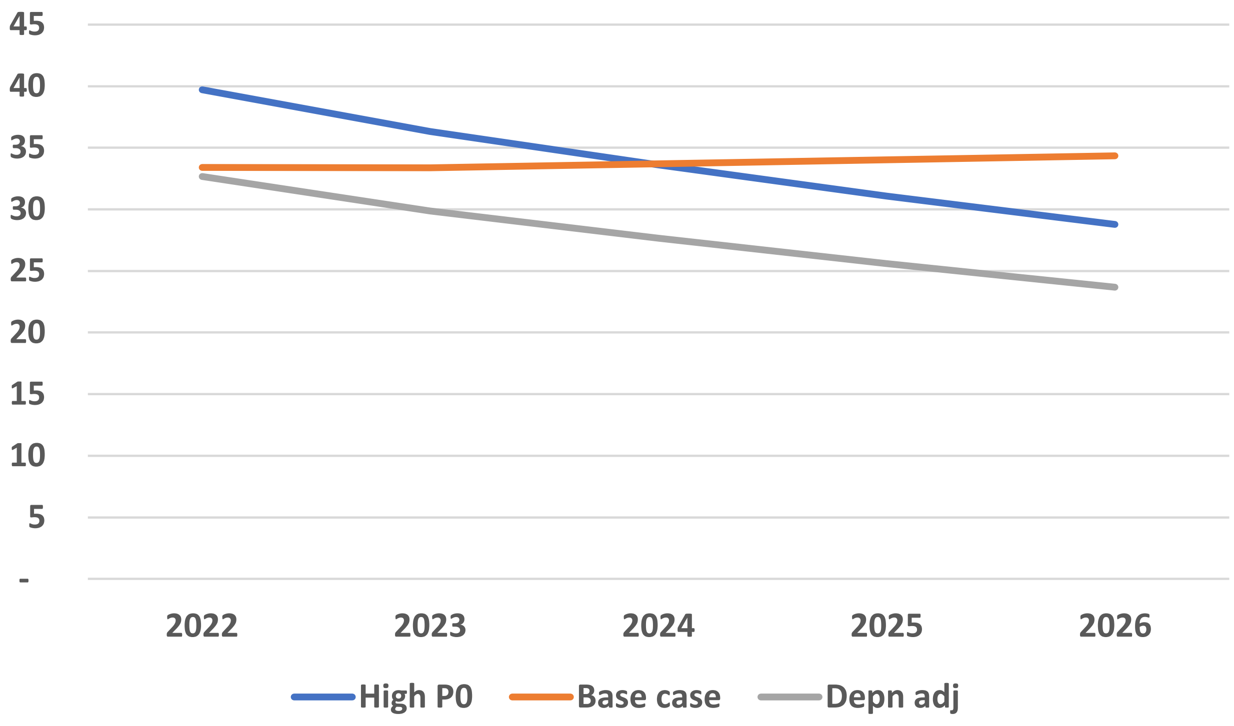
32. As noted above, we are aware that some credit rating agencies tend to "reverse out" NPV-neutral reprofiling of revenues, although we expect that they will exercise a degree of judgement in doing so. All the scenarios presented above

show the same underlying trend of an improvement in credit metrics. Just as with the analysis presented in the financeability section of this appendix, a major driver of this profile is the recovery in passenger volumes. Our assumption that no dividends will be paid is also a key driver of the profile shown above. The existence of headroom over the rating threshold suggests it may be possible for the notional entity to resume paying dividends in the second half of the H7 period.

Analysis of price cap

33. Figure I10 below shows the profile of the price cap for the same cases as shown in Figures I7 – I9. The chart is illustrative only, and the absolute level of average charge per passenger shown in the base case reflects the assumptions included in HAL's RBP.

Figure I10: impact of reprofiling on price cap



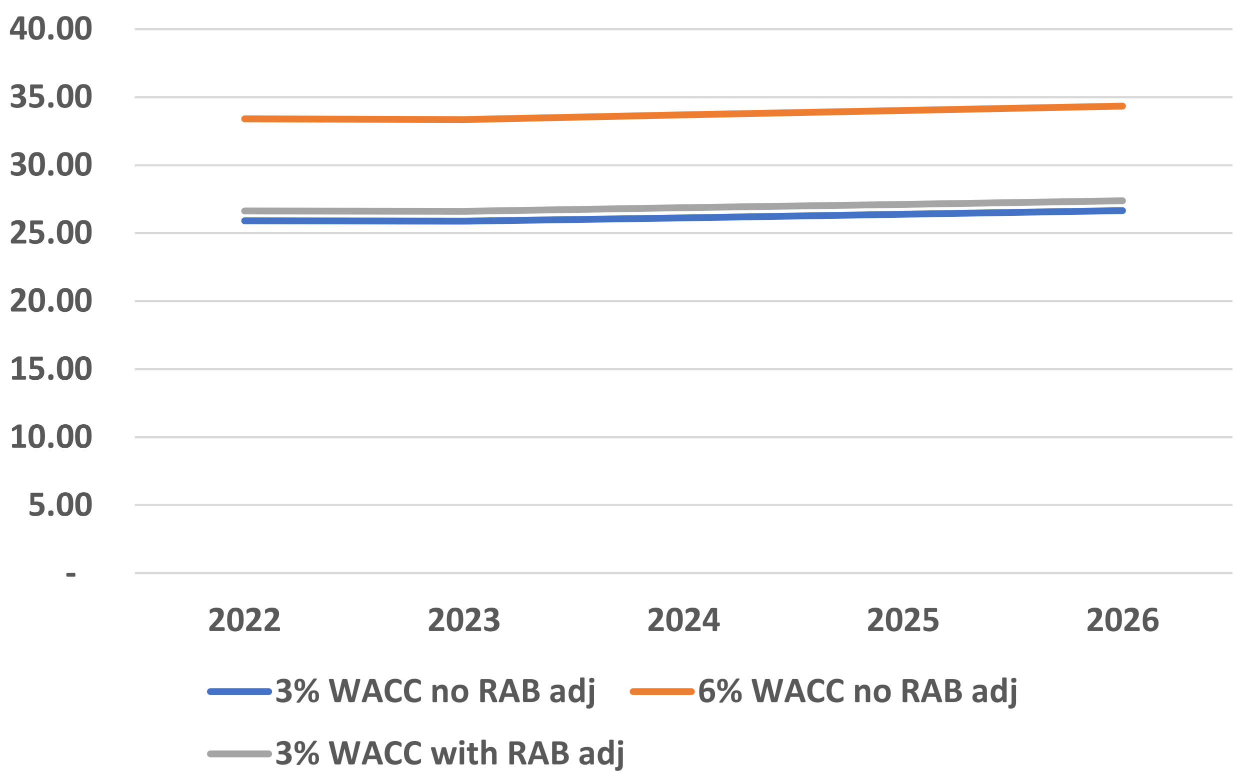
Source: CAA analysis

34. This analysis demonstrates how a depreciation adjustment can shift charges up or down across the entire period. It also demonstrates how changing the level of initial adjustment to prices, known as P0, alters the slope of the line. The implications of these changes are considered from a policy perspective in chapter 3.

Impact of a RAB adjustment on charges

35. As noted in chapter 3, we will consider the impact of proposals for a RAB adjustment on affordability. For this illustration, we have assumed a RAB adjustment of £1.6bn would be made at the start of H7.[21] This amount would be consistent with ensuring that HAL was fully compensated for the regulatory depreciation not recovered during 2020 and 2021. For the RAB adjustment case, we assume a WACC of 3%, noting HAL's comments in its submissions in respect of a RAB adjustment that making such an adjustment would lead to a lower WACC than if there were to be no adjustment. For comparison, we also illustrate the level of charges without a RAB adjustment assuming either a 3% or 6% WACC.

Figure I11: impact of a RAB adjustment on the price cap



Source: CAA analysis

36. As shown in Figure I11, the RAB adjustment increases charges by approximately 75 pence per passenger in each year of the price control. By contrast, the difference in average charge resulting from a higher WACC (without RAB adjustment) is approximately £7.50. This shows that the WACC is a more significant driver of the level of the price cap in H7, although the impact of a RAB adjustment would be felt for much longer because it would lead to a higher price cap until the RAB adjustment had been fully depreciated.

[21] The assumption of a £1.6bn adjustment to RAB is purely illustrative chosen to demonstrate the impact on the price cap of a large RAB adjustment.

Appendix J - Weighted Average Cost of Capital

Introduction and context

1. This appendix provides an update on our emerging views on the weighted average cost of capital ("WACC") and the parameters that contribute to it.
2. The allowed WACC is a key building block of the revenue we allow HAL to earn under the airport charge cap. It represents a return on the RAB and acts as a payment to investors and creditors for the risk they incur by committing capital to the business. Setting an appropriate WACC helps ensure that HAL has incentives to continue to invest, which provides the airport capacity and services that allow HAL and airlines to meet the needs of passengers.
3. The WACC is calculated as a weighted average of the cost of equity and the cost of debt. The weights assigned to each are based on the assumed proportion of debt and equity in the notional financial structure (this is discussed in chapter 3 of this consultation).
4. The cost of equity represents the expected return that the shareholders in a "notionally financed" airport operator would require in order to induce them to commit equity capital to the business. This expected return tends not to be observable and so is estimated based on theoretical models regarding how investors value equity investments. We have historically estimated the cost of equity for HAL based on the Capital Asset Pricing Model ("CAPM"). This model is commonly used by economic regulators in the UK and other stakeholders have used it in their submissions in respect of H7 to date.[22] CAPM estimates the cost of equity on the basis of three components:
    - the "equity beta";
    - the "risk free rate"; and
    - the "Total Market Return".
5. The cost of debt provides HAL with an allowance to cover efficiently incurred borrowing costs. In calculating the cost of debt we take account of both:
    - the cost of "embedded" debt; and

[22] See, for example, statements to that effect made in HAL (2020), "Revised Business Plan: WACC", December, Section 8.2.4.1, and CEPA (2020), "H7 cost of capital estimation", November, p10.

- the cost of new debt.

6. We also discuss the considerations in respect of choosing a point estimate for the WACC from the range of plausible estimates. Consistent with our approach in previous price controls[23], we intend to make a judgement regarding the appropriate WACC in the round based on reasonable ranges for individual parameters. This is important in order to avoid placing undue reliance on point estimates for individual parameters, which might be subject to a relatively greater degree of uncertainty than the WACC as a whole.
7. At this stage, we have not provided updated estimates for each parameter. Instead, we have focussed on setting out the principal issues that we think we will need to consider when forming our Initial Proposals.
8. For each cost of capital parameter, we summarise:
   - the position set out in our last update, the June 2020 Consultation;
   - developments since our last update;
   - views we have received from stakeholders; and
   - issues for consideration and how we intend to approach them.
9. Where practicable, we have had regard to HAL's request for a reopener of the current price control and its responses to our October 2020 and February 2021 Consultations. We expect to carry out further work on these matters ahead of Initial Proposals and note the views HAL has expressed that:
   - the WACC will be higher if we do not apply a RAB adjustment aligned to its proposals[24], principally due to the impact that it argues that such a decision would have on the equity beta; and
   - forward looking measures to reduce HAL's risk exposure such as applying a Traffic Risk Sharing ("TRS") mechanism in H7 will not be credible in the absence of such an adjustment.
10. We have also had regard to the CMA's Final Determination in relation to Ofwat's PR19 price controls and remain mindful of the potential relevance of emerging evidence from the appeals of Ofgem's RIIO-2 revenue restrictions. This appendix should also be read in conjunction with chapter 3 of this Way Forward consultation.
11. We note that the issues and analysis involved in estimating HAL's WACC for H7 are complex and subject to a significant degree of uncertainty in the parameters

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[23] See for example, CAP1830a paragraph E14, in respect of the NERL RP3 price controls.

[24] We have signalled our decision in CAP2140 to apply a RAB adjustment, although one that is smaller than HAL has proposed.

to be used. This is particularly the case in the context of the impact of the covid-19 pandemic. We are seeking to take a balanced approach to this uncertainty, and are seeking to focus on the most important issues and insightful analysis, rather than unduly expanding the range and complexity of analysis. This approach should both retain an appropriate degree of transparency and reasonable degree of precision in our estimates. Nonetheless, we also expect that a degree of judgement will be required in finalising our estimates of HAL's WACC, consistent with the wider precedent established by economic regulators and the CMA.

Inflation

12. This section updates our approach regarding the inflation assumption we will adopt that will underpin our estimate of the cost of capital. The inflation assumption is important since the allowed return is calculated based on a real WACC applied to an inflation indexed RAB. However, several WACC components are estimated in nominal terms and must be deflated in order to avoid double-counting of inflation. These include:

   - the yield on non-gilt securities used as an input into the estimate of the risk free rate; and
   - the yield on the benchmark index of debt securities used to estimate the cost of embedded and new debt.

Previous CAA position

13. We previously signalled our intent to continue to use RPI as the basis for indexing HAL's RAB in our December 2017 consultation. We noted that "Indexing the RAB and calculating the real WACC by using CPI would introduce an additional financing risk for HAL to manage and would do so at a time when it is also raising a significant amount of debt for new runway capacity"[25]. Although we are no longer assuming significant capacity expansion in H7, we note that a transition from RPI to CPI under the circumstances created by the current pandemic could be equally challenging for HAL. We have therefore assumed in this document that we will retain RPI as the basis for indexation in H7.

14. In our June 2020 consultation, we previously adopted a range of RPI inflation estimates based on two sources:

   - at the lower bound, we adopted the RPI inflation assumption used by the CMA in its determination of the RP3 price control for NERL. This

[25] CAA (2017), "Economic regulation of capacity expansion at Heathrow: policy update and consultation", CAP 1610, December, Paragraph 3.30.

was based on HMT guidance for RPI inflation at that time of 2.78%; and

- at the upper bound, we adopted an estimate based on the Bank of England implied inflation curve, adjusted to strip out a potential inflation risk premium, and cross-checked against OBR forecasts. This estimate suggested a value of 3.10%.

Developments since our last update

15. The current pandemic has led to a reduction in inflation relative to previous years. For example, the 12-month rate of CPIH inflation in January 2021 was 0.9%, compared with 1.8% in January 2020.[26] The 12-month rate of RPI inflation in January 2021 was 1.4%, compared with 2.7% in January 2020.[27]

16. The CMA's Final Determination of the PR19 price controls for four water companies included a discussion regarding how to account for the impact of the pandemic on inflation. The CMA considered that "using a longer-term estimate is the fairest way to calculate the real cost of capital at this time", on the basis of "the Bank of England's stated objective of achieving 2% CPIH inflation over time and the evidence that periods of higher and lower inflation have been met with corrective actions that pushed average inflation back towards the long-term target within a short time-frame".[28] On this basis, the CMA assumed CPIH inflation of 2% and RPI inflation of 2.9%.

Summary of stakeholder views

HAL views

17. The approach proposed by HAL was broadly consistent with that adopted by the CMA's PR19 Provisional Findings: namely, to adopt a CPIH assumption of 2% in line with the Bank of England target, and to assume an RPI-CPI wedge of 0.9% based on the latest OBR guidance. HAL also noted that it was not appropriate to apply the Fisher formula to convert between real and nominal costs, and did not do so in their calculations.

AOC/LACC views

18. In its November report, CEPA, on behalf of the AOC/LACC has focussed on break-even inflation[29] on UK gilts as the basis for deflating nominal costs. It did not provide a justification for this approach in this report.

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[26] https://www.ons.gov.uk/economy/inflationandpriceindices/datasets/consumerpriceindices

[27] https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/czbh/mm23

[28] CMA (2021), "Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Final Report", March, paragraph 9.36.

[29] This refers to an estimate of inflation derived from the difference between observed yields on nominal and index-linked debt.

Summary of issues and possible approach

19. For Initial Proposals, we will consider whether it is appropriate to continue to place weight on each of the approaches we considered in our June 2020 consultation.

20. We will also update our estimate of the RPI-CPI wedge to reflect the latest OBR guidance, in line with the CMA's approach for PR19.

Asset beta and equity beta

21. This section provides an update in respect of our approach to estimating the asset beta and equity beta for HAL for the H7 control period.

22. A beta is a measure of the "systematic" risk that a company is exposed to, that is, the proportion of total risk that cannot be eliminated by holding a diverse portfolio of assets. It is an important input into our cost of capital calculation because, under the CAPM, it is the parameter that determines shareholders' required return for holding a stock in a specific business, in this case Heathrow airport.

23. Consistent with the CMA's approach in its determinations of the PR19 controls and its previous decisions, we estimate the asset beta, and consider how this should translate into an estimated equity beta through our notional assumptions about HAL's gearing.

Previous CAA position

24. We previously provided an update on our emerging thinking in respect of the equity beta in the June 2020 Consultation. This update took into account:

- the Final Determination by the CMA on the RP3 price control for NERL; and
- a report by NERA submitted by HAL.

It presented an estimate of asset and equity betas supported by evidence from our advisors Flint Global, based on:

- the use of three comparator airports: AENA, Aeroports de Paris and Fraport;
- the use of a Europe-wide index: the Eurostoxx 600;
- primary reliance on daily data;
- use of trailing averages alongside spot estimates;
- use of a debt beta of 0.05 for comparators and 0.1 for HAL;
- continued use of two year and five-year measurement periods; and
- a reduction in HAL's notional gearing;

25. We presented an emerging view that HAL exhibited greater risk than Fraport, similar risk to Aeroports de Paris and lower risk than AENA

Developments since our last update

26. Developments since the June 2020 Consultation may warrant a change to our previous approach, including:

- the impact of the covid-19 pandemic may have affected perceptions of risk, both systematic and company specific, throughout the economy, including in relation to the riskiness of an airport business like HAL. Where this is the case, the question arises how much of any change is likely to endure during the H7 period or whether, and how much, any increase in perceived risk is transitory and will abate once the pandemic subsides;
- we have indicated in this consultation that we are intending to introduce a TRS mechanism as part of H7. Although the form and calibration of the TRS mechanism has yet to be developed, we consider that an appropriately specified TRS mechanism could substantially reduce the risks borne by Heathrow's shareholders;
- we have also indicated in this consultation that we are intending to amend the incentive regime applying to capex and service quality. The impact of these changes on HAL's equity beta in H7 will also need to be considered;
- in the February 2021 Consultation, we consulted on potential interventions we could make in respect of losses HAL has incurred as result of the impact of the covid-19 pandemic, either as part of a reopener to the current price control or through the H7 price control determination. Depending on which options are taken forward, these could influence perceptions of risk exposure and hence the equity beta;
- the CMA has issued its Final Determination in respect of the appeals by four water companies of the PR19 price control determination. This determination included points that are relevant for the determination of the equity beta for HAL in H7; and
- we have carried out further analysis of the appropriate comparator set for HAL for the purposes of determining the equity beta for H7. This was motivated by concerns regarding the narrowness of the previous selection, and evidence that other airports constitute equally viable comparators.

Summary of stakeholder views

HAL views

27. HAL has presented additional evidence on the asset and equity beta since the June 2020 Consultation, both in its response to the October 2020 Consultation and in its RBP. The approach put forward by HAL for estimating the asset betas

of comparator airports was consistent with the approach set out in the June 2020 Consultation in several respects, including:

- using the same comparator companies (AENA, AdP, and Fraport);
- using the same comparator index (Eurostoxx 600);
- using daily data only; and
- using an Ordinary Least Squares ("OLS")[30] to estimate betas and not using a Vasicek adjustment.[31].

It differed from our emerging approach, for example, by assuming a debt beta at the low end of our range (0.05) for HAL.

28. An important aspect of HAL's method was the time period used to estimate the comparator equity betas. HAL took the view that the impact of the covid-19 pandemic represents a "discontinuity" in the time series. Specifically, HAL has placed weight on an estimation window that starts after the onset of the pandemic in March 2020, on the basis that

> "*use of longer periods to estimate the current asset beta of airports is not appropriate as the data before March 2020 is not relevant to investors' current views on the risk of airports*".[32]

It also placed weight on an estimation period of 2 years. On this basis, HAL estimated that the asset beta for comparator airports is between 0.72 and 1.00.

