Application for Covid-related RAB adjustments

Final submission

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Table of Contents

Executive Summary

This submission sets out why we consider the CAA needs to take action to protect consumers in respect of regulation of Heathrow airport and why action needs to be taken quickly. We set out an approach we consider best meets the needs of consumers and is consistent with the CAA's duties. We show that action needs to be taken now, and that such action is consistent with the Q6 Settlement and the approach at other airports and other regulated settings.

The impact of Covid-19

The impact of Covid-19 on Heathrow has been unprecedented. Passenger numbers reduced by 52% in March, by 97% in April and May, and by 95% in June, reducing Heathrow's income by a similar amount. At present any predictions about when and how air travel will start to recover are highly uncertain. However, all scenarios result in large reductions in passenger numbers for 2020 and 2021. Heathrow's current estimated loss of revenue is between £2.2bn [REDACTED]for the two years.

This situation has serious short-term <u>and</u> long-term consequences which are contrary to the interests of consumers[1]:

- In the short term, ongoing negative cashflow of £159m per month means Heathrow may have to make further urgent cuts to expenditure, resources, [REDACTED]investment in order to maintain liquidity. These will be expensive and difficult to reverse and may significantly impact service quality as traffic recovers.
- In order to preserve cash, capital expenditure is being severely curtailed in 2020 and 2021. The negative cashflows mean that Heathrow's balance sheet will be extremely stretched, significantly curtailing the airport's ability to invest during H7 as well.
- In the long-term, Heathrow is being re-graded as a riskier business. Trigger events are forecast to occur leading to a cash lock-up, and Heathrow Finance is forecast to breach its RAR and ICR covenant thresholds for 2020. Heathrow has sought and obtained a waiver on financial covenants from Heathrow Finance creditors. Ratings agencies have begun to downgrade Heathrow's debt. Bond spreads have increased by 0.7% compared to other corporate debt, and listed airport asset beta's have increased by around 0.3 since the CMA analysis for NERL. Together, these represent an increase of Heathrow's WACC of around 3.0%.
- This poses very serious questions of [REDACTED]affordability for consumers given the potential impact of a higher WACC on charges.
- The viability of any future expansion is at stake. Despite the enormous consumer and economic benefits of airport expansion in the long-term, the weakened financial position of Heathrow and the increased perception of risk mean that the ability to use private finance to expand Heathrow comes into question.

The effect on Heathrow's financeability is profound. Heathrow finances itself largely based on its regulatory asset base (RAB). However, with severe passenger number reductions, the RAB has no value because we cannot earn on it. Moreover, as regulatory depreciation continues to occur without commensurate revenue, the RAB model without adjustment results in a permanent loss of value and thus long-term equity and debt financeablity.

These consequences would be genuinely calamitous for Heathrow and most importantly for consumers and passengers, airlines, Heathrow's community and the UK's post-COVID economy.

[1] We use the terms *consumers* and *passengers* interchangeably as a shorthand for "users of air transport services"

A RAB adjustment is needed

To address these issues, we are asking the CAA to publish a policy decision in 2020 specifying an adjustment to the RAB reflecting an appropriate proportion of the revenue lost in this crisis. Our proposed adjustment would have proportionate, gradual effects on prices from 2022. Crucially, if the CAA chooses not to act now, the impact on charges will ultimately be much greater because the market perception of Heathrow's risk will remain high. This will flow through to a higher cost of capital and sustained higher prices for consumers.

In order to protect consumers, Heathrow considers that the CAA's response to the crisis must meet the following four criteria:

1. It must be in place in sufficient time so that asymmetric decisions can be avoided and that the appropriate activities that the adjustment will allow can be commenced in a timely manner: our request is that the CAA publish a policy decision in autumn 2020.
2. It must set out a clear ex-ante approach that allows Heathrow to assess the impact the mechanism would have as the situation evolves.
3. It must avoid significant short-term impacts on charges and airport operations.
4. It must be designed so Heathrow has the appropriate incentives to make the right long-term decisions for consumers.

An appropriate RAB adjustment is the best mechanism for this because:

1. It deals with financeability issues and will reduce market perceptions of risk, helping to restore Heathrow's A- credit rating and mitigate the increase in the cost of capital;
2. It will (therefore) enable continued investment, not only in 2021 but also in H7, in the long-term interests of consumers;
3. It will allow lost revenues to be recovered over a long period, smoothing impacts on airlines and preventing short term price-rises, which might not be in the interests of consumers.
4. As a long-term policy, it is consistent with the principle of regulatory certainty.

As we explain below, our proposal for a RAB adjustment fits neatly with the CAA's statutory duties. It is also consistent with the basis of the Q6 settlement and regulatory best practice from other sectors. It is actually less financial support than other major airports around Europe might expect from their regulatory frameworks. Annex 2 deals with these points in more detail.

The appropriate form of RAB adjustment

We are asking that the CAA adopt the following approach to a RAB adjustment:

1. Apply a depreciation holiday for 2020 and 2021. This means that Heathrow's RAB will be higher at the end of 2020 and 2021 by a known amount. This will increase Heathrow's access to finance and give short-term confidence to investors thus enabling greater investment in 2021. Since the RAB is not currently defined in the licence, we do not consider that a formal licence modification is required for this step. However, the CAA's policy decision should be accompanied by an express 'revision' to the depreciation arrangements set out in the CAA's iH7 policy decision (i.e. CAP1852 Appendix C).

2. Apply an adjustment to the starting RAB in the H7 determination based on the actual revenue outturn for 2020 and the forecast revenue for 2021 to correct for any difference between the required RAB change and that implemented through the depreciation holiday. The recovery

amount calculated for 2020 and 2021 based on actual and forecast revenue (excluding ORCs) will be:

Recovery amount = (Forecast revenue * 0.92 – actual revenue) * 0.95

3. No depreciation would be applied to this element of the RAB for H7, but return would be included in prices from 2022 in H7.

4. A final adjustment to RAB would be made at the end of 2022, reflecting actual outturn revenue for 2021 and prices for 2023 onwards adjusted accordingly.

Steps 2-4 would be reflected in the H7 price control licence conditions. However, to provide the necessary confidence, it is essential that the CAA's policy decision setting out step 1 also provides assurance that the CAA intends to adopt steps 2-4 in the H7 price control and recognises that Heathrow and its investors will have to make business decisions in reliance on that statement. [REDACTED]

We show in this paper that such action is consistent with (i) the principles underlying the Q6 settlement in Annex 1; and (ii) the approach at other airports and in other regulated settings in Annex 2. Importantly, the proposal recognises the importance and value of an appropriately balanced risk-sharing mechanism, which Heathrow considers should be an important element in the H7 price control.

Impact of the RAB adjustment

Table 1 sets out estimates of the revenue which would be recovered through the RAB as a result of this mechanism for our forecast. It shows the proposed approach avoids short-term increases in charges and is anticipated to have only a small impact on airport charges for H7. It also shows that Heathrow bears a significant proportion of the overall risk and obtains no recovery for a substantial proportion of the revenue losses.

Table 1 - Illustration of recovery through proposed mechanism

£bn (2018p)	Heathrow Forecast
Estimated Revenue Loss	2.2
Amount recovered in RAB	1.7
Amount borne by Heathrow	0.5
Estimated impact on allowed yield in H7	£1.2 per pax

Table 1 shows that the consequence of the adjustment on future charges at the airport is relatively small and amounts to less than 0.5% of a typical airfare of £400. As such it will have little impact upon what consumers pay for travel.

Timeline and next steps

For such an intervention to deliver the required benefits **the CAA must publish a policy decision in autumn 2020 for how the RAB will be adjusted in 2020 and 2021, providing assurance that the CAA intends to take the remainder of the four steps set out above. Heathrow and its investors will have to make business decisions in reliance on such a statement and therefore it is imperative that the statement is in place as soon as possible.** This will allow Heathrow to have the confidence to make the right long-term decisions for consumers and ensure that Heathrow, its lenders, rating agencies and shareholders can understand the impact of the mechanism as the pandemic evolves. We propose the following timetable:

- CAA reviews Heathrow's submission and publishes a consultation during September 2020
- Consultation responses due by the end of September 2020
- CAA publish policy decision by the end of October 2020

Conclusion

Heathrow's financial reality means that we may not be able to return suspended capacity in a timely way, with the level of service and resilience that users will need in recovery. It also makes it very difficult to pursue future new capacity. It may limit our ability to adapt at the necessary speed to new post-Covid requirements for safe flying, creating capacity constraints as the demand for flying recovers. Consumers will also lose out on savings from efficient investments that are neither financeable nor economically rational under these conditions. Airlines are also under huge financial pressure and want Heathrow to take a long-term view to support them commercially in recovery, which we currently do not have the capacity to do.