29. HAL expressed the view that the asset beta for comparator airports represents a proxy for the asset beta for HAL once the expected regulatory mitigations available to these airports has been taken into account.[33] It indicated that, if the CAA were not to apply HAL's proposed RAB adjustment, its asset beta would be higher than the estimate for comparator airports, since HAL would not have benefitted from the same degree of regulatory mitigations as these comparators.

30. HAL has also provided an estimate of the asset beta for H7 in the absence of regulatory mitigation by the CAA. This estimate has been calculated based on an analysis of the impact of the covid-19 pandemic on the volatility of HAL's returns. The resulting asset beta is 0.93-1.04.

31. HAL also proposed a notional gearing assumption of 60-67%, resulting in a corresponding equity beta of 1.98-2.38.

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[30] In statistics, ordinary least squares ("OLS") is a type of linear least squares method for estimating the unknown parameters in a linear regression model

[31] The Vasicek adjustment shifts the OLS beta estimate towards a prior expectation and the magnitude of that shift is greater when the standard error of the OLS estimate is higher. That is, where the OLS beta estimate is more precise it is given more weight, and when it is less precise it is given less weight.

[32] HAL (2020), "Revised Business Plan: WACC", December, p16.

[33] HAL (2020), "Revised Business Plan: WACC", December, p17.

AOC/LACC views

32. The AOC/LACC provided us with a report by CEPA in November 2020, which set out an estimate of the asset and equity beta for HAL. This estimate was based on a broader set of comparators than we had considered in the June 2020 Consultation. CEPA considered a longlist of 24 airports and a shortlist of 7 airports.

33. The approach put forward by CEPA for estimating the asset betas of comparator airports was consistent with the approach set out in the June 2020 Consultation in several respects, including using:

- daily data only;
- a pan-European index for European airport comparators;
- a debt beta of 0.05 to derive comparator asset betas, and a debt beta of 0.10 to re-lever these when estimating HAL's equity beta; and
- OLS to estimate betas and not using a Vasicek adjustment.

34. It also differed from our emerging approach in certain ways through:

- exclusive use of two year measurement periods; and
- use of longer trailing average periods (up to ten years).

Based on this analysis, CEPA proposed an asset beta of 0.45-0.50.

35. CEPA assumed notional gearing of 60%, supporting a proposed equity beta of 0.98-1.10, for HAL in H7.

36. In February 2021, the AOC/LACC provided us with an update from CEPA in respect of its previous report that included further evidence on the equity beta. This update included commentary on HAL's approach to estimating the equity beta, particularly its views on the presence of structural breaks and their implications for equity beta estimation. CEPA indicated that it did not consider the presence of a structural break corresponding to the pandemic provided sufficient justification for disregarding longer term data prior to this date. In any case, it highlighted practical challenges associated with conducting structural break tests.

Summary of issues and possible approach

37. The interactions between the various developments since the publication of the June 2020 Consultation are complex, so care is needed to capture prospective risks reasonably and consistently. These risks may also be addressed in different ways, which coexist within the regulatory framework, such as through compensation for "shocks" within traffic forecasts,[34] traffic risk sharing arrangements, reopeners and/or the compensation for risk within the WACC formula.

[34] This is referred to as the "shock factor" throughout the rest of this document.

38. We consider that data on airport share prices and movements in stock market indices are important and relevant to the assessment. It is plausible that their evolution since 2020 could signal a shift in investors' perceptions of the systematic risk exposure of airports. At the same time, this data must be cautiously interpreted:

- we are concerned that beta estimates may be subject to certain biases[35] during periods of market turmoil; and
- there is a risk that data during the period of the pandemic is over represented in recent market evidence for the purposes of determining HAL's forward looking risk exposure.

39. For example, by the start of H7, almost two years of the most recent data will have coincided with the pandemic. Where the equity beta is calculated based on five years of data, almost 40% of the dataset will be prominently affected. Yet, if a crisis akin to the current pandemic is expected only once every 20-50 years, we might expect that a much smaller proportion of an appropriate forward looking dataset should reflect the impact of the pandemic. We note that this is consistent with statements made by the CMA in its Final Report for the PR19 determinations:

> *"While we consider that the pandemic represents a systematic event which should not be excluded from our estimates, we also recognise that this type of economic crisis is relatively rare and that it is likely to be over-weighted in our range of beta estimates, which cover the last 2-, 5- and 10-year periods"*[36].

40. We also disagree with HAL's statement that:

> "*use of longer periods to estimate the current asset beta of airports is not appropriate as the data before March 2020 is not relevant to investors' current views on the risk of airports*".[37]

41. Whilst we agree that older data may be less representative of HAL's current business risk, we do not agree that only evidence from certain time periods is relevant in an absolute sense. The key question is how much weight should be placed on data from each period.

42. We also recognise that the behaviour of equity betas for individual comparator airports during the pandemic have been driven by factors that are unique to each airport and may not be directly applicable to HAL.[38] These include:

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[35] An example of a bias to which CAPM may be subject during periods of market turmoil is termed "endogeneity bias". CAPM assumes that company share prices are affected by market movements, but not vice versa. Where share price movements are sufficiently extreme as to move the market, as may be the case during a period of market turmoil, this assumption can be violated. The result is that the measured equity beta may overstate the "true" level of equity beta.

[36] CMA (2021), "Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Final Report", March, paragraph 9.493.

[37] HAL (2020), "Revised Business Plan: WACC", December, p16.

[38] This is particularly the case in the context of a changing regulatory framework.

- risk sharing arrangements at each airport, and the way these have been applied in practice;
- the availability of direct and indirect government support; and
- underlying traffic dynamics.

43. We will need to consider each of these points carefully in the measurement of systematic risk. Hence, we see merit in carrying out further work to examine three possible estimates of the equity beta for HAL ahead of Initial Proposals. These are:
    - the "pre-covid" equity beta for HAL;
    - the equity beta including the "unmitigated" impact of the pandemic; and
    - the equity beta including the impact of the pandemic, the effect of changes to the incentive framework (particularly TRS) and the iH7 RAB adjustment.

"Pre-covid" equity beta for HAL

44. The pre-covid equity beta represents the equity beta that HAL would exhibit if the current pandemic had not occurred and in the absence of any changes to the Q6/iH7 regulatory framework. Developing a robust estimate of this figure is important as a starting point for the analysis of HAL's H7 beta.

45. Because HAL is not a listed company, we approach the estimation of HAL's beta through comparator analysis. The principal drivers of any pre-covid estimate will be:
    - the comparator set on which the estimate is to be based;
    - the approach used to calculate the equity beta and asset betas for each comparator; and
    - how these comparator equity beta estimates are combined and adapted to reflect our assumption on the notional gearing for HAL.

Comparator set for HAL

46. We have further considered the appropriate comparator set for HAL. We consider that there is a case for including a broader set of comparator airports than we had previously used. The three comparator airports that we previously considered (ADP Group, Fraport and AENA), exhibit certain differences from HAL and we are concerned that a small sample size could bias our estimate of the equity beta for HAL. For example, we note that all three airport groups own several small airports which are likely to be subject to higher volume risk than HAL due to the absence of capacity constraints. On the other hand, both ADP and Fraport benefit from TRS arrangements that are currently absent from HAL's regulatory framework.

47. Reliance on an overly narrow comparator set could lead to excessive weight being placed on results that are driven by specific circumstances that may not be applicable to HAL. We are cautious about our ability to control for these

circumstances robustly and in a consistent and evidenced manner. Hence, we intend to evaluate a broader sample of airports, to ensure that company specific factors do not exert undue influence on our overall estimate.

48. In order to develop a broader set of appropriate comparators, we have undertaken the following analysis:

Step 1: Development of a "long list" based on a desktop review of regulatory determinations for other airports, previous analysis conducted for CAA and the description of listed airports and airport groups in Thomson Reuters Eikon; and

Step 2: Filtering of this long-list based on:

- the availability of stock return data over a period of at least five years;
- the absence of substantial non-airport revenue streams;
- the existence of market power;
- the application of a revenue or price cap by an economic regulator;
- size in terms of air traffic movements ("ATMs") and passenger numbers("pax"); and
- whether the airport is a "hub".

49. We have identified a long list of comparators based on Step 1 comprising 16 listed airport businesses. Table J1 below sets out why we deem that eight of these comparators should be excluded from the short list.

Table J1: Long listed comparators excluded from sample

Comparator	Reason for exclusion	Comparator	Reason for exclusion
Airports of Thailand PCL	Insufficient information on regulatory framework	**Malaysia Airports Holdings BhD**	Too few ATMs and too few destinations served
Atlantia SpA	Substantial toll road operations	**Malta Int'l Airport PLC**	Too few ATMs and too few destinations served
Bologna SpA	Not a hub airport, too few ATMs and too few destinations served	**Toscana Aeroporti SpA**	Not a hub airport, too few ATMs and too few destinations served
Enav SpA	Substantial non-aviation business	**Vinci**	Substantial non-aviation business

Source: CAA analysis and desktop research

50. Based on this analysis, we have short listed eight listed airports and airport groups as potential comparators for HAL based on the criteria set out under Step 2 above:

Table J2: Short list of comparators for HAL

Aeroports de Paris	Flughafen Zuerich	Fraport	AENA
Copenhagen Airports	Flughagen Wien	Sydney Airport Holdings	Auckland International Airport Limited

Source: CAA analysis and desktop research

Approach used to calculate comparator betas

51. The empirical estimates of the betas for each comparator airport identified are sensitive to the choice of estimation method, especially:

- the frequency of return data (daily, weekly or monthly);
- the time period over which the beta is measured;
- the length of any trailing averages employed; and
- the market index used.

52. The CMA has applied a method for estimating the equity betas for listed water companies in its PR19 determinations that is based on[39]:

- 2-year, 5-year and 10-year betas;
- daily, weekly and monthly frequency;
- data from January 2006 to the end of December 2020;
- OLS calculations;
- spot betas and 1-year, 2-year, 5-year rolling averages; and
- not employing a Vasicek adjustment or the GARCH[40] method.

It has also excluded a small number of outlier observations that it considered could introduce bias into its analysis.[41]

53. We consider that it is appropriate to apply broadly the same approach to estimate comparator equity betas to HAL. This approach should be applied

[39] CMA (2021), "Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Final Report", March, paragraph 9.479.

[40] The Generalised Autoregressive Conditional Heteroskedasticity ("GARCH") estimator is a statistical modelling technique used to help predict the volatility of returns on financial assets.

[41] CMA (2021), "Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Final Report", March, paragraph 9.474.

using data up to the end of December 2019, to ensure that only the pre-covid equity beta for comparators is captured.

54. In line with the approach outlined in the June 2020 Consultation, we intend to use the Eurostoxx index as the market index for the European comparator airports. For Sydney and Auckland, we intend to use the ASX200.

55. When translating comparator equity betas into asset betas, we intend to use the same approach we proposed in the June 2020 Consultation, namely, to assume a 0.05 debt beta for comparator airports, in line with the approaches proposed by both HAL and CEPA on behalf of AOC/LACC.

Translating comparator asset betas into an estimate of the equity beta for HAL

56. We consider that it is difficult to assess how similar each comparator is to HAL robustly, since the relative importance of different potential risk factors is unclear. We previously made a qualitative judgment that HAL exhibited similar risk to ADP, greater risk than Fraport and lower risk than AENA. At the same time, we did not put forward a robust means of quantifying these differences.

57. We could apply the following approaches to derive a single equity beta for HAL:

- apply a simple average across the unlevered asset betas for each comparator;
- make qualitative judgments regarding the relative risk exposure of HAL with respect to each comparator airport; or
- estimate a set of weights to apply to each comparator based on an index of similarity to/difference from HAL.

58. We will set out a view regarding the appropriate approach in our Initial Proposals.

59. In addition, we will need to consider how to translate the asset beta estimate for HAL into an equity beta estimate, including whether our previous debt beta assumption for HAL of 0.1 remains appropriate.

"Unmitigated" impact of the covid-19 pandemic on HAL's equity beta

60. We intend to carry out analysis to estimate the impact of the covid-19 pandemic on HAL's asset and equity beta. We will do this on the assumption that the Q6 regulatory framework is rolled forward unchanged: that is, without any TRS, covid-related RAB adjustment or updating of the shock factor applied to passenger forecasts when setting the Q6 price control.

61. In its RBP, HAL has put forward an estimate of the unmitigated impact of the pandemic on its asset beta based on the impact on the volatility of equity returns. It estimated that the asset beta could increase by 0.44 in the absence of mitigating action by the CAA.

62. In the Appendices to the February 2021 Consultation, we highlighted certain concerns regarding HAL's analysis. For example, HAL's estimate of the increase in the asset beta of 0.44 assumed that a similar crisis would recur every 30 years. HAL's analysis suggests that, if an alternative assumption was adopted that a similar crisis would recur every 100 years, the resulting estimate

of the increase in the asset beta would be 0.14, holding all other assumptions unchanged.

63. HAL's analysis also made specific assumptions regarding the way in which an increase in return volatility translated into an increase in asset beta. These assumptions are pivotal in driving the estimated impact on beta.

64. Despite its limitations, we consider that a similar framework could be useful in estimating the impact of the pandemic on the equity beta, providing that it is appropriately calibrated and amended to reflect reasonable underlying assumptions. We, therefore, intend to explore whether it is practicable to put forward our own estimate based on an analysis of return volatility, but substituting our own assumptions regarding:

- the opening asset beta and target return;
- the expected frequency of pandemic recurrence; and
- the relationship between changes in return volatility and asset beta.

Impact of new regulatory mechanisms and covid-19 related interventions

65. The interventions being considered in respect of HAL's covid-19 related losses, in combination with the new regulatory mechanisms being considered for H7 and referred to in paragraph 37 above, could affect HAL's equity beta.

66. We consider that there are at least two ways in which the new regulatory mechanisms and interventions could affect the assessment of HAL's equity beta in H7:

- they could affect the way in which the impact of a covid-19 type event might translate into changes in the level of returns earned by HAL's shareholders; and
- they could require adjustments to the "pre-covid" equity beta, to the extent that a TRS mechanism would have affected HAL's systematic risk exposure prior to the pandemic.

67. The nature of these interventions and prospective new mechanisms have not yet been agreed and determined. However, we will need to develop an approach that enables us to reflect the impact of our interventions and mechanisms on HAL's equity beta, and to ensure that HAL's allowed WACC is appropriately calibrated, for example, by reference to the comparator set.

68. We note HAL's view that mechanisms designed to reduce HAL's risk exposure on a forward-looking basis (such as TRS) will not be credible without a RAB adjustment of around £2.6bn. We indicated in the February 2021 Consultation that, in our initial view, a TRS would be credible regardless of whether we have applied a RAB adjustment. We will consider this position further ahead of Initial Proposals.

Risk free rate

69. This section provides an update on our approach to estimating the risk free rate for HAL in H7. The risk free rate is the return that an investor would expect to earn on a risk free asset. It is an input into the calculation of the cost of equity under the CAPM.

Previous CAA position

70. In the June 2020 Consultation, we indicated that we were minded to adopt an approach that was closely aligned to that adopted by the CMA in its Provisional Determination of the appeal of the RP3 price control by NERL. This would involve estimating the risk free rate based on the yields on 10-year index-linked gilts ("ILGs") averaged over three and six months, and cross checked against the 15-year and 20-year ILG rates.[42] Based on this assessment, we indicatively estimated a risk free rate of -2.1% (RPI real)[43] for H7.

Developments since our last update

71. As illustrated in Figure J1 gilt yields (in real terms) have been substantially negative throughout 2020. It did not initially appear that the covid-19 pandemic had fundamentally altered this position, although yields have subsequently increased through the early part of 2021.

72. The CMA recently issued its Final Determination in respect of the PR19 price controls for four water companies. This included a number of points that are relevant for the determination of the risk free rate in H7. In particular, the CMA determined that weight should be placed on high-quality corporate bond yields when estimating the risk free rate, alongside ILG yields. It also confirmed its previous view that it is not necessary to apply a forward rate adjustment to recent market data.

73. We also note that appeals have recently been lodged with the CMA in relation to Ofgem's RIIO-2 price control decisions. These appeals will be in progress as we consult on the matters contained in this document and approach H7 decisions. We are mindful of the potential relevance of these appeals and may adapt our approach in light of emerging CMA thinking and/or decisions.

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42 CMA (2020), "NATS (En Route) Plc / CAA Regulatory Appeal: Provisional findings report", March, p.194.

43 RPI real refers to nominal figures deflating using the RPI inflation series.

Figure J1: Yields on 10-year zero coupon index-linked gilts

Source: Eikon, CAA analysis.

Summary of stakeholder views

HAL views

74. HAL highlighted that the CMA's Provisional PR19 Determination estimated the risk free rate based on two points of reference:

- a six-month trailing average of the 20-year ILG yield; and
- a six-month trailing average of long-dated AAA-rated corporate bonds.[44]

It proposed that the CMA's resulting point estimate of the -1.85% (RPI real) should be employed for the purposes of H7.

AOC/LACC views

75. The CEPA report provided an estimate of the risk free rate. This was exclusively based on yields on 10-year and 20-year tenor index-linked Gilts and placed no weight on high-quality corporate debt securities.

76. CEPA highlighted a number of practical and theoretical concerns regarding the use of AAA rated corporate debt benchmarks. These included:

- Subjectivity in approach to deflating nominal yields: there is a greater degree of subjectivity in selecting the appropriate inflation series for the pooled iBoxx series than for nominal bonds of a specific tenor.

[44] Specifically, a simple average of the IHS iBoxx UK non-gilt AAA 10+ index (which has an average maturity of approximately 28 years) and the IHS iBoxx UK non-gilt AAA 10-15 index (which has an average maturity of approximately 12 years).

- <u>Number and type of issuers captured by the indices</u>: the corporate debt indices considered by the CMA include a relatively limited number of securities. It has also expressed concerns regarding the nature of the issuers represented in each index.

77. CEPA also considers that a forward rate adjustment is beneficial where it represents a better proxy of expectations in the future than the spot rate.

78. Where a forward rate adjustment is applied, CEPA estimated a range for the risk free rate of -2.7% to -2.3% (RPI real). If a forward adjustment is not applied, CEPA estimated a range of -2.8% to -2.2% (RPI real). This position was reiterated in CEPA's update, but no additional evidence was provided.

Summary of issues and possible approach

79. There are at least four questions that we will need to consider regarding the risk free rate in our Initial Proposals:
    - whether to place weight on high-quality corporate debt indices;
    - the tenor of our reference bonds;
    - the averaging period that should apply; and
    - whether to include a forward rate adjustment.

Use of corporate debt indices

80. A significant volume of evidence was considered by the CMA in respect of the appropriate reference instrument on which to base an estimate of the risk free rate and, specifically, whether weight should be placed on high-quality non-government debt instruments.

81. The CMA concluded that weight should be placed on high-quality non-government debt instruments, on the basis that these instruments:

    > "*provide an input that is both very close to risk free (issuers with a higher credit rating than the UK government, but with some inflation and default risk) and is at least closer to representing a rate that is available to all (relevant) market participants*".[45]

    We agree with the CMA's position on this issue.

82. We also acknowledge the limitations highlighted by CEPA associated with the non-gilt index used by the CMA. For our Initial Proposals, we will consider further whether there is a better set of non-gilt instruments available that could mitigate some of the concerns highlighted.

83. Whichever approach is ultimately adopted, we agree with the CMA that the yields on index-linked Gilts are

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[45] CMA (2021), "Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Final Report", March, paragraph 9.149.

> "*significantly lower than would be accessible by even the highest-rated private investor*"[46]

and hence exclusive reliance on index-linked gilts is likely to result in a downwards-biased estimate of the risk free rate.

Tenor of reference bonds

84. The CMA Final Determination for PR19 estimated the risk free rate based on instruments at or close to 20-year maturities. This was consistent with its approach in the Provisional Findings, which reflected the

> "*the very long-life assets and long-horizon investment decisions that are likely to be based on our cost of capital estimates*".[47]

85. We consider that HAL's asset lives and investment decisions are similarly long dated, which would suggest that we should also consider instruments at or close to 20-year maturities.

Averaging period

86. The CMA Final Determination for PR19 estimated the risk free rate was based on:

- a six-month trailing average of the 20-year index-linked gilt yield; and
- a six-month trailing average of long-dated AAA-rated corporate bonds.