Heathrow's unsustainable situation has wider impacts for the UK. [REDACTED]Our capacity to invest could be permanently reduced, harming the wider supply chain. Above all we will be less able to fulfil and enhance our role for the UK economy from cargo exports to supporting recovery in business, tourism and other services.

We believe that the key to unlocking the right long-term decisions in the interests of consumers and airlines is to adjust the RAB to enable Heathrow to take the right long-term decisions. We understand the strains other companies in aviation are facing and we are suggesting a principled long-term regulatory solution. It is a solution which appropriately shares risks and can serve as a basis for an enduring risk-sharing mechanism that also avoids the need for future ad hoc adjustments in the H7 and future price controls.

We therefore request that the CAA carefully consider our request. It is in the interests of both consumers and the UK economy as a whole to ensure that we have a strong aviation sector with a strong hub airport to support our recovery from this economic and social shock.

Impact of Covid-19 on Heathrow

COVID-19 is an exceptional circumstance

The impact of Covid-19 on passenger numbers at Heathrow has been significant. Passenger numbers reduced by 52% in March, by 97% in April and May, and by 95% in June.

At present any predictions about when and how air travel will start to recover are highly uncertain. Nevertheless, Heathrow has developed a delayed recovery scenario that it is using to help manage its operations and financing plan through the coming months. In addition, a more severe prolonged contraction scenario has been developed to allow Heathrow to test the robustness of its plans in the event of a more severe downturn. These scenarios are shown in Figure 1 alongside a range of external forecasts.

[REDACTED]

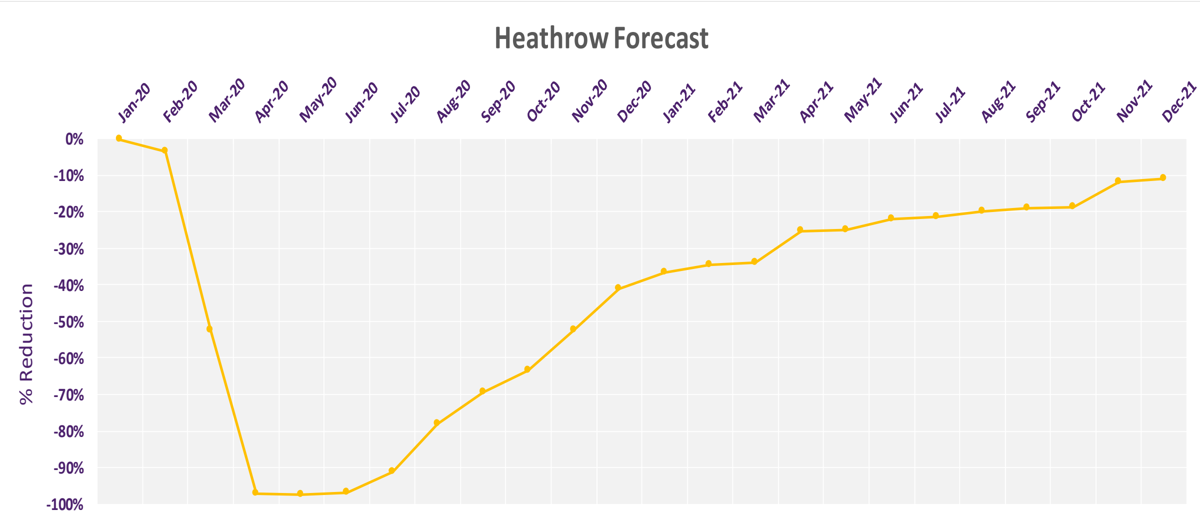

Figure 1 - Heathrow Covid-19 Scenarios and external comparison range

Both scenarios result in extremely large reductions in passenger numbers for 2020 and 2021. Table 2 shows the projected loss in passenger numbers in each year for these scenarios.

Table 2 - Impact of Covid-19 Scenarios on Passenger Numbers

Scenario	Impact on Passenger Numbers c.f. IBP submission	
	2020	2021
Delayed Recovery	-64%	-23%

This impact is a factor of around 20x the previous largest shock experienced by Heathrow. This is illustrated in Figure 2 below which shows the delayed recovery scenario in comparison to previous shocks since 1991. This clearly demonstrates that the Covid-19 epidemic is an exceptional occurrence.

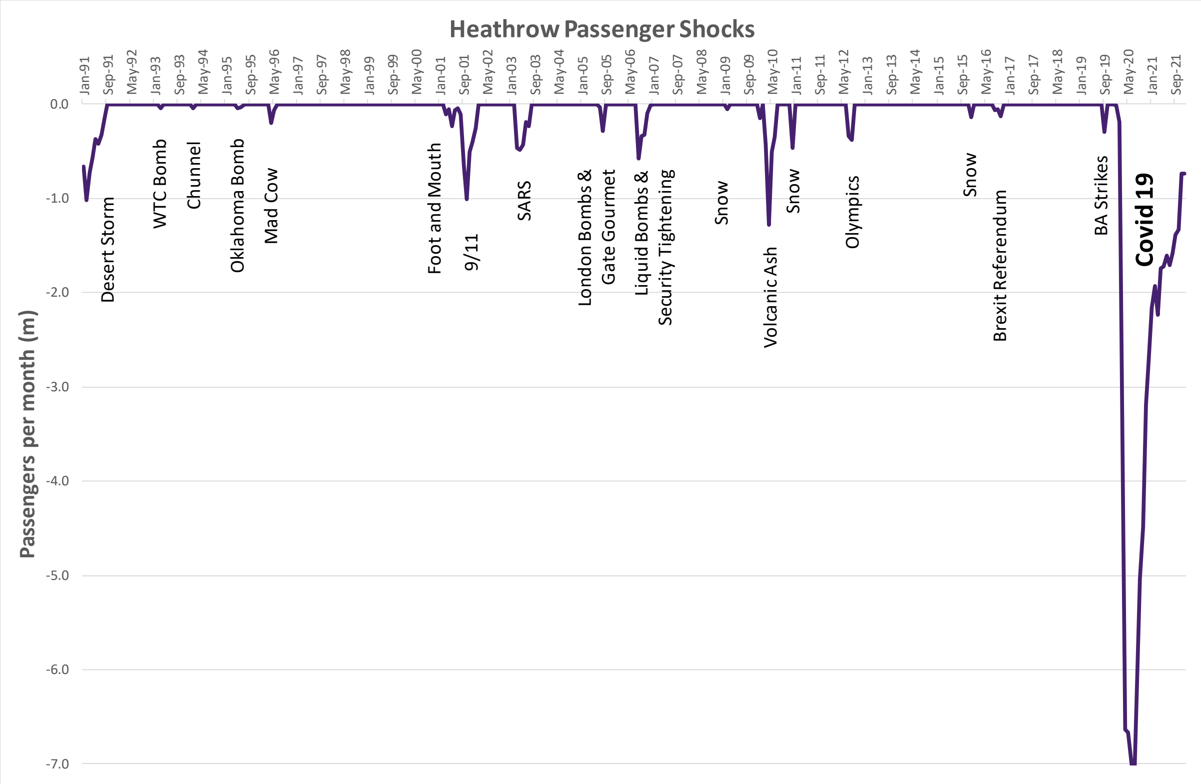

Figure 2 - Impact of Covid-19 compared to previous Heathrow shocks

The economic impact is significant

The impact of the loss of passengers on Heathrow's revenue is anticipated to be very large. Estimated losses compared to the December 2019 IBP forecast are set out in Table 3 for both the Delayed recovery and [REDACTED]. The estimated loss of revenue is between £2.2bn [REDACTED]for the two years.

Table 3 - Estimated revenue impact of Covid-19 Scenarios

Scenario	Estimated Revenue Loss (2018p)		
	2020	2021	Total
Delayed Recovery	£1.7bn	£0.5bn	£2.2bn

A consequence of this sharp reduction in revenue is that despite the mitigating steps that Heathrow has taken, cashflow is extremely negative, currently at -£159m per month. Heathrow has a sufficient liquidity horizon for now. But if the fall in revenues is prolonged then cash balances will continue to fall and the available liquidity horizon will reduce[REDACTED].

Despite the significant mitigations Heathrow has made (see below), Heathrow will make an operating (ebit) loss in 2020[REDACTED]. Table 4 sets out the anticipated return on RAB and Regulatory Equity (RoRE) in each of the scenarios, clearly showing the significant impact of the event.

Table 4 - Estimated Impact of Covid-19 Scenarios on returns

Scenario	Return on RAB	RoRE

	CAA Target 5.35%		CAA Target 6.8%	
	2020	2021	2020	2021
Delayed Recovery	-3.5%	2.0%	-11.9%	1.6%

The forecast RoRE for 2020 and 2021 is well below the allowed target, and the impact is that the cumulative shortfall in returns for the two years is 24% of notional equity in the delayed recovery case, [REDACTED].