This was based on the CMA's view that

> "*averaging periods that are too short risks the introduction of inappropriate levels of volatility into the estimation process*".[48]

The CMA balanced this view against the need to avoid introducing out-of-date data into the estimate of the risk free rate

87. We agree that applying a six-month trailing average represents a reasonable balance between reducing volatility into the estimate and ensuring that the estimate is based on recent market data. As such, we expect to employ the same approach for H7.

Forward rate adjustment

88. In the context of the PR19 determinations, the CMA expressed concern regarding the use of forward rate adjustments, on the grounds that no evidence was presented to suggest that forward rates represent robust predictors of future spot rates.

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[46] CMA (2021), "Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Final Report", March, paragraph 9.92.

[47] CMA (2020), "Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Provisional findings", September, Paragraph 9.128.

[48] CMA (2021), "Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Final Report", March, paragraph 9.208.

89. In line with this assessment, we do not propose to apply a forward rate adjustment.

Total Market Return

90. This section provides an update on our approach to estimating the Total Market Return ("TMR") in H7. The TMR is the return required by investors for investing in a diversified basket of equity securities. It is an input into the calculation of the cost of equity under the CAPM.

Previous CAA position

91. The June 2020 Consultation indicated that we considered the CMA's approach to estimating the TMR in the context of the Provisional Findings of the RP3 price control for NERL to be broadly appropriate in the context of H7. This approach consisted of:

- an ex post assessment of observed returns, considering a range of assumptions regarding, for example, holding periods, averaging methods, and inflation;
- an *ex ante* approach that split out observed returns into average dividend yields and average rate of dividend growth using the Barclays dataset; and
- no significant weight being placed on forward looking evidence such as dividend growth models or investor surveys.

92. Based on this assessment, we agreed with the CMA's estimate of the TMR of 5-6% (RPI real). We also indicated our intent to revisit the approach to estimating the TMR once more evidence of the impact of the impact of the covid-19 pandemic becomes available.

Developments since our last update

UK equity market performance

93. UK equity markets exhibited a pronounced downward movement at the outset of the covid-19 pandemic, followed by a partial recovery later in the year. However, the prospects for UK equity markets over the course of H7 is, as ever, highly uncertain. As such, we do not consider that straightforward inferences can be made with respect to the impact of the pandemic on the TMR.

CMA Final Determination for PR19

94. The CMA Final Determination for the PR19 appeals made various decisions on the estimation of the TMR that are relevant to H7:

- the upper bound for the estimate was based on historical *ex post* returns;
- in estimating historical *ex post* returns, weight should be placed on both the CED-RPI and CED-CPI inflation series when deflating

historical nominal returns, but that an adjustment should be applied to the CED-RPI series. This adjustment reflected the impact of the 2010 change in the "formula effect";[49]

- that an arithmetic average based on 10- and 20-year holding periods is the most appropriate approach for averaging historic returns.
- the lower bound of the estimate was based on a historic *ex ante* approach.
- it reiterated its previous view that no weight should be placed on forward-looking returns.

95. The CMA concluded on this basis that the TMR for PR19 is 5.2%-6.5% (RPI real).

Summary of stakeholder views

HAL

96. HAL has referred to evidence it has commissioned from Oxera that has argued that there are shortcomings in the CPI inflation series from 1950 to 1988, and that it is appropriate to rely exclusively on the CED-RPI series.

97. HAL further referred to analysis carried out by Oxera in response to the CMA's Provisional Findings for the PR19 price control appeals in respect of the CED inflation series from 1900 to 1950. HAL suggested that Oxera's analysis demonstrates that the CED series used for this period is empirically and theoretically closer to RPI. HAL also referred to Oxera's analysis of structural breaks in the RPI series, from which it concluded that it is appropriate to use the unadjusted RPI series.

98. HAL continues to support the use of an arithmetic average as the basis for measuring historical market returns. HAL has referred to evidence it has commissioned from Oxera and Professor Schaefer in the context of the CMA's determination of the RP3 price control for NERL. HAL indicates that this evidence demonstrates that estimators such as Blume and JKM result in downwardly biased estimates of TMR for the purpose of setting a regulatory WACC.

99. On the approach to averaging, HAL also refers to evidence from Oxera that it suggests shows that an arithmetic average continues to be appropriate even in the presence of serial correlation.

100. HAL notes that Oxera and Professor Schaefer conclude that the discount rate that is required to give an unbiased estimate of the discount factor (that is, of

[49] The "formula effect" refers to differences in the way the RPI and CPI indices translate the change in price of individual goods and services into a single inflation figure. These differences have led to a systematic tendency for RPI to be larger than CPI. The size of the formula effect has varied over time. It increased significantly in 2010 primarily due to methodological changes to the measurement of clothing prices that were implemented from January of that year.

present value), for use in capital budgeting, will be at least as high as the arithmetic average of historical returns.

AOC/LACC

101. The AOC/LACC provided us with a report by CEPA in November 2020, which set out an estimate of the TMR of 5.2%-6.0% (RPI-real). This considered a range of estimation approaches which paralleled those considered by the CMA in the context of the Provisional Determination for PR19. In most cases, CEPA's analysis was consistent with the CMA's approach.

102. There were two principal differences. The first was CEPA's position that the CED-CPI inflation series is preferable to the CED-RPI inflation series, and its exclusive reliance on the former. This resulted in the upper end of CEPA's range being 25bps lower than the upper bound of the CMA's range. The second was that CEPA placed relatively less weight on historical *ex ante* estimates of the TMR in arriving at its final proposed range. The CEPA update provided further clarification of the approach put forward in the November 2020 report, but did not provide any additional evidence.

Summary of issues and possible approach

103. Consistent with our approach in the June 2020 Consultation, we expect to base our TMR estimate at Initial Proposals on a combination of historical *ex post* and historical *ex ante* estimates of equity market returns. We are not currently minded to place any weight on forward looking approaches.

104. We will need to make decisions in respect of two principal aspects of the historical *ex post* approach. These are discussed below.

Historical inflation

105. The CMA has reviewed the evidence provided by HAL and other parties, and continues to consider it appropriate to place weight on both the CED-CPI series and the CED-RPI series.

106. We agree with the CMA that neither inflation series is without its drawbacks.[50] This reinforces the need to avoid relying excessively on a single, imperfect approach. As such, we are minded to retain our previous approach of placing weight on both inflation series. We note that the CMA applied an adjustment to the historical returns deflated using the CED-RPI series to reflect the impact of the 2010 change in the formula effect. We expect to apply a similar adjustment in H7.

Averaging method

107. The CMA considered a range of estimators for estimating historical returns. At Provisional Findings, the CMA proposed to estimate historical returns based on several estimators, but excluding pure arithmetic, geometric and non-overlapping returns. Having considered additional evidence, the CMA amended

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[50] CMA (2021), "Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited price determinations: Final Report", March, paragraph 9.295.

its view in its Final Report, where it based its estimate exclusively on arithmetic averages using 10- and 20-year holding periods.

108. We acknowledge the emerging evidence in respect of the challenges associated with estimating historical returns. We are cautious of our ability to develop robust models of parameter uncertainty that would facilitate a departure from the arithmetic mean approach adopted by the CMA. As such, we are minded to adopt a similar approach to that of the CMA, namely, to place weight on the arithmetic mean based on 10- and 20-year holding periods.

109. We are also mindful of the potential relevance of evidence emerging from the RIIO-2 appeals and will reflect this as appropriate.

Cost of embedded debt

110. Like other regulators, we estimate the WACC by reference to the costs that would be incurred by HAL under the notional financing structure. Embedded debt is therefore defined as debt that the notionally financed entity would already have issued at the start of H7. The cost of embedded debt provides HAL with an allowance for servicing this debt.

Previous CAA position

111. We set out a proposed approach to estimating HAL's cost of embedded debt in the June 2020 Consultation. This consisted of:

- setting an allowance for the cost of embedded debt with respect to an index of A and BBB rated corporate bonds (the iBoxx index);
- an assumed debt tenor at issuance of 20 years, consistent with evidence provided by HAL in respect of bonds pre-dating the breakup of BAA;
- for the first year of H7, use of a 20-year trailing average of yields on the index, consistent with the tenor of HAL's actual debt issuance;
- for the remaining years of H7, employing a dynamic, "collapsing average" whereby the earliest year of the trailing average period in the previous year is excluded from the trailing average period for the current year. This reflected the observation that some of HAL's embedded debt would be expected to mature over the course of H7; and
- translation of nominal yields into real yields based on a range of inflation forecasts, including those adopted by the CMA in its findings on the RP3 price control for NERL, and "break even" inflation forecasts derived from the relative yields on real and nominal government bonds.

112. Based on this approach, we estimated a cost of embedded debt of 1.5%-1.8% (RPI real).

Developments since our last update

113. We indicated in the February 2021 Consultation that the pandemic has put considerable pressure on HAL's financial position. Many of its credit metrics have fallen below levels consistent with investment grade in 2020 and 2021 on a notional basis. We also noted that HAL's credit rating has been downgraded by Standard & Poor's and has been placed on negative outlook by all three rating agencies.

114. In its Final Determinations for on the PR19 price controls, the CMA has based its estimate of the cost of embedded debt for the disputing companies on their estimate of the actual cost of debt for the industry, that is, averaged across all the water companies in England and Wales. It has adjusted this industry average cost of debt

> "*to account for unusual levels of cash (as a result of COVID-19) and floating rate debt*".[51]

It has then cross checked this estimate based on a notional benchmark consisting of:

- the iBoxx A and BBB-rated 10+ year indices; and
- 15-year and 20-year trailing and collapsing averages.

Summary of stakeholder views

HAL

115. HAL has continued to advocate the view that the most appropriate approach to setting the cost of embedded debt is to base this estimate on HAL's actual cost of embedded debt. It has presented an estimate of its actual cost of embedded debt of 2.1% (RPI real).

116. HAL has also estimated the cost of embedded debt based on a notional approach, consisting of:

- a 20-year trailing average period;
- a range of approaches to reflect the "retirement" of debt over H7; and
- an uplift of 40bps to reflect historic spreads between HAL's actual debt and the iBoxx A and BBB rated indices.

Based on this notional approach, it has estimated a cost of embedded debt of 2.2% to 2.4% (RPI real).

AOC/LACC

117. The CEPA report in November 2020 proposed an estimate of the cost of embedded debt based on:

[51] CMA (2021), "Anglian Water Services Limited, Bristol Water plc, Northumbrian Water Limited and Yorkshire Water Services Limited Price Determinations: Summary of Final Determinations", March, paragraph 89.

- a notional approach based on an index of A and BBB rated corporate bonds (the iBoxx index);
- an assumed tenor of 10-15 years;
- a 15-year collapsing average period; and
- deflation of nominal yields using the inflation series implied by the difference between 10-year nominal and index-linked gilts ("break even inflation").

Based on this approach, CEPA estimated a real cost of embedded debt for HAL of -0.33% - 0.66% (RPI real) in H7.

118. The CEPA update in February 2021 provided further clarification on the rationale behind the tenor of debt adopted in its report. It highlighted several points:

- the tenor of comparator airports' debt is shorter than that of HAL's debt;
- the tenor of comparator airports' debt has decreased since Q6;
- CEPA estimated that HAL's average debt tenor including non-bond debt financing is around 15 years and hence does not support the tenor assumption of 20 years set out in the June 2020 Consultation;
- HAL's September 2020 quarterly consolidated debt release suggests a nominal cost of embedded debt of 3.40%, which is 160bps lower than the cost of embedded debt implied by the approach set out in the June 2020 Consultation; and
- there is no imperative to seek to match debt tenor to average asset lives, and regulatory precedent does not support this principle. Moreover, matching debt tenor to asset lives is a concept generally used in project financing not in corporate finance.

Summary of issues and possible approach

119. We will need to address the following issues in respect of the cost of embedded debt in our Initial Proposals.

Notional or actual cost of embedded debt

120. We maintain the view that it would not be appropriate for us to set the cost of embedded debt based solely on HAL's actual financial structure. As we have previously outlined, this would distort incentives for HAL to manage its finances prudently and could lead to consumers underwriting HAL's actual debt costs.

121. We note that the CMA has used the industry average cost of debt as a basis for setting the cost of embedded debt for the disputing companies in its Final Determinations for PR19. This is logical in that individual water companies do not have the ability materially to influence the industry average cost of debt. This means that the potential for distortions to incentives for prudent financing

are limited. We consider that there is no analogous approach available for HAL, since it is the only UK airport for which we set *ex ante* price controls.

122. We further note that the CMA ruled out using individual companies' actual cost of debt as a basis for estimating the cost of embedded debt, on the grounds that it would distort incentives:

> "*We did not agree with Yorkshire's arguments in favour of adopting actual costs as the basis for our estimate. In our view, there would be little to no incentive for companies to ensure that their debt costs were as low as possible if there were a 'cost-pass-through' mechanism in place*."[52]

123. At the same time, it is reasonable to consider the role that HAL's actual debt costs can play as a cross check on the notional benchmark in the light of HAL's submissions and the CMA's Final Determinations on the PR19 price controls.

124. NERA, on behalf of HAL, has estimated that the yield at issuance for HAL bonds has been around 40bps higher than the yield on the A/BBB iBoxx indices. This analysis was based on a small, narrow selection of six bonds, two of which were issued at a lower yield than the benchmark. In addition, the two most recent of these issuances were priced close to the benchmark despite having a greater time to maturity than the benchmark.

125. We also continue to consider that any residual spread is likely to be at least partly driven by HAL's higher leverage relative to the benchmark. HAL has advanced the argument that leverage does not affect the cost of debt within a given credit rating. It has supported this position by reference to a paper by Oxera that seeks to demonstrate this observation. We consider that the Oxera analysis is of limited relevance to the current context, given that:

- Oxera's analysis focusses on the relationship between the debt risk premium ("DRP") and the level of gearing; the cost of debt is not the same as the debt risk premium, since it includes an expected loss component in addition to the DRP;
- The bonds considered by Oxera are limited to water and energy networks, so it is not obvious that its findings carry across to other sectors;
- The level of gearing exhibited by the issuers in Table 4.1 of the Oxera report (to which HAL refers) is considerably lower than HAL's actual gearing, so it is not obvious that its findings carry across to more highly leveraged entities such as HAL; and
- The dataset used provides no indication of sample size or statistical significance within each gearing category.

126. As a matter of principle, we would expect that the cost of debt should increase with gearing. This is consistent with corporate finance theory, in particular, the capital structure irrelevance principle. We, therefore, remain sceptical that any

[52] CMA (2021), "Water Redeterminations 2020: Cost of Debt – Working Paper", February, paragraph 13.

uplift to the iBoxx is warranted based on comparisons with HAL's actual cost of debt.

127. For Initial Proposals, we will consider further the question of whether, and how, HAL's actual cost of debt should inform our assessment of the cost of embedded debt. This will include further consideration of the difference in yield (if any) between HAL's bonds and the iBoxx indices and how we should treat any such difference.

Form of notional benchmark

128. In the light of the preceding discussion, we consider that it will be useful to calculate a notional benchmark for HAL's cost of embedded debt. We continue to view the notional benchmark set out in the June 2020 Consultation as appropriate. This was that it should be based on yields on an index of corporate securities of a credit rating that is consistent with HAL's credit quality under the notional financial structure.

129. There are three areas for further consideration for the notional benchmark:

- the tenor of HAL's bonds;
- the tenor of comparator bonds; and
- the averaging period for the index.

The tenor of HAL's bonds

130. We note CEPA's observations in respect of the tenor of HAL's actual debt and agree that this is relevant to the estimate of HAL's cost of embedded debt.

131. Our review of HAL's submissions indicates to us that CEPA's assessment omits certain data:

- while we agree that the tenor of HAL's outstanding debt is around 17 years based on HAL's 2020 reporting, HAL has indicated that this omits bonds that predate the breakup of BAA Ltd that were called early and are relevant to the assessment. Based on information provided by HAL, including these bonds results in a longer average tenor of around 20 years and
- we note CEPA's observation in respect of HAL's cash interest costs (as reported in its September 2020 consolidated debt release) implying a cost of debt of 3.40%. Our understanding is that this omits the cost of accretions on index-linked derivatives. HAL has estimated that if this cost is included the total interest cost is 5.00%.[53]

[53] We note, however, that HAL's RBP and its consolidated debt release appear to be inconsistent regarding the treatment of accretions on index-linked bonds. In the RBP, HAL presents a cash interest cost of 3.49% for H7 that appears to exclude accretions on index-linked bonds. In the consolidated debt release, HAL presents an estimate of the cost of debt of 3.40% including accretions on index-linked bonds. We would welcome clarity from HAL on this point.

132. We also note that the embedded debt costs presented in Table 1.2 of CEPA's February 2021 report are simple trailing averages of yields of the iboxx indices. In our June 2020 consultation, we proposed the use of collapsing averages, whereby index values in the early years of the averaging period would progressively drop out of the average over the course of H7. This approach implied a nominal cost of embedded debt that was 54 basis points lower than a simple trailing average.

133. As such, we do not consider that the evidence in respect of the tenor of HAL's bonds suggests that a shorter trailing average period should be applied.

The tenor of comparator companies' bonds

134. We agree with CEPA that the lower tenor of comparator company bonds compared to HAL's bonds is relevant to the assessment of embedded debt.

135. To the extent this is the case, it would imply that comparator airports are choosing to issue debt at tenors that are shorter than their useful asset lives (on the assumption that airport asset lives are relatively long). This, in turn, might suggest an asset-liability mismatch that might increase refinancing risks for these airports compared to a company whose debt tenors match their asset lives.

136. Even where such mismatches existed for comparator airports, we do not consider that this would warrant encouraging a similar asset-liability mismatch for HAL. As a general principle, we consider that it is in consumers' interests to ensure that HAL matches its liabilities to its assets[54]. So, we should seek to set the cost of embedded debt in a manner consistent with this aim.

137. We will consider the evidence on the tenor of comparator airports further and assess whether this warrants a change to our current approach for Initial Proposals.

Averaging period for the index

138. In its Final Determinations for PR19, the CMA estimated a notional benchmark as a cross-check on its estimate of the industry actual cost of debt. This benchmark was based on averaging periods of 15 years and 20 years respectively.

139. We note that in the context of the CMA's February 2021 working paper on PR19, its consideration of a 15-year trailing average was motivated by a desire to reflect the observed financing choices made by the water companies: in particular, the issuance of floating rate debt, EIB debt and other forms non-fixed rate debt that could have a downwards impact on both duration and yield.

140. We note CEPA's position that accounting for similar forms of non-fixed rate issuance by HAL could similarly affect the tenor of HAL's bonds. We will

[54] Mismatches in the timing of cash inflows from return of investment and cash outflows pertaining to repayment of debt can have financeability consequences for HAL. Although, in principle, this would be a matter for management, it could have consequences for consumers *in extremis*, for example, if it led to capital rationing or HAL encountering financial difficulties.

carefully consider this observation and reflect on whether we should amend our approach accordingly for Initial Proposals.

Impact of the covid-19 pandemic

141. We noted in our February consultation that HAL's notional credit metrics came under significant pressure in 2020 and 2021. Due to losses incurred due to the pandemic, most credit metrics have been below the level consistent with investment grade during this two-year period.

142. Despite this, we note that HAL's debt has, to date, only been downgraded by one notch by one credit rating agency, and remains on negative credit watch with other two rating agencies.[55] That being said, there is potential for a lag between underlying market movements, publication of data, changes to risk perceptions and associated adjustment of credit ratings.

143. We will consider a range of approaches for addressing the impact of the pandemic on HAL's cost of embedded debt at Initial Proposals. These could include:

- Taking no action: this would either assume that the pandemic would not affect the notional entity's borrowing rates, or that the notional entity could defray any impact, for example, by avoiding issuing new debt during the pandemic. Both assumptions appear to have drawbacks given the significant impact on metrics and the significant amounts of new debt that the notional entity would most likely have needed to draw down to cover cash losses;
- Set the cost of embedded debt for 2020 and 2021 only based on the BBB iBoxx index only: this would reflect the downgrade experienced by HAL to date; and
- Estimate an uplift, for the cost of embedded debt in 2020 and 2021 only, based on the change in HAL's actual cost of debt: this would fully capture the impact of the pandemic, but would be subject to our previously stated reservation regarding the appropriateness of using HAL's actual cost of debt to set its allowed cost of embedded debt.