The scale of this impact can be illustrated by considering the degree and duration of excess returns that would be required to compensate the loss. It would require 10-years of consistent excess returns of 4%-5% above the cost of equity. This is clearly impossible without a specific regulatory intervention to allow higher cashflows.

The impact of these losses means that the overall returns for Heathrow since Q4 will be significantly below the allowed WACC for the periods. This is illustrated in Figure 3, which shows the pre-tax return on RAB over Q4 to Q6 both up to 2019 (pre-Covid) and including the impact of Covid-19 on returns in 2020-21 as well. It also shows the average of the CAA assessment of the cost of capital for the periods. The chart shows that for the 17 years up to 2019 returns were below target despite strong performance at the end of Q6 and that the impact of the pandemic in 2020 and 2021 has made this shortfall larger.

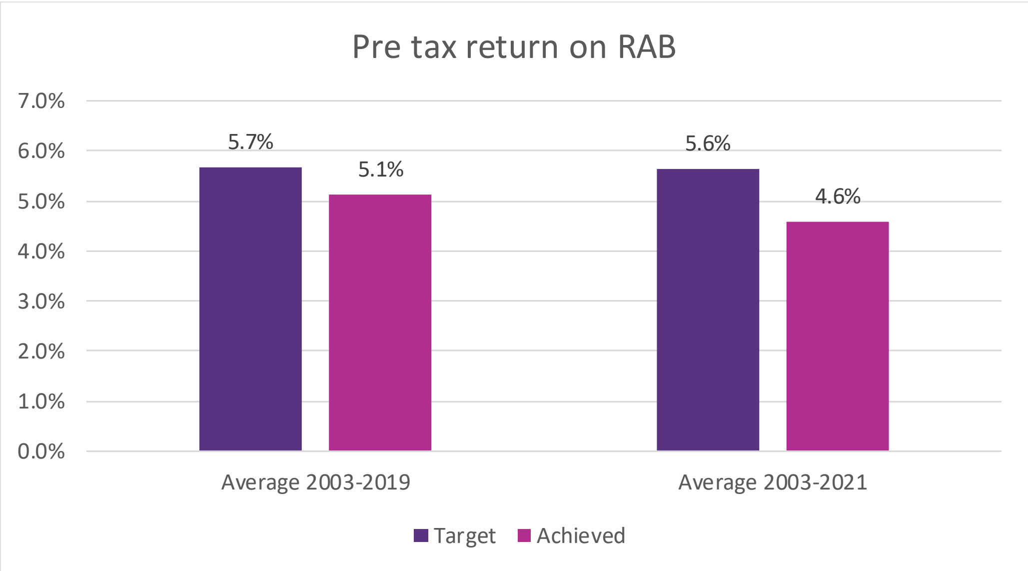

Figure 3 - Heathrow Returns compared to target

Underperformance over 19-years shows that the Covid-19 crisis is more than simply an expected fluctuation in returns driven by the business cycle or company performance. This underperformance is during a period in which Heathrow has transformed customer satisfaction to be the best airport in Europe and in which it has invested over £10 billion while consistently improving operating efficiency and commercial performance. Rather, such underperformance is conclusive evidence of a sustained, systematic asymmetry of risk that now imperils Heathrow's capacity to continue to invest in line with consumers' interests.

Heathrow has mitigated the impact to the extent possible

The large drop in the number of passengers has eliminated nearly all of Heathrow's revenue. In order to protect the business and conserve cash, Heathrow has had to take decisive actions – for example, we have:

- Accessed over £3bn of liquidity and stopped dividends;
- Consolidated operations onto one runway and temporarily closed terminals 3 and 4 and areas of Terminals 2 and 5;
- Cut the capital programme for 2020 from £1.9bn to £445m (over £250m of which had already been spent when Covid-19 hit);
- Implemented temporary pay reductions of 10-25% for all colleagues;
- Undertaken a company-wide reorganisation with over 500 redundancies of head office staff and 880 of front-line staff to date; and
- Furloughed over 50% of our colleagues.

These actions have reduced Heathrow's negative cashflow from £240m to £159m per month whilst keeping the airport operational and leaving the airport in as good a position as possible to respond to consumer demand if it returns. However, this negative cashflow is increasing net debt rapidly and cannot be sustained. It is also creating longer term financial challenges for a business with its upside potential capped by capacity limits and the regulatory framework.