144. We are cautious of committing to one of the options above at this stage, and our thinking in this area is still under development. We may therefore consider other options for setting the cost of embedded debt at H7 in the light of further emerging evidence from the debt markets.

145. We note, however, that the difference in the impact of these approaches is relatively small, due to the relatively small proportion of embedded debt (under our notional financing assumptions) that has been issued during 2020 or 2021.

[55] Having placed HAL on credit watch negative on 29 May 2020, S&P removed HAL from negative watch on 5 March 2021 and affirmed the rating with negative outlook.

Cost of new debt

146. This section provides an update on our approach to estimating the cost of new debt for HAL in H7. New debt is defined as debt that we would expect HAL to issue in the course of H7 under the notional financial structure. The cost of new debt provides HAL with an allowance for servicing this debt.

Previous CAA position

147. In the June 2020 Consultation, we indicated that we intended to set the cost of new debt by reference to:

- the iBoxx 10Y+ A/BBB indices; and
- update the cost of new debt in-period based on the relevant index values in each year of the price control.

148. We did not consider any uplifts to the index were warranted based on the evidence considered at that time. However, we also indicated we might revisit this position as evidence on the impact of the covid-19 pandemic emerged.

149. At that time, our advisors, Flint Global, indicated that an allowance of 0.1% for issuance and liquidity costs was reasonable for H7. Flint also considered the appropriate weight to be placed on the cost of new debt. Flint provided a range of estimates based on different assumptions for the level of notional gearing in H7. The upper end of the range (12.5%) corresponded to a notional gearing assumption of 60%. The lower end of the range (0.0%) reflected a scenario in which a notionally financed airport would be expected to deleverage over the course of H7, meaning that all maturing debt was funded with retained earnings and/or new equity and no new debt was issued in H7.

Developments since our last update

150. We indicated in the February 2021 Consultation that the pandemic is expected to continue to put pressure on credit metrics in the early years of H7. We noted that the forecasts for HAL's credit metrics set out in the RBP suggested that these would fall below the level consistent with investment grade in 2022, before returning to levels consistent with investment grade from 2023 onwards. We also noted that HAL has been downgraded by one notch by Standard & Poor's and has been placed on negative outlook by all three rating agencies.

151. The CMA's Final Determination on the PR19 price controls set out a position on the cost of new debt that was largely consistent with the position we set out in the June 2020 Consultation.

Summary of stakeholder views

HAL

152. HAL estimated its cost of new debt for H7 based on its forecast of yields for the iBoxx index, together with:

- a "New Issue Premium" to reflect HAL's view that the cost of issuing new debt is generally higher than the yields on its existing debt;
- an uplift to reflect HAL's view that index-linked debt is more expensive than nominal debt; and
- an uplift to reflect the difference in the cost of Heathrow debt relative to the iBoxx index.

153. HAL has also assumed issuance and liquidity costs of 0.18% in H7. This assumption has been based on an updated version of similar analysis presented in the context of the IBP. HAL has also assumed a weighting on new debt of 12.5%, consistent with a notional gearing assumption of 60%.

AOC/LACC

154. The CEPA report in November 2020 estimated a cost of new debt based on:

- the iBoxx non-financial corporate 10-15yr A/BBB indices (consistent with its arguments in respect of debt tenor);
- a 3- to 12-month trailing average of the yield on the relevant indices;
- a forward adjustment of 0-15bps. The lower end of the range is consistent with the CMA's view in the context of its PR19 determnations that a forward adjustment should not be applied, and the upper end of the range is based on the forward curve for index-linked gilts;
- an uplift to reflect the impact of the pandemic of 0-50bps. The lower end of the range reflected CEPA's view that the observed increase in HAL's yields may be transitory. The upper end of the range reflected the increase in spreads for comparator airports; and
- use of 10- and 20-year break even inflation to deflate nominal yields.

155. CEPA applied a weight of 20% to new debt, consistent with its view of the appropriate debt tenor for HAL in H7. CEPA also estimated issuance and liquidity costs of 0.1%.

Summary of issues and possible approach

156. We will need to consider several issues in respect of the cost of new debt in developing our Initial Proposals.

Impact of the covid-19 pandemic

157. We will consider a range of approaches for addressing the impact of the covid-19 pandemic on HAL's cost of new debt in our Initial Proposals. These could include:

- Take no action: This would involve setting the cost of new debt by reference to the iBoxx A/BBB indices and updating the cost of new debt based on the relevant index values in each year of the price control, but without any further adjustment for the impact of the covid-

19 pandemic. For the reasons set out in paragraph 143, we consider this approach would have drawbacks.

- Set the cost of new debt for 2022 based on the BBB iBoxx index only: This would involve setting the cost of new debt by reference to the iBoxx BBB index only in 2023 and updating this based on the index value. For the remaining years of H7, the cost of new debt would be set by reference to the A/BBB indices and updated based on the relevant index values in each year. This approach would reflect the one-notch downgrade experienced by HAL to date and would assume that this lower credit rating would only apply in 2023. The drawback of this approach is that there is significant uncertainty over the length of time it will take for HAL's credit metrics to return to their "steady state" level. As such, forecasting the notional credit rating in each year is difficult.
- Estimate an uplift based on the change in HAL's actual cost of debt due to the pandemic: This approach is analogous to HAL's proposed uplift to the index of 100bps. It effectively assumes that the notional company would experience an increase in the cost of new debt of a similar magnitude and that this increase would persist for the duration of H7. A potential drawback of this approach is that it may overstate the appropriate uplift if, for example, the uplift currently observed does not persist through the H7 period.
- Move away from an index-based approach to setting the cost of new debt and instead set the cost of new debt based on a pass through of HAL's actual costs of new debt in H7, for example, based on weighted average yield at issuance for new debt securities issued: This approach addresses challenges associated with forecasting the magnitude and duration of increases in the cost of debt due to the pandemic. However, it would significantly dampen incentives on HAL to minimise its cost of debt and manage its finances prudently.

158. We will carefully consider these options and determine a preferred approach in developing our Initial Proposals. In line with our approach to the cost of embedded debt, other options may also be considered in the light of stakeholder responses and evolving debt market evidence.

New issue premium and index-linked premium

159. We do not consider that HAL has presented any substantial new evidence on these premiums. We therefore maintain our previous position that no such premiums should apply in H7.

Relevant index

160. Consistent with our statements in paragraphs 138 and 140, we will need to consider the implications of the CMA's Final Determination for the PR19 appeals for the appropriate debt tenor carefully. It is likely that we will want to adopt a consistent tenor across both embedded and new debt.

Issuance and liquidity costs

161. We do not consider that HAL has presented any substantial new evidence on the magnitude of issuance and liquidity costs, but has rather updated its previous analysis of actual costs[56]. We therefore maintain our previous position that an allowance of 0.1% for both issuance and liquidity costs should apply in H7. An allowance of this magnitude is also consistent with the CMA's Final Determination for the PR19 appeals.

Weighting on new debt

162. We indicate in the Financial Framework chapter of this consultation that there is a case for assuming gradual deleveraging of the notional financial structure over the course of H7. To the extent possible, this would imply that maturing debt would be funded by some combination of retained earnings and injections of new equity in the current context. This would in turn limit the extent of new debt issuance under the notional financial structure in H7.

163. The exact trajectory of notional gearing and the implied quantum of new debt in H7 are dependent on the broader assumptions regarding the price control framework. We will confirm the weighting of new debt that we will assume in H7 at Initial Proposals.

Choice of a point estimate

164. There is a degree of uncertainty associated with estimating each of the parameters used to assess HAL's WACC. To recognise this uncertainty, we intend to present a range of plausible estimates for each parameter. However, we will ultimately be required to determine a single point estimate for the WACC for the H7 price control. This section discusses the considerations that will inform the choice of the point estimate from within the plausible range.

Previous CAA position

165. In the June 2020 Consultation, for the purposes of illustration, we presented point estimates at the midpoint of our proposed range for each parameter. However, we did not explicitly discuss the arguments for adopting a point estimate at a particular point in the range. This is because the analysis of the WACC was still at a relatively early stage of development.

Developments since our last update

166. In the context of its PR19 determinations, the CMA set out an explicit discussion of the appropriate point estimate to choose from within the range of plausible

[56] We appreciate that HAL has provided further detail regarding its estimate of HAL's actual issuance costs. Regardless, we consider that this is simply a more granular exposition of the same point of reference: namely, HAL's actual issuance costs. Moreover, HAL arrives at precisely the same estimate. As such, we do not consider that this constitutes material new analysis.

estimates. The CMA has referred to several considerations that could inform the choice of point estimate from within a range:

- the need to promote investment, both within a single price control and in the longer-term;
- asymmetry in the choice of WACC parameters;
- the balance of risk within the price control package; and
- cross-checks on the level of WACC, including financeability.

167. Based on this assessment, the CMA concluded that it was appropriate in PR19 to choose a point estimate 0.25% above the midpoint of the range for the cost of equity. The CMA did not produce a range of estimates for the cost of debt, although it considered a range of cross-checks on their point estimate.

Summary of stakeholder views

HAL

168. HAL has adopted an approach that they indicate is consistent with the CMA Provisional Findings for the PR19 determinations, namely point estimates:

- at the bottom of the range for the cost of embedded debt;
- at the midpoint of the range for the cost of new debt; and
- between the mid-point and top of the range for the cost of equity.

AOC/LACC

169. While the November 2020 CEPA report does not propose a particular point estimate from within the estimated range of plausible estimates, CEPA notes that it sees no strong reason to consistently adopt a point estimate above the midpoint of the range ("aim up") or below the midpoint of the range ("aim down)".

170. The CEPA update also indicated that it does not consider that the balance of risk in H7 constitutes a valid reason to aim up from the mid-point of the H7 cost of capital range. It argues that the CMA's decision for PR19 was motivated by the presence of a more highly powered incentive regime with downside-only incentive mechanisms, a rationale that CEPA says does not apply to H7.

Summary of issues and possible approach

171. We will consider each of the factors referred to by the CMA in the context of our proposed H7 regulatory framework.

Promoting investment

172. We agree with the CMA that aiming up on the WACC may be warranted to maintain investor confidence and ensure that investment takes place over the longer term.

173. We are mindful that the CMA's comments in the context of the PR19 determinations reflected the particular circumstances and regulatory framework in the water sector. We consider that the following characteristics of investment in Heathrow Airport are relevant to our consideration of the point estimate for the H7 WACC:

- economic regulation in the water sector has historically had a greater focus on delivery incentives. The need for specific investments at Heathrow can also change very significantly over time, requiring greater flexibility. This means that our ability to apply strong incentives in respect of the delivery of investment is currently more limited than is the case for water. All else equal, this implies that setting an appropriate WACC is more significant as a driver for new investment than in water;
- there has historically been strong investment in Heathrow Airport, leading to a substantial RAB of over £16bn in 2019; and
- in the context of a two runway airport, the need for investment is reduced compared with what would have been the case had HAL undertaken expansion in H7.

174. We will consider the implications of these characteristics for setting a point estimate for the WACC further at Initial Proposals.

175. We also note that concerns around investment accounted for a maximum of 5-15bps of the CMA's total uplift to the midpoint of the cost of equity.[57]

Asymmetry in the choice of WACC parameters

176. In line with the CMA's approach in its recent work, we expect that uncertainty in respect of individual WACC parameters is unlikely to warrant explicit aiming up or down. Even where there are potential biases associated with individual parameters, we expect that these are likely to offset each other within the overall WACC estimate. As such, we do not consider that this consideration warrants any aiming up or aiming down.

The balance of risk in H7

177. We note that the Outcome Delivery Incentives ("ODI") framework applicable to water companies is materially negatively asymmetric and has been referred to extensively by the CMA as a justification for aiming up. We will consider whether our proposals for incentive arrangements create similar asymmetries, but that at present we do not intend to adopt such an approach.

178. We are conscious that HAL is currently subject to asymmetric risk in respect of passenger volumes: however, this is already explicitly addressed elsewhere: namely, through the application of a shock factor to baseline passenger forecasts and the possible introduction of a traffic risk sharing mechanism in H7.

[57] The CMA's point estimate was 25bps above the midpoint of its range for the cost of equity. Of this, 10-20bps were attributed to asymmetry in the overall ODI package (paragraph 9.1342). The remainder were attributed to financeability considerations and investment concerns respectively.

179. Our present view is that the balance of risk under the H7 price control package is unlikely to warrant significant aiming up.

Cross-checks on the level of WACC

180. There are no close, listed UK airport comparators for HAL. As such, our ability to cross-check our WACC estimate with market data is necessarily limited.

181. We are, however, mindful of the considerable pressure that the impact of the covid-19 pandemic is placing on HAL's notional financial position. The WACC alone is unlikely to play a decisive role in determining HAL's financeability. Even so, we consider that financeability considerations may warrant a degree of aiming up, depending on the outcome of our financeability assessment at Initial Proposals.

182. On the other hand, we are also considering interventions in respect of covid-19 related losses that could improve HAL's long-term attractiveness to investors. Depending on the scale of any such interventions, there could be a case for aiming lower within the WACC range.

Appendix K - Financial resilience and ring fencing

Introduction

1. This appendix updates our work on the financial resilience and ring fencing rules applicable to HAL. As we noted in the June 2020 Consultation, while this work was started in the context of expansion, we have refined and reduced the scope of this work to limit it to the elements that are still relevant in the current circumstances.

Our overall approach

2. This work remains focused on managing the risk that consumers would suffer detriment from disruption to services and investment if HAL experienced financial distress. Consumers could experience these detriments, irrespective of whether the circumstances led to the airport closing.

3. As we have noted consistently:
   - the provisions in HAL's licence on financial resilience are not extensive and do not readily protect HAL's cash or assets for the benefit of consumers;
   - HAL's "financing platform" largely covers the same ground that regulatory rules would otherwise do and, so, provides some protection for consumers; and
   - we will avoid obligations that "cut across" the financing platform as these would potentially prompt an expensive and distracting re-financing that would neither be proportionate nor in consumers' interests.

4. We consider that appropriate, targeted intervention may be necessary and proportionate to protect the interests of consumers. Given the points noted above, we will focus on relatively narrow changes that will:
   - improve the flow of information to the CAA, so that in the circumstances of financial distress we will have better information to inform our decisions on whether to intervene on behalf of consumers; and
   - clarify and "tidy up" the licence, ensuring that it is internally consistent where appropriate.

The June 2020 Consultation

5. The June 2020 Consultation built on our earlier consultations and working papers in 2017-9. While it narrowed the scope of the reforms under consideration, it did not reach any firm conclusions as to what, if any, changes should be made. So, we stopped work on possible new credit rating obligations

backed by cash/dividend lock because these measures were most relevant to managing the challenges of expansion.

6. Possible changes were, therefore, limited to:

- minor changes to the sufficiency of resources obligation to ensure internal consistency within the licence by explicitly requiring HAL to have sufficient assets to operate the airport in accordance with the licence;
- separation of the financial and operational resources certificates and bolstering the required supporting evidence (addressing the differing level of detail HAL has provided in recent certificates);
- requiring HAL to provide the CAA with the same information provided to bondholders;
- clarifying the ultimate controller obligation (i) so that it is clear it does not apply to shareholders and (ii) to ensure subsidiaries hold the records HAL reasonably needs to conduct its business; and
- requiring HAL to write to the ultimate controller annually to remind it of its obligation.

7. We also proposed a review of the accounting and other financial information provided by HAL to streamline it and make it consistent with the approach in the H7 price control.

Stakeholders' responses

8. We received only one response to the discussion of financial resilience in the June 2020 Consultation. This was from HAL, whose overall concern was that new conditions should:

- not cut across existing financial arrangements or create extra costs in excess of the benefits for consumers; and
- have regard to CAA's duties.

9. It reiterated the view it expressed in response to previous consultations that its existing financing arrangements are aligned with the interests of consumers and provide sufficient protection for them. It considered, therefore, that more justification would be required for the CAA's proposals, albeit that it wanted to see the drafting of the proposed conditions to be able to assess them fully.

10. On sufficiency of resources, HAL appeared concerned that the CAA would require it to certify that it will have sufficient cash and liquidity and operational resources for a 24 month period. It said that this would increase HAL's costs unacceptably. It also considered that there was no need for the sufficiency of resources condition to refer to other obligations in the licence.

11. On compliance certification, HAL said it would need to see the proposed drafting to understand if the certification requirements will be onerous and increase its costs. It said the information it provides to bondholders is already

significant, consisting of investor reports, RNS[58] announcements and going concern assessments by the auditors for the following 12 months. It considered that, since all these are public documents, they can be used by CAA. If the CAA were to want additional information, it should spell the requirements out. HAL would provide this if it were necessary and reasonable to do so. HAL also considered that the CAA should not impose additional requirements on HAL if it entered financial distress. HAL stated the requirements would be burdensome at time when Heathrow's time and resources should be directed to ameliorating the distress.

12. HAL welcomed our clarification that the ultimate controller obligation should not extend to shareholders. However, it considered that an obligation to write to the ultimate controller annually to remind it about obligation would not add value. Rather, this should only happen on any change of control.

Our views

13. HAL's concerns do not appear to acknowledge the clear statements we have made that our approach will not cut across HAL's financing platform. Furthermore, the changes we are considering are largely clarificatory and/or relate to the provision of information that should already be in HAL's possession. As such, the burden of demonstrating that they comply with CAA's duties should be relatively low.

14. In particular, we are not proposing to change the sufficiency of resources obligation or certificates as a "back door" to imposing a specific cash or liquidity requirements on HAL. We have already decided that imposing such requirements would not be in the interests of consumers. Instead, our approach will be to keep the sufficiency of resources obligation in line with the present licence condition, save to make it consistent with the requirements of the sufficiency of resources certificates and rest of the licence.

15. We do, however, propose to give financial and operational matters equal status by requiring them to be certified separately, so to increase clarity and transparency. This will only increase the regulatory burden slightly, and will not change the strength of the obligations themselves. So, we intend to maintain the current approach of requiring directors to certify their "reasonable expectation" regarding the sufficiency of resources.

16. As for the evidence supporting those certificates, we note that, in each of its 2020 compliance certificate and initial request to reopen the Q6 price control, HAL provided relatively little information and insight into the impact of the covid-19 pandemic on operational issues compared with the information it provided on financial matters. In particular, it did not provide significant alternative scenarios demonstrating the impact on future traffic levels of those challenging circumstances.

17. To address this, we propose to re-focus the evidence we require HAL to provide in support of the certificates by requiring it to provide information on the traffic and other scenarios that the directors have used in the preparation of their

[58] RNS is the regulatory news service

certificates and the sensitivities around them. We consider that it is likely that, in the conduct of any prudent business, the directors will consider a range of likely traffic scenarios and operational outcomes. As such, it does not appear to create a very significant regulatory burden on HAL for it to share those with us.

18. HAL's comments on the information provision we expect in the event of financial distress show we need to clarify our proposals. Our proposal, if adopted, would be to ensure the CAA has the same information as bondholders to facilitate oversight. It is not our aim to create a distracting additional burden. Achieving this would require a relatively simple general obligation to require HAL to provide the CAA direct with the same information and notices that it provides to bondholders under the financing platform. Adopting this approach would have a low administrative burden while ensuring the obligation is flexible enough to cover all relevant information in a timely way, without the CAA needing to monitor other sources, such as RNS announcements. If we need additional information, we have powers under section 50 CAA12 to require it from HAL.

19. The benefit to consumers in promoting compliance of an annual reminder of the undertaking to the ultimate controller may, in practice, be relatively small. However, the administrative burden would be insignificant and, therefore, proportionate to the benefit. To the extent that it encourages internal discussions within HAL's wider group structure and, with it, a culture of compliance, consumers should benefit.

20. Finally, in the June 2020 Consultation, we indicated that we were intending to conduct a review of the regulatory accounts rules applicable to HAL. This will now commence once the H7 price control is in place. For the avoidance of doubt, no consideration of conditions that either:

- require HAL to deal with all parties on an "arm's length basis and normal commercial terms"; or
- prohibit cross subsidies

will take place until that review.

Summary of the proposals under consideration

21. Having considered HAL's response to the June 2020 Consultation, we consider that changes to HAL's licence of the nature summarised in Table K1 below will address the concerns we have over the existing provisions in HAL's licence in a manner that is proportionate. As noted above, we do not consider that these changes will impose significant compliance costs or other regulatory burdens on HAL that outweigh the benefits to consumers of mitigating these issues.

Table K1: Summary of proposed licence changes

Proposal	**Description**	Proposed approach to drafting
Sufficiency of resources Address lack of internal consistency within HAL's licence	Simple change to the existing sufficiency of resources obligation to make clear that the resources HAL is required to maintain are: • both financial and operational; and • sufficient to support operation of the airport in accordance with the licence.	Existing obligation in condition E2.1 of HAL's licence to be retained with small additions, including the words "in accordance with this Licence" after "at the Airport".
Resources certification Separation of operational and financial certificates and promoting internal consistency.	The certificates of sufficiency of resources required in condition E2.2 to be split into separate certificates for each of (i) operational and (ii) financial resources. Each certificate to be drafted to certify that the resources are sufficient to provide airport operation services at Heathrow in accordance with the licence.	The certificates will, save for being tailored into separate certificates for each of (i) financial and (ii) operational resources, be in broadly the same form as at present, except for the addition of the words "in accordance with this Licence" after "London Heathrow Airport" for consistency with the refreshed consistency of resources obligation in condition E2.1 and some re-ordering to improve clarity and readability.
Resources certification Provision of additional evidence.	The existing requirements for supporting evidence under condition E2.4 are to be retained. However, a new provision would be introduced to require HAL to provide additional information in support of its certificate based on the traffic and operational	The new condition will be drafted relatively simply to require HAL to provide supporting evidence for its resources certificates. This evidence will be for HAL to explain the traffic and/or other operational assumptions that it has used in the certification process, in each case, providing at a minimum:

	scenarios that it is using to underpin its resources certificates.	- a high traffic/central case/low traffic scenarios; and - the impact of each scenario on the sufficiency of each of its financial and operational assets.
<u>Information provision</u> Ensuring that the CAA has the same information as is provided under the financing platform.	Require provision of information in line with information provided to bond holders and the bond security trustee.	A relatively simple obligation requiring HAL to provide the CAA with all information and notices required to be provided to bond holders and the bond security trustee under the financing platform should be sufficient. This would also cover any additional information provided to bondholders in the event of financial distress.
<u>Ultimate controller obligation</u> Clarifying the scope of the obligation	Clarification of identity of ultimate controller so that it does not include the shareholders of HAL's corporate group.	Insert definition of ultimate controller to make clear that the ultimate controller is the holding company of the licensee which is not itself a subsidiary of another company and using the definitions of "holding company" and "subsidiary" section 1159(1) Companies Act 2006.
<u>Ultimate controller obligation</u> Setting an appropriate scope for the obligation	The ultimate controller undertaking should ensure that both it and HAL's affiliates (such as group service companies) provide HAL with information that that they hold which the CAA may need on request. The obligation would be limited to ensure group companies did not have to hold information that they would not otherwise hold	A relatively simple provision would be added to the ultimate controller undertaking in condition E2.7. This would require the ultimate controller to ensure each subsidiary of the ultimate controller holds the records that HAL may reasonably need to carry on the activities permitted under its licence. This, when combined with the existing obligation in condition E2.7(b), should ensure that the companies in question have the information

	for their functions within HAL's group.	contemplated by the condition E2.7 (b) without creating additional burdens for HAL or its group companies.
Ultimate controller obligation Annual reminder	Annual requirement for HAL to write to ultimate controller bringing obligation to its attention.	Simple obligation based on those seen in energy network licences requiring HAL to confirm to the CAA that it has written to the ultimate controller reminding it of the undertaking.

22. We intend to share informal early drafts of possible licence modifications to reflect the changes discussed in this Appendix with stakeholders in the coming weeks.

Views invited

23. We invite stakeholders' views on the issues raised by this appendix and, in particular, on the possible amendments to HAL's licence described in Table K1.

Appendix L - Assessment of options for tax allowance

Introduction

1. This appendix outlines our assessment of the different approaches that might be used to set the allowance for corporation tax within the H7 price control. HAL's IBP detailed its arguments for the CAA to use a pre-tax WACC, inclusive of a simple gross up of the cost of equity, rather than set a separate modelled tax allowance. We have considered these arguments in our assessment below.

HAL's approach

2. In its IBP HAL argued that the benefits that will arise from continuing with the pre-tax WACC approach are that it:
   - maintains regulatory stability, which HAL considers gives investors long-term confidence in the regulatory regime;
   - is simple to implement and does not require a wide range tax modelling assumptions to be made;
   - is well understood and easy to model for stakeholders; and
   - is a more transparent approach because the actual tax payable may not be settled until many years after the tax year in question has passed.

3. HAL's arguments against allowing for modelled tax payments as a separate line item outside of the WACC calculation included that it:
   - requires an accurate forecast of the likely level of tax to be made;
   - requires a forecast of the notional company's gearing to be implemented properly; and
   - is difficult to validate because actual tax payments may not be settled until many years after the tax year in question.

4. HAL also referred to the Competition Commission's statements on tax allowances in 2007 in the context of the Q5 price control. The Competition Commission recommended in this decision that a simple pre-tax WACC approach should be used on the grounds that there is no good reason to change the approach adopted by the Competition Commission for previous price controls.[59] It was further recommended that we consult relevant parties on

[59] Competition Commission economic regulation of the London airports companies (Heathrow Airport Ltd and Gatwick Airport Ltd) 2007, Appendix F page 4

the approach to taxation in the following (Q6) price control.[60] We have consulted on this matter in previous consultations and explained that we consider there are justifications to move away from the pre-tax approach.

Our assessment of the options

5. We note that HAL's arguments did not consider the extent to which a pre-tax approach would reasonably remunerate tax costs and, in particular, whether there would be an appropriate alignment between the expenses that HAL incurs and the prices paid by consumers.

6. We agree that continuing with the pre-tax WACC approach presents advantages such as its simplicity to implement and familiarity for stakeholders. However, we consider that the pre-tax WACC approach is less transparent inasmuch as it is harder for consumers to understand the amount they pay in respect of HAL's tax liabilities. Further, this approach is inaccurate and prone to being overly generous. As one example of this, losses or reduced profits, due to the impact of the covid-19 pandemic would not influence the allowance for tax under a pre-tax WACC. This could lead to consumers paying significant amounts in respect of tax in the H7 period in excess of the actual tax liabilities HAL may incur. This would effectively lead to a windfall gain for HAL that is unrelated to its performance and this would not appear to be in the interests of consumers.

7. An approach along the lines of that already adopted by other regulators such as Ofgem and Ofwat, where tax is treated as a separate line item, should provide a more reasonable and transparent estimate of the tax costs that HAL will likely incur in practice. This approach was discussed in the January 2020 Consultation.[61]

8. Based on regulatory precedent and our analysis to date, our current view is that a modelled approach to setting the tax allowance would be reasonably robust and transparent. Such a policy would be best implemented with appropriate support from HAL and the provision of certain information about its historical tax affairs and its plans for the H7 period. Providing this information would be in line with the general information provision requirements for the price control setting process. It would also reduce the risk to HAL that we make unduly stringent assumptions and allow for less tax than might be appropriate.

9. This broad approach will allow for the H7 tax allowance to be set closer to the actual tax charges, as the impact of various allowances can be taken into consideration. In addition, a tax uncertainty mechanism could also adjust allowed tax costs for unexpected changes that are deemed to be outside reasonable management control.

10. A modelled approach would be based on notional gearing and does not require an accurate forecast of HAL's actual gearing. We have also previously discussed a "tax clawback mechanism" under which tax benefits accruing to

[60] Competition Commission economic regulation of the London airports companies (Heathrow Airport Ltd and Gatwick Airport Ltd) 2007, Final report pg 47

[61] See www.caa.co.uk/cap1876A

HAL from adopting a higher level of gearing than the notional level could be returned to the users. We consider there would be advantages of adopting this for HAL, as it could reduce any undue incentive on HAL to adopt a highly leveraged structure. That said, we note that a tax clawback mechanism is not an essential feature of a modelled approach to allowing for tax costs.

11. A tax “pass through” mechanism could be used as an alternative to an ”up front” modelled approach. This approach would be fairer to consumers than a pre-tax approach as it would better reflect the actual amount of tax that HAL actually needed to pay. A pass through approach, in common with the other options currently implemented and under consideration, seems unlikely to distort incentives to any great extent. This is because we would expect HAL’s actions to be primarily motivated by considerations other than their tax treatment.[62] We recognise that historical actual tax payments may not be settled until after the tax year in question and we intend to conduct further analysis to assess the practicalities of implementing such an approach.

Conclusion

12. We are not persuaded by the arguments in HAL’s IBP (and referred to in the RBP) on the continued appropriateness of a pre-tax approach to WACC. We remain of the view that other approaches could more efficiently remunerate tax costs. We note the uncertainty over the expected recovery in passenger numbers in the H7 period and the implications this may have for a modelled approach to tax. We are, therefore, exploring the possibility of a tax pass through mechanism as a possible alternative.

13. We invite views on the issues discussed above as well as any wider thoughts on the treatment of tax costs in H7.

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[62] For example, lower commercial revenues would contribute to a lower tax liability (to the extent that the costs are allowable for corporation tax purposes). But it is unlikely that HAL would seek to lower commercial revenues since the net effect would still be to reduce after tax profits for HAL.

Appendix M - Capital efficiency incentives

Introduction

1. We outlined in chapter 4 why we consider that the broad approach for capex efficiency incentives that we set out in the June 2020 Consultation (and the supporting August 2020 Working Paper) remains appropriate for H7. Our approach moves away from *ex post* reviews of capex to an *ex ante* incentive framework, to promote increased efficiency in capital spending.
2. Nonetheless, in response to stakeholder feedback, we consider that it may be appropriate to update some detailed aspects of our approach.
3. This appendix provides further details on our policy for capex efficiency incentives. It covers:
   - a summary of HAL's alternative proposal for capex incentives and our views on it;
   - a summary of our approach for capex incentives;
   - setting capex baselines, delivery objectives and obligations and timing incentives;
   - enhanced governance arrangements; and
   - reconciliation of incentives.
4. Recognising that the capex plan in HAL's RBP is less developed than we had anticipated at this stage, we have outlined our latest thinking on how our approach could work for H7. We intend to continue to work closely with stakeholders to develop these incentive arrangements. Further collaborative working should allow us to:
   - establish appropriate capex categories based on clearly defined outputs and similar levels of risk and controllability;
   - agree an updated set of criteria for when triggers could be applied to capex projects;
   - develop enhanced governance arrangements for H7; and
   - work through some of the practical implementation issues, for example developing an appropriate process for incentive reconciliation.

HAL's proposal for capex efficiency incentives

5. HAL proposed an alternative approach for capex efficiency incentives in its RBP. This is largely based on the existing capex framework, but includes:

- a capex portfolio categorised into seven capex programmes;[63]
- *ex ante* incentives (at an incentive rate of 15%) applying only to a subset of its capex portfolio (its £1.2billion asset management programme);
- no specific delivery obligations for the programme subject to *ex ante* arrangements as HAL proposed that requirements will be set as part of the service quality framework;
- for all other categories of capex, it would refine and link to new symmetrical incentives that would replace the current Q6 capex triggers (which penalise late delivery); and
- a streamlined governance process with a focus on project benefits and outputs. HAL also proposed new programme level governance arrangements for the asset management capex category (because it is subject to *ex ante* incentive arrangements under HAL's proposal).

6. HAL resubmitted two consultancy reports to support its proposal.[64, 65] These reports were originally submitted to support HAL's IBP submission.

7. Some key issues highlighted in the reports include:

   - a move to *ex ante* incentives could lead to worse outcomes for consumers because, for example, costs could rise due to higher cost estimates and an increase in HAL's cost of capital;
   - if an *ex ante* approach is implemented for H7, it would only be appropriate for a subset of HAL's capex plan, specifically asset management, where projects are small, repeatable, benchmarkable and well understood.

8. In their February 2021 response to the RBP, Airlines provided the following views on HAL's proposal for capex efficiency incentives:

   - they agreed that the core and development framework should be retained;
   - they considered that HAL has mis-interpreted the broad approach for capex efficiency incentives that we proposed in the June 2020 Consultation;
   - they disagreed with HAL's proposal to apply *ex ante* incentives to only a subset of its capex plan (asset replacement) because, based on previous capex efficiency reviews, it is the larger and more complex projects where the biggest issues and cost overruns have occurred;

[63] HAL refers to capex categories as capex programmes in the RBP.

[64] HAL's RBP annex 11, *Ex ante* incentives for investment at Heathrow, by Frontier Economics, April 2018.

[65] HAL's RBO annex 38, Heathrow Airport: assessment of CAA-consulted *ex ante* capital allowance process by Steer, December 2019.

- they disagreed with HAL's proposal to streamline the governance process for certain capex programmes (where *ex ante* arrangements apply) because this could lead to less airline oversight and reduce the transparency of investment decisions.

Our views on HAL's proposal

9. HAL's proposals fall short of the requirements that we set out in the June 2020 Consultation and its alternative proposal for capital efficiency incentives appears under-developed. For example:

- while HAL has split its capex portfolio into separate capex programmes, it has not demonstrated how these meet our definition of a capex category for the purposes of setting *ex ante* incentives (being based on clearly defined common outputs and having similar levels of risk and controllability);
- HAL has provided limited evidence to justify that a 15% *ex ante* incentive rate is appropriate for the asset replacement programme, and that the current position for other capex categories remains appropriate for H7. Its proposal is based around maintaining the risk levels that HAL was exposed to at Q6 without explaining why this level of risk remains appropriate in the context of the H7 capex portfolio and its wider business plan;
- HAL's proposal for quality requirements and timing incentives is unclear. For example, the scope of whether these arrangements would apply to specific projects or to the wider capex portfolio;
- HAL's proposal that quality requirements for asset replacement would be set through the service quality framework is under-developed. For example, HAL does not explain which measures are relevant or how this information could be used to ensure that deliverables have been met so that capex incentives can be reconciled at the end of H7;
- HAL has not clearly demonstrated how it intends to address the issues on governance arrangements that were identified by the IFS and the CAA. For example, the need for more effective processes for airlines and the IFS to scrutinise project costs and delivery obligations and more effective monitoring of project "Gateway" milestones;[66] and
- HAL has not addressed the issues we highlighted with the existing Q6 financing cost incentive which means that the incentive to delay capex during the period will remain under HAL's proposal.[67] HAL has also not provided analysis to demonstrate what would happen to the strength of

[66] We set out areas of improvement to governance arrangements in para 3.27 of the June 2020 Consultation..

[67] The design of the Q6 framework means that HAL has faced a form of *ex ante* incentive against the G3 capex baseline.

the financing cost incentive under a different cost of capital scenario for H7.[68]

10. Both consultancy reports that HAL has submitted were developed in the context of applying *ex ante* incentives to a significantly larger, more complex capex portfolio which was originally anticipated for capacity expansion. Since these reports were published, our policy on capex incentive arrangements has evolved in response to changing circumstances and stakeholder feedback. We consider that many of the issues raised are less relevant now, for example:

- several points raised around the disadvantages of an *ex ante* framework were overstated and in any case are less relevant in the context of our updated our policy. For example the reports assume that we would apply a very strong or inflexible form of *ex ante* incentives but our updated approach builds on the flexible core and development framework so that capex baselines can be updated as more information on costs and deliverables becomes available;
- most of the arguments that stress the disadvantages of *ex ante* incentives (which we do not in any case consider reflect a balanced consideration of the case for improved incentives) were in the context of expansion so the key the findings and recommendations are now less relevant to a smaller, more typical capex portfolio;
- evidence presented in both reports is high level and we do not agree with key aspects of the evidence base. For example, the review of other regulated industries is selective which gives a misleading impression that *ex ante* incentives do not apply to large, unique and complex projects. We note that large, complex projects such as the Thames Tideway Tunnel (Ofwat), Ofgem's Strategic Wider Works and Network Rail enhancements have been subject to *ex ante* incentives.

Our approach for capex efficiency incentives

A flexible capital investment framework to deal with uncertainty

11. We outlined in chapter 4 that there will be continued uncertainty around HAL's capex plan for H7 for some time yet. It is important that our approach to efficiency incentives maintains the flexibility currently provided by the existing core and development framework so that the price control can adapt to the emerging needs of consumers.

12. We also outlined in chapter 4 that a new mechanism is needed for H7 so that, in the event of significant changes in the external environment, decisions around overall capex envelopes can be agreed by airlines and reviewed by the CAA. We will continue to discuss these matters with stakeholders and consider the best approach to managing this issue.

[68] We note that the c.13% cost financing incentive is predicated on the Q6 WACC of 5.35%.

13. HAL's capex plan has not been developed to the level of maturity that we expected at this stage of the review. This has presented some challenges in developing certain aspects of our framework for incentives. For example, establishing sensible capex category baselines and associated delivery objectives or obligations at the start of the next price control. [69]

14. We intend to set out a high-level framework for capex incentives as part of the price setting process. Where we do not receive sufficient information on HAL's capex plan to scrutinise and set capex baselines in advance of H7, we will work with HAL and airlines to set baselines and deliverables for each capex category as better information on HAL's capex plan becomes available during the H7 period.

15. We recognise that this approach will mean that the governance arrangements will be especially important for setting Gateway 3 ("G3") baselines and any subsequent changes to the G3 baseline. This is because we will be assessing HAL's delivery performance and calculating under or over-spending against these baselines. It is important that appropriate mechanisms are in place for HAL to seek agreement from airlines and appropriately involve the CAA as its capital plans develop during the price control period.

16. We have summarised our overall approach for capex incentives in Table M1.

[69] In our June 2020 Consultation and the August 2020 Working Paper we referred to setting delivery obligations (DOs). Following discussions during CE we have decided to define two separate terms going forward. Delivery objectives are set at the start of the price control and will be updated to become delivery obligations as more information is available during H7 when baselines and deliverables are finalised.

Table M1: Summary of our overall approach for H7 capital efficiency incentives

High-level proposal	Move from the Q6 framework under which the CAA assesses the efficiency of HAL's capex through *ex post* reviews, to an *ex ante* framework where HAL's performance is measured against cost baselines agreed in advance of delivery. The baselines for individual capex categories would be set based on G3 project values.	
	Capex categories & baselines	**Delivery objectives / obligations**
Start of H7 **The price setting process**	▪ Overall H7 capital envelope to be set by the CAA, based on the level of capex HAL has demonstrated is needed through its H7 capex plan. ▪ The envelope would be split into capex categories. Programmes are a good starting point, but we want to understand whether any programmes need to be split further. ▪ Capex categories will be based on projects that have common outputs / objectives and similar levels of risk and controllability. ▪ Each capex category would have an **indicative baseline**. This would be the sum of forecast development and core expenditure. ▪ The purpose of the indicative baseline is to have (i) a clear initial forecast and high-level objectives for each capex category, (ii) track changes within period, and (iii) a clear line of sight from these to the final baseline (see below). This would enable airlines and CAA to have a good oversight of any changes that occur compared to the initial plan.	Each capex category would have a SMART[70] high-level statement of what HAL is seeking to deliver, and the reasons it has prioritised this spending. This would be the **delivery objective**, defined at the capex category level. **Triggers** ▪ Not needed for most capex categories as the new framework would incentivise timely delivery (through cost incentives and delivery objectives / obligations). But it may be proportionate to apply additional weight on timely delivery through trigger payments for certain capex projects within a category. ▪ Criteria for triggers and design of the trigger mechanism will be set as part of H7 capex framework but triggered projects would be agreed by HAL and airlines during the H7 period.
During H7 **Enhanced governance arrangements**	▪ As projects in HAL's portfolio move through the governance process, the indicative baselines would be updated to reflect G3 values for individual projects (when agreed). ▪ When all projects within a capex category have reached G3, the baseline becomes the **G3 baseline** – one baseline for each capex category which is the sum of G3 values for individual projects within that category. ▪ This G3 baseline could change subsequently to reflect a limited set of circumstances, for example if the scope of projects changes or projects are dropped post-G3. ▪ Adjustments to the G3 baselines would only happen where changes are agreed with airlines through a change control process as part of the **enhanced governance process**. ▪ The CAA would also have a role as part of the change control process: as a minimum this would be an arbiter role as in Q6, but we are considering whether we need to have an enhanced role.	As projects reach G3, the high-level delivery objective would be updated to reflect more specific metrics / requirements, at the capex category level. It would become a **delivery obligation**, which should reflect: - outputs; - quality requirements; and - timing requirements. ▪ When any post-G3 adjustments to baselines take place during the period, the delivery obligation may also need to be updated to reflect changes in project scope. ▪ The CAA would have a role as arbiter in circumstances where HAL and airlines do not agree on either new delivery obligations (where projects pass G3) or changes to existing delivery obligations. We may also need to have a role in approving delivery obligations to ensure that outcomes are in consumers' interests.
At the end of H7 **Review of deliverables and reconciliation**	▪ Reconciliation would be at the capex category level. The CAA would assess (and consult on) whether the **delivery obligation** has been met in relation to each capex category. If yes, the G3 baseline becomes the **final baseline**. If the delivery obligation has not been met, an adjustment for under-delivery would be applied to the baseline, and this becomes the **final baseline**. ▪ Reconciliation would involve comparing HAL's actual spend for each capex category to the **final baseline**. HAL would bear a proportion of any overspending compared with the final baseline or would get to keep a proportion of any underspending (these adjustments would be applied to the RAB). Our proposal is for a symmetrical sharing rate on over- and underspending. ▪ We are still considering the detailed approach to reconciliation and will continue to work with HAL and airlines to agree a framework for how adjustments to baselines would be made as a consequence of under-delivery.	