But without regulatory intervention, we will have to take further steps

Without regulatory intervention, Heathrow will have to take further steps to reduce costs and investment so that acceptable liquidity can be maintained. Such cost reductions are likely to be asymmetric in that we will not be able to reverse them quickly as demand at the airport recovers. This will potentially impair the ability of the airport to cope smoothly as demand for air travel returns.

This creates a tension between the actions needed for short-term survival and actions that are in the long-term interests of consumers.

If Heathrow is forced to continue to focus on short-term liquidity potential actions include:

- Further permanent headcount reductions. This would have a significant impact on service and costs as the airport returns to normal operations;
- Investment will continue to be drastically curtailed including into H7;
- The required cost of capital will increase considerably;
- The viability of expansion will be at stake; and
- We will not be able to give airlines the support they need to help re-establish traffic.

Each of these is discussed in turn below.

Urgent support is necessary to support good levels of consumer service

Heathrow has acted fast to reduce costs whilst the volume of traffic has fallen following the imposition of travel restrictions by governments worldwide. We have made absolute reductions in headcount and will continue to make more. So far Heathrow has aimed to retain the ability to scale up operations efficiently and meet airline demands as flights resume. However, our ability to do this depends upon both how long the current situation persists for aviation and the financial implications of the regulatory risk we face. As the downturn continues and Heathrow faces all the downside risks with no prospect of long-term returns, then further action will have to be taken to preserve cash [REDACTED].

If such drastic action is required, then it would be likely to have a significant impact on service and costs as the airport returns to more normal operations. We might have to constrain future throughput. Alternatively, if for example new colleagues were ultimately hired, they would need to be trained and integrated which would result in additional costs and delay. It would be very likely that service standards would fall for an extended period. For example, queueing times are likely to be longer and on-time departure would reduce as a result of fewer and less experienced colleagues. Taking such action would clearly be against the long-term interests of consumers and only be done where it was unavoidable. However, Heathrow cannot afford to take a long-term view in a situation where cash needs to be preserved for survival.

The same dynamic will be seen in most if not all of Heathrow's costs such as maintenance, customer service, access, resilience and information. All have similar long-term asymmetric effects if decisions are taken only on a short-term basis. Simply insisting the airport do otherwise does not overcome the basic reality that there is not financial scope to do so without a recovery mechanism.

The impact of such changes on consumer welfare could be considerable. For example, if on time departure were to fall from around 80% to 60% (the recent level at Gatwick) the loss of consumer welfare would be around £570m pa based on the results of the IBP willingness to pay survey. In addition, increasing security queue time by 5 minutes for 40m departing passengers would result in a loss of £150m pa of consumer welfare[2]. Whilst these examples are illustrative, they demonstrate that the consumer welfare impact of service reductions can rapidly exceed the amounts Heathrow is seeking in the proposed recovery mechanism.

Clear long-term visibility on recovery of lost revenue will assist Heathrow in being able to avoid making asymmetric cost reduction decisions. Instead it can focus on taking actions that are in the long-term interests of consumers. This will allow it to be ready to increase available capacity as demand is re-established whilst meeting the concerns of customers and providing a good airport service. Heathrow would also be able to more effectively meet new Covid-19 health related requirements, increasing consumers' confidence in safe travel, and be able to help re-establish an extensive route network thus giving consumers the widest choice for travel.

Urgent support is necessary to support investment

The need to preserve liquidity has resulted in Heathrow reducing its capital expenditure by over two thirds for 2020 and 2021. Investment can now only be on safety critical items and completing works already underway where pausing work would be extremely uneconomic. An immediate consequence of this cut in capex is a backlog of required maintenance. This will have to be undertaken in coming years and could lead to a detrimental impact on future service if it cannot be funded.

In the short term, a RAB based recovery mechanism would enable Heathrow to take advantage of the opportunity for efficient capital maintenance projects presented by lower utilisation of the airport. This promotes efficiency and economy of airport operations as well as capital projects. For example, maintenance of the Southern Runway or terminal areas can be undertaken more efficiently and effectively as a result of not having to work in short windows during the night. This aligns with the approach taken by the DfT for road and rail programmes that have been accelerated to take advantage of lower levels of traffic. As described by the Secretary of State for Transport in his speech on 14th

[2] WTP values obtained from the Systra 2018 willingness to pay survey were £3.55 per passenger for an improvement from 80% to 85% on time departure, and £1.55 to reduce security queue time from 5 to 3 minutes (67-%ile) (See Table 16 of Systra report). Assuming the same unit rates and 40m departing passengers per year, the loss of value from a 20% reduction in OTD is 40m * 20 * 3.55/5 = £568m pa, and 5 minutes extra queue time is 40m * 5 *1.55/2 = £155m pa.