[70] Specific, Measurable, Achievable, Realistic, Time bound.

Setting capex baselines and delivery obligations

Our proposal in the June 2020 Consultation

17. In order to implement the *ex ante* incentive framework, we proposed to:

- split HAL's H7 capex plan into several capex categories, defined in relation to common outputs and similar levels of risk and controllability;
- define a baseline for each capex category, which could be updated either during, or at the end, of H7 provided any changes are appropriate and efficient and are agreed by airlines; and
- define delivery obligations for each capex category to cover output, quality and timing requirements. We said that we expected that delivery obligations would be formally attached to the capex baselines during Gateway 3 and would allow us to assess whether HAL had delivered the outputs and benefits agreed with airlines.

Stakeholder views

18. Broadly, stakeholders agreed with our proposal to split capex into categories and set baselines at this level. HAL did not agree on our proposal for setting delivery obligations while airlines raised a number of questions over the detail of our approach.

19. HAL raised the following points:

- project outcomes and benefits should be tracked as part of the capex governance arrangements; but
- given the level of uncertainty around traffic recovery, high level delivery objectives (not obligations) could be agreed at the time of setting the price control, but these should not be linked to financial incentives because;
  - i) other factors outside of HAL's control could influence successful outcomes;
  - ii) they are challenging to define and measure: for example, sometimes project outcomes and benefits materialise a few years after the investment has been made; and
  - iii) *ex post* assessments of delivery obligations (at the point of reconciliation) would create further uncertainty around the recovery of capex.

20. Airlines supported our approach and raised the following points:

- clear rules are needed on how projects can move between different capex categories during the H7 period;
- the "maintain" capex portfolio should be split into further sub-categories, based on appropriate deliverables;

- they support the three elements of delivery obligations that we proposed (delivery, timing and quality requirements); and
- requested greater clarity on how delivery obligations will be linked to the OBR framework.

Way forward

Capex categories

21. We consider that HAL's proposal to use its existing definition of capex programmes for capex categories is a good starting point. However, some modifications are likely to be required so that the capex categories are defined based on clearly defined outputs being delivered, and similar levels of risk and controllability.

22. We commissioned our technical consultants (Arcadis) to review HAL's proposed capex categories and whether they meet our requirements for the purposes of setting *ex ante* incentives.

23. Arcadis noted that HAL had not defined its proposed capex categories in line with the requirements that we set out in the June 2020 Consultation and August 2020 Working paper.[71] Instead HAL used its existing internal capex programmes to organise the capex plan. Arcadis also noted that HAL had split the capex portfolio in different ways throughout the RBP, so it was unclear which set of capex categories HAL had proposed for the purposes of the incentive framework.

24. Arcadis carried out an initial assessment on whether HAL's capex programmes (as described in the RBP) were likely to have significantly different risk and/or HAL was likely to have less control over outturn spending.[72] The main observations were that:
    - three programmes ("regulated security", "carbon and sustainability", and "future ready airport") may have medium levels of controllability compared the other programmes which are likely to be highly controllable;
    - the "future ready airport" category may have a different risk profile compared to the other programmes, but more information was needed to understand the planned activity within this capex category better.

25. We intend to update our assessment of HAL's proposed capex categories as part of our Initial Proposals when we have received updated information on HAL's capex plan.

[71] We said that capex categories should be based on common outputs or objectives and have similar levels of risk and controllability.

[72] It was difficult at this stage to assess whether the proposed capex categories were based on common outputs or objectives based on the information HAL had provided in the RBP.

Setting capex baselines

26. We have summarised our approach to setting capex baselines earlier in Table M1. We remain of the view that, given the uncertainties facing the sector and the impact this is likely to have on HAL's forecast capex plan, it is important to have a flexible approach for setting baselines for H7. This section provides further detail on how baseline adjustments can be made.

27. Capex baselines can be adjusted for a specific set of circumstances, either during (on an annual basis) or at the end of H7, provided these changes are agreed with airlines as part of the capex governance process (see Table M2). We recognise that enhanced governance arrangements will be important for setting final baselines and we discuss these arrangements later in this appendix.

Table M2: Overview of circumstances in which capex baselines can be adjusted

Change category	Impact on capex category baseline	Updates reflected in annual airport charges	Adjustment reflected in capex category baseline at the point of reconciliation
1. Movement of projects from development to core capex status	G3 estimate for each project that transitions to core is included in the G3 baseline for that capex category.	Yes: consistent with Q6 approach.	Yes: as this would be reflected in the G3 baseline as projects move from development to core, it would also be reflected in the final baseline.
2. Project not taken beyond G2 (i.e. does not reach G3)	Full G3 estimate for this project would not be included in the G3 baseline for the capex category. The development spending incurred would however be included. The change should also be reflected in the updated delivery obligation, to reflect reduced outputs.	Yes: consistent with Q6 approach. Development spending incurred by HAL in relation to projects not taken forward is currently added to the RAB and reflected in annual airport charges.	Yes: as only spending in relation to projects that move past G3 (other than development spending) would be reflected in the final baseline.
3. Agreed project scope changes after G3[73]	Adjustment to the capex category G3 baseline by replacing the G3 estimate for the project being modified with the new estimate.	Yes: consistent with Q6 approach.	Yes: the final baseline would reflect the most up to date G3 estimates for all projects within the capex category.
4. Non-delivery or under delivery of delivery obligation	Adjustment applied when the capex category is delivered, and the CAA undertakes its assessment of delivery obligations as part of the reconciliation process.	No: this adjustment would only be applied after the capex category has been delivered (not while work is ongoing).	Yes: this is the final step in calculating the final baseline. If the delivery obligation has been delivered, the G3 baseline becomes the final baseline for the capex category. If HAL has under-delivered the delivery obligations, an adjustment is applied to the G3 baseline to

[73] This type of change would also cover instances where, for example, a project has to move between two different capex categories. A scope change would have to be agreed by airlines for the two capex categories.

			reflect this under-delivery, and the adjusted G3 baseline becomes the final baseline.

28. The process of moving from an indicative capex baseline (that we will set at the start of the price control) to the G3 baseline would be consistent with the existing project Gateway process for moving projects from development to core capex. Criteria and guidance are already in place for how projects make the transition from development to core during the Gateway process (see change category 1 in Table M2). Feedback from stakeholders suggests there is scope to improve this process and we have set out views later in this appendix (in the section on Enhanced capex governance arrangements) on these matters.

29. Adjustments to the baseline to reflect projects either not taken beyond G2 or where scope changes are agreed after G3 (change categories 2 and 3 in Table M2), criteria could include:

- explicit airline agreement through an enhanced governance process, documented and submitted to CAA on an annual basis; and
- independent technical advisor (for example, the IFS) to provide assurance that the updated baseline estimates and associated delivery obligations are appropriate.

30. Where a baseline is adjusted for non-delivery or under-delivery of delivery obligations (change category 4 in Table M2), criteria could include:

- CAA assessment of delivery obligations once the capex category has been delivered. This assessment could be supported by an independent technical advisor/feedback from airlines and/or the IFS; and
- consultation by the CAA on findings and any adjustments that are made to final baselines for all capex categories.

31. We recognise that making this type of adjustment can be complex but it is necessary to ensure that underspending that HAL retains (and is rewarded for through the *ex ante* incentive mechanism) reflects genuine cost efficiency savings rather than due to non-delivery or under-delivery of agreed outputs. Our assessment of delivery obligations will form part of the reconciliation process which is outlined in more detail later in this appendix.

32. We intend to work with HAL and airlines to develop processes and guidance for adjusting baselines, building on existing arrangements. For example, a change management process for project baselines (covering scope and schedule) already exists under the Q6 arrangements.[74] We expect the new processes and guidance will be reflected in updated HAL/airline capex governance protocols for H7. We discuss enhanced governance arrangements later in this appendix.

[74] The Capital Efficiency Handbook refers to this process as the "Client change control"

Setting delivery obligations

33. We have updated our definition of delivery obligations since the June 2020 Consultation, based on feedback and discussions with stakeholders and with our advisors. We consider it is helpful to have two different terms and definitions that capture how what HAL is required to define in terms of deliverables changes throughout the period: delivery objective and delivery obligation. The table below provides definitions for these two terms.

Table M3: Definitions of delivery obligations and delivery objectives

Term	Definition
Delivery objective	A high level statement of what the capex category is intended to deliver, and why HAL has prioritised this spending for H7. The capex plan proposed by HAL should include a delivery objective for each capex categories that is SMART.
Delivery obligation	As projects reach G3, the delivery objective would be updated to reflect more specific metrics / requirements, at the capex category level. It would become a delivery obligation, which should reflect: ▪ outputs; ▪ quality requirements; and ▪ timing requirements. We will assess whether the delivery obligation has been met at the point of reconciliation, as part of the process of finalising baselines.

34. HAL has said that it will be difficult to establish detailed delivery obligations at the start of the next price control which have delivery (description of output), timing and quality (description of benefits) requirements, particularly given the maturity of HAL's capex plan at this stage of the price setting process.

35. We have summarised our approach to setting capex delivery objectives and obligations earlier in Table M1. As part of its next business plan update, HAL should define delivery objectives (rather than delivery obligations) which should be agreed with airlines. Each capex category should have a SMART high-level statement of what HAL is seeking to deliver, and the reasons it has prioritised this spending. We will assess them as part of the price setting process, to ensure that they meet our requirements for capex incentives and provide a suitable starting point.

36. During H7, final project level deliverables will be formalised at G3 and, where appropriate, they will inform the final delivery obligation for each capex category. At this stage, the delivery obligation should include timing and quality requirements, as well as an updated description of output (if this has changed since setting the delivery objective).

37. We also asked our technical consultants (Arcadis) to explore whether delivery objectives or obligations could be established based on the latest information provided by HAL on its capex plan.

38. Arcadis noted that HAL's proposed objectives for each capex category are mostly aligned with statements of overall intent rather than clearly defined SMART objectives. In their current format, HAL's proposed objectives could not be used for the purposes of the capex incentive framework, to assess whether HAL has delivered what was agreed for each capex category.

39. Arcadis proposed a framework for a set of typical "programme benefits" that could be used to define delivery objectives or obligations for a capex category. We consider that this framework could be a useful way to think about setting delivery objectives / obligations, but we intend to test it against a more developed H7 capex plan, and as part of our ongoing engagement with HAL and airlines on the incentives framework.

40. Arcadis also set out some key recommendations which included:

- all parties need to agree consistent terminology to be used, to avoid confusion and ambiguity;
- agreed outputs should be clearly defined so that it is clear what each programme is aiming to deliver;
- delivery objectives / obligations should be SMART;
- programmes that are already at a more advanced stage of development (such as T2 Baggage) should have enough detailed information available to establish delivery obligations with output, timing and quality requirements at the start of the price control; and
- the CAA should provide further detail on how capex governance arrangements for H7 should take account of delivery objectives / obligations.

41. The August 2020 Working Paper set out an example for how a delivery obligation could be defined based on projects included in HAL's IBP. We have provided an updated example showing how delivery objectives and obligations could be defined for HAL's proposed T2 Baggage programme, which was included in the RBP. This example is illustrative only and is not based on the actual scope or timings of this project. The italicised text in square brackets demonstrates the information we would expect HAL to provide as part of a delivery objective or obligation.

Table M4: Illustrative delivery objective and obligations

Project	**T2 Baggage**
Delivery objective To be defined at the start of H7	Maintain existing levels of capacity and performance of the T2 baggage system (currently served from T1), providing a safe, reliable and compliant solution for the duration of H7.

	[Specify target levels of capacity and performance, and any relevant metrics.] This will be achieved by [*explain what the work will involve – e.g. replacing specific assets or building new assets, and when these works are expected to be delivered by*].[75] The programme will be delivered by *[completion date for capex category]*.
Delivery obligation To be defined at the start of H7 if projects within the capex category are sufficiently developed. Otherwise to be defined during H7.	Outputs: deliver *[description of assets renewed or built]* to maintain existing levels of capacity and performance of the T2 baggage system (currently served from T1), providing a safe, reliable, and compliant solution for the duration of H7. Quality: ▪ T2 baggage system is able to process at least *[target]* bags per day; ▪ *[Performance target]* ▪ *[A target for level of disruption during works]* Timing: ▪ *[Date when works are expected to commence and be completed.]*

42. We expect that the specific metrics associated with the delivery objective will be developed during H7, rather than before the start of H7. The exception would be for a capex category that includes a significant proportion of projects that had already progressed beyond G3 before the start of H7.

43. In the RBP, HAL said that delivery obligations were not necessary for its asset replacement programme, which was the only programme to which it proposed *ex ante* incentives should apply. Instead, HAL proposed that metrics from the proposed OBR framework should be used to assess whether quality requirements have been met for this programme.

44. We have considered to what extent service quality measures (as part of the OBR framework) could be used as elements of the delivery objective or obligation for HAL's asset replacement programme.[76] At a high level, our initial view is that OBR measures are designed for a different purpose: to incentivise and improve performance and quality of service at Heathrow airport in key

[75] In the RBP, HAL said that it is reviewing options for how to deliver the T2 Baggage programme. These options include prolonging the T1 baggage facility along with any alternative solutions that could provide the baggage functionality without T1. We expect the delivery objective to include this kind of information once the preferred solution has been agreed with airlines.

[76] HAL did not specify which service quality measures would be appropriate for the asset replacement programme.

areas that matter most to consumers. Therefore, they generally capture elements of delivery beyond specific capex programmes. This might mean that is not appropriate to rely on service quality measures to act as delivery objectives or obligations for a capex programme. For example, other types of expenditure (such as opex) could have an impact on performance against some of these metrics.

45. In addition, as highlighted in the section on capex categories, we are also of the view that the asset replacement programme needs to be broken down into several capex categories. Therefore, we will need to explore further with HAL, once it has provided an updated capex plan, whether OBR measures could be used in relation to updated capex categories.

Timing incentives

Our proposal in the June 2020 Consultation

46. We proposed a more targeted set of timing incentives for H7 so that the incentives on cost, delivery and timing are balanced. We said that:

- triggers would not be needed for most capex categories as the new incentive framework will encourage HAL to deliver projects on time;
- it may be proportionate to apply additional weight (through trigger payments for certain projects) on timely delivery of certain capex categories where the timing of delivery is particularly important for airlines / consumers; and
- in response to feedback from the IFS, we proposed that trigger payments could be symmetrical so that HAL would receive a reward for early delivery as well as a penalty for late delivery against the agreed trigger date.

47. We said for capex categories that do not have associated trigger payments, establishing effective backstop incentive reconciliation arrangements is likely to mitigate the risks of undue delays in delivery. We also said that we could consider setting an additional penalty for non-delivery of a capex category by the backstop reconciliation date.

48. We said that we would ensure that the incentive rate is consistent over the H7 period so that HAL does not have an incentive to delay spending (this was an issue identified with the current Q6 framework).[77]

Stakeholder views

49. HAL broadly agreed with the changes we proposed for trigger payments and raised the following key points:

[77] We said that we would apply any adjustment to the RAB so that it is NPV neutral by accounting for the associated financing costs (based on the allowed cost of capital).

- symmetrical penalties and rewards to encourage delivery on time are appropriate;
- the assessment of delivery against an agreed trigger date can unfairly penalise in circumstances where most of the project has been delivered on time but HAL continues to face the full penalty until final project completion; and
- HAL proposed to replace the existing trigger mechanism with a symmetrical incentive framework which covers the delivery of scope as well as timing.

50. Airlines raised the following key points:
    - they did not agree with symmetrical trigger payments, noting that currently triggers are set conservatively at the P80 delivery date;
    - BA said that HAL should only be rewarded for early delivery where a clear benefit for consumers can be demonstrated;
    - BA said that the existing timing incentives are not one-sided (as characterised in the June 2020 Consultation and August 2020 Working Paper): instead trigger payments are intended to realign charges to remove the return on capex for projects that are not delivered on time; and
    - AOC/LACC requested clearer guidance on when a trigger might be applied during H7 to mitigate the risk of disputes between HAL and airlines.

Way forward

An updated trigger mechanism for H7

51. We consider that it is appropriate to retain the option to apply additional weight on timely delivery by applying triggers to certain key projects during H7.

52. Where triggers are considered necessary, we are retaining the broad approach used for Q6. However, we have decided to make some changes to the design of the mechanism.

Table M5: Proposed trigger mechanism for H7

Design aspect	Rationale
1. Triggers are only applied to exceptional, material, and complex projects, where timing is particularly important for customers.	To the extent that delays are associated with overspending, the H7 *ex ante* framework will provide an incentive on HAL to deliver work on time because HAL would bear a share of any overspend. But we consider that it is appropriate to maintain triggers for exceptional projects, especially those that are material and complex or for types of projects where HAL has a track record of late delivery. We have proposed some updates to the trigger criteria below.

2. For projects subject to triggers, HAL will face: • a penalty for late delivery that will be based on the existing Q6 calculation; or • a modest reward if it delivers the project ahead of the agreed trigger date.	We are strengthening the trigger mechanism so that HAL has an even stronger incentive to deliver triggered projects on time. We are building on the established Q6 penalty by including a modest reward for early delivery, for example the equivalent to around 10% of the penalty payment. A symmetrical reward would result in HAL being rewarded a double return for early delivery. We consider that a more modest reward would strengthen the incentive without resulting in double renumeration. All triggered projects should be reviewed by the IFS in advance to provide a view on the agreed trigger date. This will provide a level of scrutiny to ensure that agreed trigger dates are realistic.
3. Trigger payments will be assessed against full project completion by the agreed trigger date.	We have decided not to change the existing mechanism to account for partial delivery of projects (as suggested by HAL). Making this change is likely to weaken the incentive on HAL to deliver the final stages of a triggered project on time. As we are now proposing to offer a modest reward for early delivery, we consider that this approach provides a more balanced incentive for HAL to deliver on time.

53. In the August 2020 Consultation, we set out the proposed trigger payment criteria for H7:

- triggers should be based on the delivery of outcomes/outputs with demonstrable benefit to consumers;
- HAL should have management control or substantial influence over the elements that determine the success of the project;
- the optimal delivery of the project subject to the trigger (in terms of content, order and phasing) should be reasonably predictable for the period;
- the existence of an incentive mechanism should not itself distort delivery of the programme away from the best that can be achieved based on all emerging information;
- the additional risk implied by basing reward more on delivery and less on capital spending should make the most appropriate use of HAL's capacity to bear risk; and
- triggers should be applied to projects where timely delivery is important to consumers and/or airlines.

54. We also consider that the following criteria should be included:

- triggers should be applied to exceptional projects, such as projects that are material, complex and strategically important; and
- early delivery of the project before the trigger date would result in clear benefits to consumers.

55. As part of our Initial Proposals we expect to set out requirements on HAL to develop updated capex Triggers Guidance to reflect the new criteria and changes to the mechanism for H7.

Wider timing incentives

56. We want to create appropriate incentives on HAL to balance the competing priorities of cost efficiency, timing of delivery and quality of the output. For capex categories that do not have associated triggered projects, the *ex ante* incentive arrangements, including the timing requirements set out in the delivery obligations, will incentivise HAL to deliver on time. We will reconcile the efficiency incentives at the end of H7. We recognise that there may be circumstances where a project might be delayed and delivered after H7 and we will set a backstop reconciliation date to encourage timely delivery of each capex category.

57. As part of our reconciliation process, we will consider whether the delivery obligation has been met. This will include an assessment of whether HAL has met the timing requirements set out in the delivery obligation. We could also consider setting a penalty for failing to deliver by the reconciliation backstop date.[78] For example, the backstop date could be set at a constant deadband (such as 12 months) from the agreed date of delivery of each capex category. This would create a strong incentive for HAL to avoid lengthy delays in delivery. We will consider our approach in more detail as part of our Initial Proposals.

NPV neutrality

58. Under the Q6 framework, no financing cost adjustments were made for the difference between HAL’s outturn cost and the G3 baseline. That has created what HAL has characterised an *ex ante* financing cost incentive where HAL benefits/bears the financing costs associated with capex underspending/overspending against the G3 baseline.[79] The design of the Q6 framework means that the financing cost incentive becomes weaker over the course of the price control which has the effect of potentially incentivising HAL to delay capex to the later years of the price control.

59. We acknowledge that there was some ambiguity in relation to our Q6 “intertemporal indifference” policy.[80] We said that our preferred approach would be to ensure NPV neutrality on capex spend during the Q6 price control period. However, we regard HAL’s interpretation of the Q6 *ex ante* financing cost incentive is consistent with the licence and, given the likely benefits of the *ex ante* incentive, we do not intend to make an adjustment for the impacts of Q6 intertemporal indifference as part of the H7 price control.

60. We maintain the view that the efficiency incentives should be consistent over the H7 price control period to ensure that there is no incentive for HAL to delay capex. We will make financing cost adjustments when the incentives are reconciled so that the incentive strength is consistent over the H7 period. The reconciliation section of this appendix sets out an example reconciliation calculation.

[78] See para 3.19 in the June 2020 Consultation.

[79] See appendix C of the August 2020 Working Paper for more information on the Q6 financing cost incentive.

[80] See paras 5.36 – 5.42 of the Q6 Final Determination www.caa.co.uk/CAP1103

Enhanced capex governance arrangements

Our proposal in the June 2020 Consultation

61. We said that we would build on the core and development framework, with a vital role for airlines and that the CAA would continue to act as arbiter where HAL and airlines do not agree project Gateway decisions. We also set out several areas of improvement including:

- more effective processes for airlines and the IFS to scrutinise project costs and delivery obligations, including clarifying the role of the IFS;[81]
- more effective monitoring of project Gateway milestones;
- greater alignment and compliance by HAL with agreed processes / procedures such as cost planning and benchmarking; and
- clear criteria for determining the levels of independent expert review for particular projects (proportionate to the risks of overspending such as a focus on large and more complex projects to improve assets / create capacity).

62. In addition to these improvements, we said that governance arrangements would need to be enhanced for H7 to reflect the new *ex ante* incentive framework and that we would further consider how to ensure that the interests of consumers are appropriately reflected in these arrangements.

Stakeholder views

63. Stakeholders agreed that the capex framework for H7 should build on the existing governance arrangements and that that airlines should continue to play a vital role in project investment decisions during H7. HAL considers that the existing arrangements are working well and made the following points:

- there is good collaboration between HAL and airlines, the use of the IFS has been effective, but it should be reviewed for H7. That no project Gateway decisions have been escalated to the CAA demonstrates the arrangements are working well;
- *ex ante* incentive arrangements could lead to a less collaborative capex framework;
- it supports streamlining the governance process, particularly in the context of limited resources during H7; and
- programme level governance might be appropriate for some capex programmes (those subject *ex ante* incentive arrangements) so that once a tranche of projects in a programme passes G3, a cost baseline

[81] For more detail see para 3.27 of the June 2020 Consultation.

is set at a programme level (P2) which the IFS would scrutinise to assess cost and benefits.

64. Airlines agreed that improvements are needed for H7 and raised the following key points:

- greater definition and accountability of defined benefits was required by HAL;
- the CAA should continue to act as the arbiter where HAL and airlines cannot reach agreement but they also suggested that the CAA will need to play a closer role in governance arrangements during H7, particularly in relation to updating baselines and establishing delivery obligations;
- better reporting is needed so that project progression through the Gateway process is transparent;
- the role of the IFS should be enhanced to assess value for money, the project solutions proposed by HAL and whether projects are being properly managed; and
- there should be a mechanism to stop projects that have passed G3 if it no longer makes sense to continue: this will prevent cost overruns, delays, or failure to achieve outcomes.

Way forward

65. We remain of the view that the existing core and development framework should be retained and the improvements that we outlined in the June 2020 Consultation should be implemented.[82] We are considering how the existing governance arrangements can be enhanced to reflect the *ex ante* incentive framework. HAL has proposed separate governance arrangements for capex programmes that are subject to *ex ante* arrangements. We consider that this programme-level approach might be a useful addition for H7, but it is important that airlines continue to play a vital role in scrutinising HAL's investment proposals and agreeing which investment should be taken forward.

66. Where we do not receive sufficient information on HAL's capex plan as part of the price setting process, we explained in chapter 4 that we will set baselines and associated deliverables as more information becomes available during H7. For example, this could include appointing our own technical advisors to supplement the role of the IFS so that any adjustments to baselines, and updates to associated delivery obligations, are appropriately reviewed for efficiency and appropriateness by the CAA.

67. We agree with stakeholders that the IFS mandate should be considered in more detail, especially in the context of limited industry resources and the requirement to set final baselines, delivery obligations and project trigger dates (where appropriate) during H7. We also recognise that our role as an arbiter in

[82] See paragraph 3.27 of June 2020 Consultation.

cases of disputes will continue to be important, but that we are now likely to have an enhanced role in the governance arrangements for H7. For example, to scrutinise and monitor adjustments to baselines and delivery obligations. We set out in Table M6 our current views on the roles that different parties are likely to have at different stages in the process.

Table M6: Proposed roles in the enhanced governance process for H7

Stage in process	Role of CAA	Role of airlines	Independent advisor/s
Setting indicative baselines and delivery objectives: start of H7	CAA has a role in setting the overall capex envelope for H7, as it has done in the past. This is a key element of the price control. As part of this process, the CAA will also set an indicative baseline for each capex category defined in HAL's plan. As part of the process of setting indicative baselines, the CAA would also review and approve delivery objectives proposed by HAL.	Airlines provide feedback on HAL's plan which will inform the overall H7 capex envelope. Airlines will also provide views on whether the capex categories HAL has proposed are appropriate, and on the spending forecast for those capex categories, which will inform the indicative baselines set by the CAA. Airlines will also provide views on the delivery objectives proposed by HAL.	CAA technical advisors are involved in reviewing HAL's plan to inform indicative baselines.
Setting G3 baselines and delivery obligations **- at the start of H7 (for any capex categories at a sufficient level of maturity) or** **- during H7**	The CAA is not currently involved in the gateway process for individual projects (unless an issue is escalated). The CAA will be involved in setting and monitoring G3 baselines for capex categories but unlikely to get further involved at the project level.	Airlines are currently involved in gateway process. to agreeing G3 baselines for individual capex projects. Airlines will also have a role in agreeing delivery obligations for each capex category, as projects within the category go through G3.	The IFS currently has a role in the governance process. We expect that this role will need to be enhanced to ensure G3 baselines and associated delivery obligations are appropriately scrutinised to support capex incentives. We are considering whether we will need technical advisors to support us during this stage of the process.
Adjustments to G3 baselines and delivery obligations during H7[83]	The CAA will engage with HAL and airlines to set out the framework and criteria for how these types of adjustments to baselines can be made. We will continue to have the role as arbiter where HAL and airlines do not agree to adjustments to baselines, or to corresponding delivery obligations. We expect HAL to report capex incentives baselines and delivery obligations regularly as they develop within period and could intervene in the process if we have concerns based on this reporting process.	Airlines are currently involved in the change management process. Airline agreement will be required to make changes to baselines and delivery obligations.	The IFS currently has a role in the governance process. We are considering whether this role should be enhanced to cover changes to G3 baselines (and delivery obligations) during H7. We are considering whether we will need technical advisors to support us during this stage of the process.

[83] G3 baseline updated to reflect projects either not taken beyond G2 or where scope changes are agreed after G3 (change categories 2 and 3 in Table M2)

68. As part of our Initial Proposals we intend to:

- update the Regulatory Accounting Guidelines ("RAGs") so that we have the level of information that is needed to assess HAL's performance and to calculate under- or overspending against final baselines (discussed in more detail in the reconciliation section). The new reporting requirements will improve transparency and allow us to monitor adjustment that are made to capex category baselines and delivery objectives or obligations, on an annual basis; and
- set out requirements on HAL to develop a new Capex Protocol, Capital Efficiency Handbook, and updated Triggers Guidance to reflect the H7 capex framework. The updates should reflect the improvements that have been highlighted previously.[84]

69. In preparing these guidance/process documents, HAL will need to engage with airlines and the CAA to ensure that they meet agreed requirements. We expect the documents to set out a tighter set of rules and procedures that HAL will be required to follow when progressing its capex programme. We also welcome views on whether it is appropriate to strengthen licence obligations around HAL's compliance with capex governance arrangements (Condition F of HAL's licence).

Reconciliation

Our proposal in the June 2020 Consultation

70. We set out our initial thinking on reconciling incentives including:

- high-level principles for reconciliation;[85]
- options for when the efficiency incentives could be reconciled (either during H7, at the end of H7, or during the following ("H8") regulatory period); and
- a high level example of what the reconciliation would involve.

Stakeholder views

71. Broadly stakeholders agreed with the principles we set out for reconciliation but wanted more information on how this will work in practice. HAL raised the following issues:

- regulated charges should be set based on baseline capex and updated during H7 for agreed changes to the capex baseline as projects transition from development to core status; and

[84] The June 2020 Consultation, para 3.27

[85] Para 3.25.

- it proposed that the incentive for the asset replacement programme (which HAL proposed could be subject to *ex ante* incentive arrangements) should be reconciled at the end of the H7 period.

72. Airlines raised the following key points:

- BA supported setting core and development capex baselines at the beginning of H7 better to forecast the transition of development to core capex;
- airlines said that the development capex adjustment mechanism[86] is unclear so want more transparency on the mechanism and the final level of capex that is added to the RAB; and
- airlines support annual reconciliation of incentives so that colleagues with the right knowledge and accountability are involved in the process.

Way forward

Overview of the reconciliation process

73. As we mentioned earlier in this appendix, we intend to update our RAGs for capex reporting. We expect that the following information will be needed for each capex category:

- annual updates to the capex baselines (split into core and development capex - see Table M8 below for the format) and delivery objectives / obligations during the H7 period, we expect this to be supported by appropriate commentary to explain updates made after G3; and
- annual outturn capex and progress against final delivery obligations.

74. We intend to reconcile the incentive the **end of the H7 period,** but we will track progress of category-level baselines, delivery objectives / obligations and outturn capex on an annual basis.

75. There are two key stages of the incentive reconciliation process:

- Stage 1: We will assess whether the agreed requirements for each capex category (as specified in the delivery obligation/s) have been delivered. If there is evidence of non-delivery or under-delivery, we will consult on any proposed adjustments to the capex baseline. If a programme is completed before the end of the price control, we will assess and consult on it early to ensure that stakeholders with knowledge and accountability of the capex programme are involved in the process.
- Stage 2: At the point of reconciling the incentive, we will compare the outturn capex with the final baseline (which will include any adjustments for non-delivery or under-delivery) and multiply any over or underspend by the incentive rate. The incentive adjustments, and associated financing cost adjustments, will be applied to the RAB as

[86] The existing term in HAL's licence to account for updates to capex during the regulatory period.

part of the general RAB reset process and will be reflected in future charges.

76. There may be circumstances where we are unable to fully assess the delivery of certain capex categories by the end of H7, for example where:

- the capex programmes are delivered in the last year of H7 (2026), the forecast year;[87] and
- certain projects within a capex category are delayed beyond H7.

77. We will set backstop reconciliation arrangements to address these circumstances. We consider that a **backstop reconciliation date of the end of first year of H8 (2027)** is appropriate.

Transitional arrangements

78. It is likely that capex programmes spanning two price control periods will be proposed for H7. We intend to set baselines for capex categories that are expected to be completed within the H7 period.

79. We consider that in principle:

- capex projects that have already started, but are not due to be completed until H7, should be treated under the existing Q6 incentive framework;
- capex programmes that are due to start in H7 should be treated under the H7 capex framework;
- projects that HAL has paused and is currently reappraising should be treated under the new H7 capex incentive framework; and
- capex that is forecast for the H7 period but that relates to legacy capex projects (that is, projects that started during Q6 or iH7) should be separately identified in HAL's RBP Update.

Worked examples of the reconciliation process

80. We have set out a few simple worked examples to:

- illustrate the stages of the reconciliation process;
- demonstrate the principles of reconciliation in a worked example; and
- provide early views on capex data reporting requirements for H7.

81. Table M7 outlines the stages of updating capex baselines and reconciling the incentive against the final capex baseline.

[87] At the end of H7 we may not have full actual capex data for 2026 to use in the incentive reconciliation. Instead, the reconciliation will be based on an estimate of capex for 2026.

Table M7: H7 Capex incentives process stages

<table>
<tr><td>1.</td><td>H7 final proposal</td><td>We will set an indicative capex baseline for each capex category split by development and core.</td><td>Reflected in H7 maximum revenue yield per passenger</td></tr>
<tr><td>2</td><td>G3 baseline updated annually</td><td>The annual baseline updates follows the existing Q6 core and development framework.</td><td rowspan="2">Reflected in annual airport charges</td></tr>
<tr><td>3</td><td>Post-G3 updates to baseline e.g. scope changes</td><td>Other updates to capex baselines (after the G3 decision) are also reflected in charges on an annual basis. We are considering whether the existing mechanism that is used to update charges in period can be expanded to include post G3 capex baseline updates, or whether a new, but similar, mechanism is needed for H7.</td></tr>
<tr><td>4</td><td>End of period reconciliation</td><td>Two stages:
i) final capex baselines reflecting CAA assessment of whether the delivery obligations have been met; and
ii) apply capex efficiency incentive adjustments, including associated financing cost adjustments, to the H8 opening RAB.</td><td rowspan="2">Reconciliation of capex incentive</td></tr>
<tr><td>5</td><td>Backstop reconciliation</td><td>The backstop reconciliation for the last forecast year of H7 and H8 opening year (2026 and 2027).</td></tr>
</table>

82. Table M8 sets out an illustrative capex portfolio split into five capex categories for the purposes of the capex incentive framework (step 1 in Table M7). For each capex category we will set a development and core baseline. In Table M8 we refer to these baselines as pre-G3 capex (development) and post-G3 capex (core).[88]

Table M8: Illustrative core and development capex baselines (£m 2018p)

Capex category	2022	2023	2024	2025	2026	Total
Category 1						
Pre-G3 capex	20	20	10	0	0	50
Post-G3 capex	0	0	90	180	180	450
Total capex	20	20	100	180	180	500
Category 2						
Pre-G3 capex	10	20	10	0	0	40
Post-G3 capex	0	0	30	120	110	260

[88] In the example table, post-G3 (core) allowances are generally lower in the early years of the price control period while HAL completes detailed design work and only then proceeding with construction after the G3 sign-off decision is made.

Capex category	2022	2023	2024	2025	2026	Total
Total capex	10	20	40	120	110	300
Category 3						
Pre-G3 capex	10	30	0	0	0	40
Post-G3 capex	0	10	100	120	130	360
Total capex	10	40	100	120	130	400
Category 4						
Pre-G3 capex	20	0	0	0	0	20
Post-G3 capex	60	100	120	100	100	480
Total capex	80	100	120	100	100	500
Category 5						
Pre-G3 capex	0	0	0	0	0	0
Post-G3 capex	40	50	40	30	40	200
Total capex	40	50	40	30	40	200
Total capex	**160**	**230**	**400**	**550**	**560**	**1,900**
Pre-G3 capex	**60**	**70**	**20**	**0**	**0**	**150**
Post-G3 capex	**100**	**160**	**380**	**550**	**560**	**1,750**

83. Establishing baselines for core and development capex will provide greater transparency on how baselines evolve during the period to reflect projects moving through the Gateway process. It will also allow the CAA and airlines to track and better scrutinise baseline adjustments which will be important because we will be assessing HAL's delivery performance and calculating under or overspends against the final baseline.

84. We asked HAL for a split of core and development capex baselines as part of our RBP assessment criteria in the June 2020 Consultation (criterion C14). However, we recognise that this may have been interpreted by HAL as a request for the total amount of capex that has not yet passed G3 (development) or has passed G3 (core) at the time of producing the RBP. This is not what we intended. Instead Table M8 sets out that we expect an estimate of the level of core and development capex HAL is forecast to spend over each year of H7.

85. We have not presented worked examples of steps 2 and 3 outlined in Table M7 as we intend to build on the Q6 existing mechanism so that updates to the capex baselines that are made during H7 are reflected in annual charges.[89]

86. Table M9 provides a stylised example to demonstrate how the reconciliation process could work for each category of capex. The example consists of the following calculation stages:

[89] For example, see the current conditions C1.9 (cumulative development capex adjustment) and C1.10 (annual development capex adjustment) of HAL's licence.

1. Establish the **final capex baseline**, reflecting the CAA's assessment of whether the delivery obligation has been met;
2. Compare outturn capex to the final capex baseline to calculate the amount of **overspending or underspending**;
3. Calculate the **NPV of the overspending or underspending**, reflecting the financing costs during H7;
4. Apply capex incentive rate to calculate the **NPV of overspending or underspending at HAL's risk**;
5. At the H8 price review, we will adjust the opening RAB for the **NPV of overspending or underspending at HAL's risk.**

87. The example presented below is kept simple to demonstrate how the mechanics of the calculations could work for H7.[90] It illustrates overspending against the final capex baseline, but the mechanism works symmetrically for underspending.

88. The example uses several simplifying assumptions:[91]

- overspending in each year of the price control period;
- 25% incentive rate is applied to capex (so that HAL retains 25% benefit of any underspending and bears 25% of any overspending);
- Q6 cost of capital of 5.35%; and
- does not consider inflation and simplifies the financing (by assuming expenditure cashflows take place at the end of the year) and depreciation calculations.

[90] This worked example in Excel format is available on request by emailing economicregulation@caa.co.uk

[91] The simplified assumptions used in this example are for illustration purposes only. For the avoidance of doubt, the assumptions used here do not represent CAA policy proposals for H7.