May, this allowed delivery of schemes at lower cost and with less disruption. For example, the A14 upgrade was delivered seven months early.

If implemented in line with the proposed timetable, a RAB based recovery would allow greater investment in 2021. This would help Heathrow to transform the airport appropriately for the post Covid-19 world and help give consumers more confidence in flying. Higher numbers of consumers will in turn lead to lower charges in H7.

The drawdown of additional debt to see Heathrow through the current situation will increase net debt - group gearing is anticipated to be over 92% at the end of 2021 absent an appropriate recovery mechanism. This level of debt would need to be addressed. The requirement to rebuild its balance sheet would significantly curtail Heathrow's ability to invest during H7 even if passenger numbers fully recover and even if there was an adjustment to risk in H7. This would result in continued severe rationing of capital investment during the period. That in turn puts pressure on service and resilience and increases the backlog needing to be dealt with later.

The proposed RAB based recovery mechanism would result in a much less strained balance sheet at the end of 2021. It would thereby also enable appropriate investment in H7 supporting the continued resilience of the airport, developing it in line with consumers' preferences and addressing the need to improve the sustainability of flying.

A further consequence of the absence of a recovery mechanism would be the impact of the increased perception of risk on the ability of Heathrow to make major new investments to drive efficiency, service and capacity. Such investments – for example T5 and T2 – have been shown to have a transformative impact on Heathrow's delivery for consumers over the last two decades. Such investments would not be possible without an appropriate risk framework that is applied by the regulator in practice and strong long-term support from investors.

Urgent action is needed to avoid long-term increases in Heathrow's cost of capital

The Covid-19 pandemic has led to a fundamental reassessment of the airport business by financial markets, significantly increasing the cost of capital for Heathrow [REDACTED].

The pandemic has already led to a downgrade of Heathrow's debt by credit rating agencies and Heathrow's cost of debt has increased significantly compared to other businesses. The spread of all corporate debt to gilts has widened significantly during the crisis, but the spread on Heathrow debt has widened further. Figure 4 shows the yield on Heathrow bonds compared to the iBoxx 10+ A NFC.