Table M9: Worked example of capex efficiency incentive reconciliation[92]

Line	Calculation stage	(£m real prices)					
Calculation of over/underspend at HAL's risk		**2022**	**2023**	**2024**	**2025**	**2026**	**Total**
1	Final capex baseline	105	105	105	105	105	**525**
2	Delivery obligation adjustments	5	5	5	5	5	**25**
3 = 1 - 2	Final capex baseline after delivery obligation adjustment	100	100	100	100	100	**500**
4	Outturn capex	120	120	120	120	120	**600**
5 = 4 - 3	Over/underspend	20	20	20	20	20	**100**
6	WACC	5.35%	5.35%	5.35%	5.35%	5.35%	-
7	Number of years to 2026	4	3	2	1	0	-
8 = (1 + (6)) ^ (7)	NPV factor to 2026	1.23	1.17	1.11	1.05	1.00	-
9 = 5 * 8	NPV of over/underspend	25	23	22	21	20	**111**
10	Incentive rate	25%	25%	25%	25%	25%	-
11 = 9 * 10	NPV of over/underspend at HAL's risk	6	6	6	5	5	**28**
Adjustment to RAB at end of H7		**2022**	**2023**	**2024**	**2025**	**2026**	**Total**
12	Opening RAB	0	120	234	341	445	-
13 = 4	Outturn capex	120	120	120	120	120	**600**
14	Depreciation[93]	0	6	13	16	20	**55**
15 = 12 + 13 - 14	Closing RAB	120	234	341	445	545	-
16 = 9	NPV of over/underspend	25	23	22	21	20	**111**
17 = 5	Over/underspend	20	20	20	20	20	**100**
18 = 16 - 17	Financing cost adjustment	5	3	2	1	0	**11**
19 = 2 * 8	NPV of delivery obligation adjustments	6	6	6	5	5	**28**
20 = 2	Delivery obligation adjustments	5	5	5	5	5	**25**
21 = 19 - 20	Financing cost of delivery obligation adjustments	1	1	1	0	0	**3**
15	Closing RAB	120	234	341	445	545	-
11	NPV of over/underspend at HAL's risk	6	6	6	5	5	**28**
18	Financing cost adjustment	5	3	2	1	0	**11**
21	Financing cost of delivery obligation adjustments	1	1	1	0	0	**3**
22 = 15 - 11 + (18 - 21)	**H8 opening RAB**	-	-	-	-	-	**526**

Source: CAA

[92] Numbers in the table may not add up due to rounding to nearest £ million. An Excel version of this table is available upon request.

[93] Depreciation numbers will be based on the forecast RAB at the time of setting the H7 price control.

89. The objective of the reconciliation calculations is to ensure that an adjustment is made at H7 so that any overspending (or underspending) by HAL during the H7 period is subject to the same incentive strength regardless of the year in which it occurs. To achieve this, the overspending or (underspending) at HAL's risk is calculated in NPV terms and is compared against the full financing cost (or benefit) already accrued during H7. The difference between these amounts is the required adjustment to achieve the targeted capex efficiency incentive rate.

90. The RAB will also be adjusted to account for the financing costs associated with any adjustment that is made to the baseline at the end of the period (to reflect non-delivery or under delivery of the delivery obligation).[94]

91. The assessment will require the use of forecast expenditure for 2026. Any deviations between the forecast and actual expenditure will be trued up as part of the H8 price control.

92. As the reconciliation process will be new for H7, it is important that stakeholders have an opportunity to review our proposed approach and provide feedback. We have shared this example of how reconciliation of the incentive could work in practice, but we intend to finalise our approach when we have reviewed stakeholder feedback. We will consider any further implementation issues as part of our Initial Proposals.

Next steps

93. We welcome views on any of the issues set out in this appendix, including on:

- the CAA's involvement in the H7 capex governance process;
- an enhanced role of the IFS;
- updates to reporting requirements; and
- strengthening the consultation requirements in Condition F of HAL's licence.

94. We recognise that progress on finalising the H7 capex governance arrangements will continue to evolve during 2021.We intend to organise a series of workshops with HAL and airlines. The aim of these workshops would be to discuss the more detailed implementation points in relation to capex baselines, delivery objectives and obligations, and the governance process around these.

[94] Baseline adjustments that are made at the end of the price control (after programmes are delivered so that the delivery obligations can be assessed), will not be reflected in annual charges through the in-period adjustment mechanism (that is, the development capex adjustment term in the licence which addresses annual updates to G3 baselines). Therefore, the reconciliation process will also need to take account of the financing costs associated with any adjustment that is made to the baselines at the end of H7.

Appendix N - Consumer Engagement and Outcomes

Introduction

1. This appendix sets out our initial views on HAL's approach to consumer engagement and outcomes in the RBP. It should be read in conjunction with chapter 5.

HAL's approach

2. Since the IBP, HAL has refined and built on its substantial consumer evidence base. This includes:

   - an updated synthesis of insights which broadly reaffirms its proposed consumer outcomes; and
   - targeted research to understand whether consumer needs and priorities have changed since the covid-19 pandemic started.

3. HAL has also undertaken specific research on topics including: passengers requiring support, sustainability, consumer choices and OBR measures.

4. HAL says its RBP demonstrates a clear "golden thread" that links its consumer insights to its proposed plans and consumer outcomes for H7, which is framed under a "five-stage" methodology.

Figure N1 – HAL's "golden thread" methodology[95]

5. HAL says the key findings from its consumer insights have informed its approach to the RBP. These key findings include:

   - Consumers' underlying needs have not changed but the covid-19 pandemic has had an impact on the hierarchy of what they currently prioritise, resulting in four heightened needs[96] and a number of other priorities referred to throughout the RBP.[97] HAL also notes that it is not

[95] See RBP, Chapter 3.0 (passenger experience).

[96] The four heightened consumer needs are: ease, reassurance, cleanliness and value for money.

[97] See paragraph 11 below.

yet clear whether this change in priorities represents a temporary or longer term shift in consumers' attitudes.

- HAL's proposed consumer outcomes remain appropriate, but consumers now have a greater focus on "good value choice of flights" which HAL has reflected by rewording one of its outcomes.[98]
- Consumers value and are still willing to pay more for service improvements, particularly in the three areas of punctuality, baggage and the passenger experience.

6. HAL also explored high-level sensitivities of its plan and set out how they expect them to have an impact on the delivery of consumer outcomes during H7.[99]

Airline views

7. The airlines note that, while HAL has sought to layer consumer insight within the RBP, this does not appear to translate into the specifics within the plan itself.

Our initial views

8. The key findings from our assessment of HAL's approach to consumer engagement and outcomes are set out below. This has been supported by our appointed consultant (FTI Consulting). We have also discussed our assessment with the CAA's Consumer Panel.
9. HAL has made a clear effort since the IBP to understand consumer priorities in a post-covid-19 environment, where undertaking research and interpreting the implications for the future are considerably more challenging. There is also a clearer attempt at referring to consumer research and linking its plans to consumer outcomes compared to the IBP.
10. While we welcome HAL's efforts, there is scope to better utilise HAL's research findings within the RBP to support its proposals. The "golden thread" between HAL's consumer insights and its outcomes and measures is clearer in the RBP (which goes some way to addressing aspects of the CCB's concerns[100]). However, the "golden thread" appears less clear in other parts of the RBP. For example:

- Capex: HAL sets out eight "consumer needs" in the RBP capex chapter (Chapter 6.0) which it says has driven the composition and prioritisation of its capex proposals. However, it is not always clear how specific capex proposals link back to these consumer needs. In particular, HAL does not utilise its willingness to pay (WTP) and cost

[98] The reworded consumer outcome is: "an airport I want to travel from that offers me a good value choice of flights."

[99] See RBP, Chapter 10.2 (outcomes: next steps).

[100] See CCB report on HAL's IBP, pages 20 and 21 https://www.caa.co.uk/uploadedFiles/CAA/Content/Accordion/Standard_Content/Consumers/20200226%20CCB%20Report%20on%20IBP_REDACTED_20200521.pdf.

benefit analysis (CBA) research to help demonstrate that its proposals are the most efficient and effective way to address consumer priorities.

- Opex: HAL sets out a number of cost overlays in the RBP opex chapter (Chapter 7.1). These overlays relate to the service response to the covid-19 pandemic, the implementation of HAL's surface access strategy, including a proposed forecourt access charge, and an option for enhanced services. Some of these overlays are targeted at addressing specific consumer priorities, for example the covid-19 cost overlay covers enhanced cleaning and PPE (Personal Protective Equipment) for staff. However, there is limited information provided on the specific services that would be provided which makes it difficult to assess whether the proposal provides value for money for consumers.

11. Furthermore, there is not a consistent view on what consumers' key needs and priorities are throughout the RBP. Instead, HAL draws on its large body of research to support the different aspects of its business plan. It is also unclear how the findings of different consumer insights have been compared and synthesised to identify an overarching set of consumer priorities for improvement. In particular:

- Nine "core needs"[101] are set out at the start of Chapter 2.3 (consumer insights) and, although these overlap with lists provided elsewhere in the RBP, they do not appear to be referred to again.
- Three "priority areas for improvement"[102] are listed in Chapter 2.3, which are areas of service where HAL states consumers would prioritise further improvements.
- A further seven priorities are presented later in Chapter 2.3.[103] As with the earlier nine "core needs", these priorities overlap to a certain degree with lists presented elsewhere in the RBP but do not appear to be referred to again.
- In Chapter 3.0 (passenger experience), HAL introduces four "heightened needs"[104] due to the covid-19 pandemic and a refreshed passenger proposition.

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[101] These are: flight punctuality; airport processes; waiting times at key points across the airport; real time information; information/wayfinding; wi-fi; cleanliness; ambience/waiting areas; crowding/space. See pages 3 and 4.

[102] These are: punctuality; overall passenger experience (including security processes, cleanliness, quicker connection journeys, more efficient immigration, more automated/touchless processes, more digital/real-time information, staff on hand to assist at key points, greater variety of options to relax at the airport and more options to get to and from the airport); and baggage. See page 16.

[103] These are: reduced waiting times; no need to remove liquids and reduced time at security; reliable punctuality; better options by public transport; enhanced cleaning; colleagues supporting throughout the passenger journey; and better connectivity. See pages 33-40.

[104] These are: ease; cleanliness; reassurance; and value for money.

- The consumer insights section of the capex chapter refers to eight "consumer needs"[105], which overlap but do not completely align with either the three "priority areas for improvement" or the nine "core needs" from Chapter 2.3. However, HAL states that these eight "consumer needs" are the foundation of the four "heightened needs" and its refreshed passenger proposition set out in Chapter 3.0.

12. HAL refers to its research throughout the RBP to support an overarching narrative that consumers are willing to pay for service improvements, even after the covid-19 pandemic, and that consumers would not accept a reduction in services. We have the following observations on HAL's approach:

- It does not appear that HAL has sufficiently reconciled this narrative with its finding that value for money is a key priority for consumers post-covid-19.[106]
- HAL relies on the finding that 67% of consumers prefer plans with targeted improvements and are willing to pay more for those improvements. This figure is drawn from HAL's H7 choices research in 2019 which, despite being updated between the IBP and RBP, appears to rely on some assumptions which are not well justified in the light of the weight placed on this analysis. In particular:
  - the choice packages preferred by consumers generally assume larger performance improvements than HAL's proposed H7 OBR targets, for example in flight punctuality and baggage misconnection rates, while airport charges are assumed to be similar or lower than HAL's proposals in the RBP; [107] and
  - the research assumes that the overall airfare will fall, which may not necessarily be the case.
- Further, the CCB raised concerns about the methodology of the choices research some of which do not appear to have been addressed in the updated research.[108]

13. HAL also states that only 2% of passengers were willing to accept a reduction in service in return for fares decreasing slightly. This appears to be based on research undertaken prior to the IBP and the covid-19 pandemic.[109] This

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[105] These are: make public transport covid-19 safe; covid-19 'safe' destination choice; social distancing space; minimise covid-19 risk in the airport; passengers need to be informed; cleanliness now extends beyond traditional toilets, litter and seating; passengers still want to experience the airport as they have always done and do not want this to be lost due to covid-19; passengers expect more assurance and visibility from airport staff. See pages 5 and 6.

[106] HAL has identified value for money as one of the four heightened needs consumers have post covid-19.

[107] We note that HAL is currently undertaking separate acceptability testing consumer research.

[108] See CCB report on HAL's IBP, page 12.

[109] See Chapter 3.0 (passenger experience), page 5. Systra, Heathrow Airport Customer Valuation Research, 2018.

research also found that 46% of respondents would be happy for services and fares to stay the same.

14. HAL has undertaken extensive further research to understand the needs[110] of passengers requiring support. We note that HAL has proposed a new reputational measure to capture satisfaction of passengers who require support. However, it is not clear from the RBP how the detailed findings of its research will be implemented. [111]

15. As for HAL's consumer outcomes, we note that the CCB considered there to be a clearly visible "golden thread" from HAL's insights to it proposed consumer outcomes in the IBP, which remain unchanged except the rewording of one outcome to reflect new evidence. The four "in airport" outcomes reflect most of the measures in the SQRB scheme. HAL appears to have less influence over the two "external" outcomes. Further information on our assessment of HAL's approach to OBR is set out in chapter 5.

16. We also disagree with HAL's characterisation in the RBP of our position in the October 2020 Consultation as being that consumers are willing to accept lower service levels.

17. Overall, while there are some areas of improvement since the IBP, the RBP as a whole still lacks a clear "golden thread" and evidence of value for money for consumers.

Next steps

18. HAL should consider how it can make better use of its substantial consumer evidence base to reflect a more consistent view on consumer priorities, and provide more specific detailed evidence to demonstrate that discretionary capex and opex proposals are the most effective and efficient way to address these priorities.

19. HAL should continue to monitor and understand consumers' changing needs and priorities in light of wider covid-19 developments and reflect this in its approach to H7 business planning.

20. We also note that HAL will be undertaking a full update of its consumer engagement strategy which it says will set out its consumer approach for 2022. In doing this, HAL should reflect the Consumer Panel's feedback and ensure it continues to reflect the CCB's principles of good consumer engagement.

[110] See Chapter 2.3 (consumer insights). HAL has identified three high level needs which they say capture what matters most to passengers who require support. These are: 1) to trust; 2) to choose; and 3) to enjoy.

[111] See Chapter 2.3 (consumer insights). HAL intends to respond to the needs of passengers requiring support during H7 but notes that it is mindful of financial limitations and is still forming all the specific initiatives it will undertake. HAL sets out principles that its services need to: be universally inclusive where possible; enable independence; avoid causing more stress; and help people to share their needs.

Appendix O - Heathrow West's cost recovery request

Introduction

1. Before work on expansion was paused as a result of the Court of Appeal's decision on the NPS[112] and the impact of covid-19 on passenger traffic, Heathrow West had been proposing to make a planning application to build a new terminal at Heathrow airport. Heathrow West considered such a development could be delivered in conjunction with, and to support, HAL's development of a new northwest runway and associated infrastructure.
2. Given the uncertainty regarding capacity expansion, we said in the June 2020 Consultation that we did not consider it appropriate to comment in detail on Heathrow West's proposals.[113] We previously set out initial tests relating to whether Heathrow West's proposals were credible, plausible and deliverable, to enable us to prioritise our resources. We noted that Heathrow West had made sufficient progress in relation to these initial tests to allow us to commence more detailed work. However, given the Court of Appeal decision and the subsequent impact of the covid-19 pandemic, we said we did not intend to undertake further work on Heathrow West's proposals unless circumstances changed sufficiently to justify recommencement.
3. In its response to the June 2020 Consultation, Heathrow West requested that it be allowed to recover the costs of it developing its DCO application for capacity expansion.[114] This appendix provides further detail on Heathrow West's request and invites stakeholder views on the most appropriate way forward.

Heathrow West's request to recover its costs

4. Heathrow West's request states that it should be allowed to recover the costs of it developing its DCO application for capacity expansion in the same or a similar manner as HAL. These costs are estimated to be £30m, and include items which Heathrow West incurred to support its DCO application such as:

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[112] 27 Feb 2020 Court of Appeal judgement available online: https://www.judiciary.uk/wp-content/uploads/2020/02/Heathrow-judgment-on-planning-issues-27-February-2020.pdf

[113] Economic regulation of Heathrow: policy update and consultation. See: www.caa.co.uk/CAP1940

[114] Heathrow West's consultation response and cost recovery proposals are available online: https://www.caa.co.uk/uploadedFiles/CAA/Content/Accordion/Standard_Content/Commercial/Airports/H7/CAP1940%20Heathrow%20West.pdf

- project management;
- airline consultation;
- public consultation;
- environmental investigations; and
- financial modelling

5. Heathrow West suggests it would be appropriate for us to allow it to recover the costs associated with its DCO application, as this would be consistent with:

   - fairness principles: Heathrow West says it was encouraged by our policy to undertake substantial work and meet certain tests before its proposals could be considered. Heathrow West also notes that it was "in effect compelled"[115] to develop a competing DCO application due to HAL's lack of engagement with Heathrow West. Heathrow West considers that given these points, it would be inequitable and contrary to fundamental fairness principles not to allow it to recover its costs;

   - our duties and powers: Heathrow West cites our duty to, where appropriate, promote competition in the provision of airport operation services and considers that, if we were not to allow for cost recovery by competitors, it would send a negative message to future potential competitors that therefore that the CAA is not serious about promoting competition;

   - our policy for HAL's Category B costs: Heathrow West also considers that our rationale for allowing HAL to recover its costs associated with preparing a DCO should also apply to Heathrow West. We have consistently said that consumers' interests would be furthered by the timely development of additional runway capacity. Heathrow West considers that its proposals, which it says would deliver efficient expansion more quickly and cheaply than HAL's proposals, with the additional benefit for consumers of introducing competition, are aligned with our views on the need for new runway capacity. Therefore, in its view, allowing Heathrow West to recover its costs is consistent with CAA policy;

   - Government policy for new runway capacity: Heathrow West says that in its BAA airports market investigation in 2009 the Competition Commission said the scope for competition could extend not just between airports, but also within airports.[116] It

[115] Page 8, Heathrow West's consultation response and cost recovery proposals are available online: https://www.caa.co.uk/uploadedFiles/CAA/Content/Accordion/Standard_Content/Commercial/Airports/H7/CAP1940%20Heathrow%20West.pdf

[116] Available online: https://webarchive.nationalarchives.gov.uk/20140402170709/http://www.competition-commission.org.uk/our-work/directory-of-all-inquiries/baa-airports/final-report-and-appendices-glossary

also notes the Government explicitly acknowledged the possibility of multiple airport operators in the Airport National Policy Statement; and

- the interests of consumers: Heathrow West sets out that there is evidence that its proposals would deliver benefits to passengers and airlines and may have already begun to do so, for example by offering competition to HAL's capacity expansion proposals. Heathrow West also cites support from IAG for its development proposals. Heathrow West considers that its proposals allowed for cheaper delivery of runway capacity than HAL's proposals[117] and noted that the cost of HAL's expansion scheme had increased.

6. Heathrow West considers that HAL could recover from airlines through its regulated or other charges the revenue necessary to cover the costs in question, and then make the payments to Heathrow West to cover the costs that it has reasonably incurred. For instance, an appropriate sum could be added to HAL's RAB and this could be used as the recovery mechanism for these costs. Heathrow West says this would be consistent with how other third parties costs have been recovered, for example HAL's contribution to Crossrail's costs and that the CAA has the power to implement such a cost recovery policy with a licence condition on HAL.

Views invited and next steps

7. There a number of issues for us to take account of in considering Heathrow West's request. These include, but are not limited to, the following:

- Heathrow West's proposals formed part of a standalone commercial project that it chose to commence without prior agreement on how it should be funded. We are mindful of this context when considering whether or not to allow Heathrow West to recover its costs;
- regarding our duty to promote competition where appropriate, we consider that Heathrow West emerged as a new potential terminal provider without the CAA having a policy that allowed such parties to recover their costs. So, it is not clear that such a policy is required to promote appropriate competition in the future. That said, we would not want to set a precedent against cost recovery for new potential providers, if that would stifle the emergence of appropriate competition in future;
- we should consider Heathrow West's request in the light of the requirements under CAA12 for us to act transparently,

[117] We note that HAL strongly disputed Heathrow West's proposals, and highlighted there were potential disadvantages of competition between terminals

consistently, proportionately and in a way that is targeted at cases where action is needed. Given that it is not clear that cost recovery is required to encourage appropriate competition and there has been little specific and quantified evidence of a clear benefit for consumers from Heathrow West's proposals, it may not be necessary or proportionate to allow cost recovery.

8. Views are invited on any aspect of the issues raised in this appendix and, in particular, on:

- whether it would be appropriate for Heathrow West to recover some or all of its costs from airport users; and
- if so, whether these costs should be recovered through HAL's RAB.

9. We will consider stakeholder's views and evidence to inform our next steps. We note it may be appropriate to implement any decision we make to allow Heathrow West to recover its costs as part of the H7 price control. Therefore, there may be advantages to the CAA reaching a decision on these matters in the first half of 2021, so that any potential next steps could be reflected in our H7 Initial Proposals.