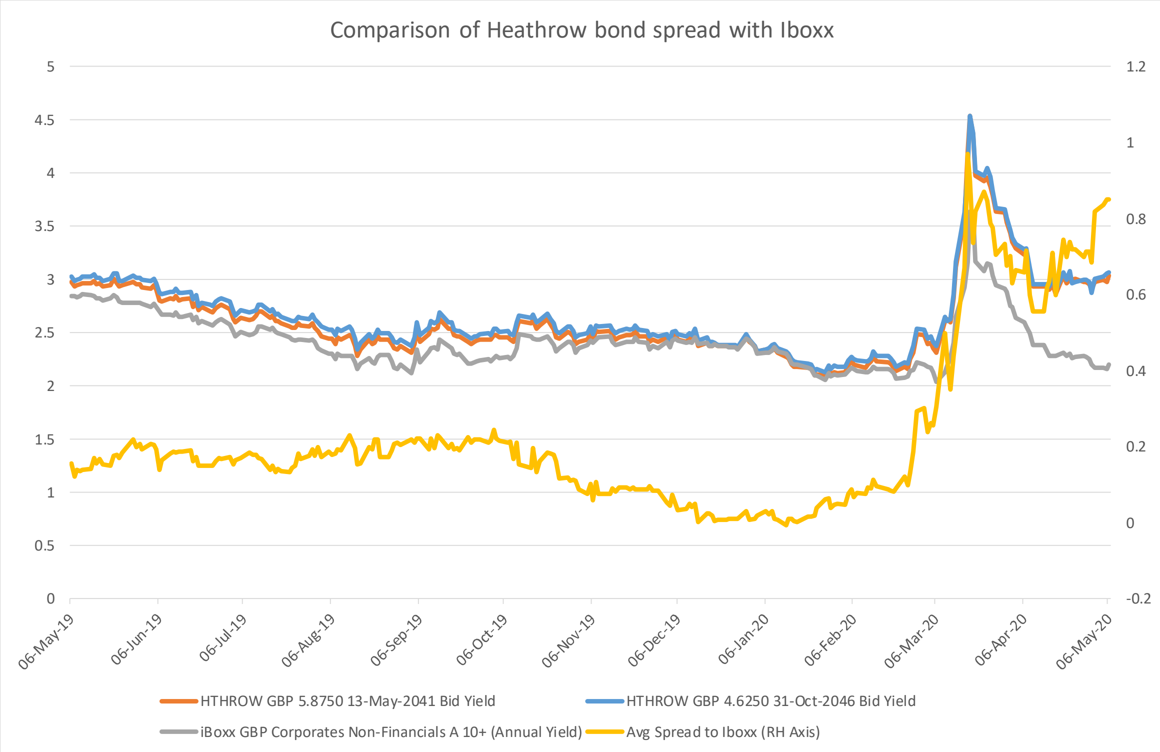

Figure 4 - Spread of Heathrow debt to iBoxx index

Figure 4 shows that the cost of corporate debt as measured by the iBoxx index increased sharply in March before falling back close to previous levels. However, the yield on Heathrow debt has remained high, and its spread above the iBoxx index has increased from around 15 bp before the crisis to 85 bp currently, an increase in the cost of debt of 0.7% relative to the iBoxx index (i.e. relative to other businesses).

In addition to the impact on the cost of debt, the Covid-19 pandemic has had a significant impact on equity investors perception of the risk of airports as shown in Figure 5.

Figure 5 - Impact of Covid-19 on 2-year average betas

Taking account of increased debt costs and higher betas, the impact on market perception of risk at Heathrow has increased the immediate WACC for Heathrow by over 3.0%. Unless investors' perception of the risk for Heathrow is reduced, this step change in the cost of capital will lead to an increase in the allowable yield of over £7 per passenger, a 30% increase in charges. The reduction in perceived risk that an appropriate recovery mechanism could deliver would likely reduce this premium by considerably more than the estimated £1-2 H7 impact of the proposed mechanism on charges.

Debt investors have previously taken comfort from the regulatory regime. Specifically, they have an expectation that the CAA's regulatory decisions are intended to support the financeability of Heathrow and deliver the same protection as other businesses in the UK which are regulated using a RAB-based approach. If the CAA were not to take appropriate action in the current circumstances to protect these expectations, then investors perception of the protections of the regulatory regime will deteriorate significantly. This would lead to downward pressure on credit ratings and further increase the cost of debt for Heathrow resulting in higher prices for consumers.

Implementing the proposed adjustment mechanism would give rating agencies far greater confidence in the strength of the regulatory compact. It will materially reduce their view of Heathrow's risk. This would help Heathrow to regain an A grade rating and moderate any increases in the Heathrow cost of debt. This would help reduce the future cost of airport services.

In addition, the actual implementation of an appropriate recovery mechanism would reduce equity investors' perception of the risk of investing in Heathrow. This could help mitigate the increase in the cost of equity compared to the very high levels seen since Covid-19.

The viability of expansion is at stake

The Covid-19 pandemic has serious consequences for expansion. Despite the enormous economic benefits of airport expansion in the long-term, the pandemic has raised questions around the equity required to finance expansion in light of (i) the significant RAB reduction from lower capex; (ii) Heathrow's significant additional borrowing for short-term liquidity; and (iii) Heathrow's lower credit ratings and the higher cost of finance.

An appropriate adjustment to the RAB would help reduce the cost of finance, restore Heathrow's A- credit rating, and improve Heathrow's financial position in terms of debt relative to the RAB. This would re-enable private financing of Heathrow expansion and allow its cost to consumers to be lower. This will preserve the option of expansion at Heathrow and the huge benefits that this will deliver to consumers.

In addition, the Covid-19 pandemic has revealed the huge risk that Heathrow would be exposed to during expansion were a similar event to reoccur. Addressing this will require both significant changes to the regulatory regime and shareholder confidence in it. An appropriate RAB adjustment would set the shape of any potential future regulatory mechanism and help build shareholder confidence that the regulatory regime was sufficiently flexible and supportive to manage these risks.

We may not be able to support airlines to restore traffic

The CAA's legal duty is to further consumers' interests, not the interests of airlines, and the CAA cannot assume that airline interests will always be a good proxy for consumers' interests. The CAA must be especially cautious of such a fallacy in the context where airlines are, understandably, focused on their immediate and short-term interests. Nevertheless, we consider that in the current situation the impacts of various options on airlines may be a relevant consideration in considering consumer interests, provided the CAA properly examines how the impacts on airlines will flow through to consumers.

The recovery of the airport in an appropriate way for consumers will depend on large numbers of other partners at Heathrow. In addition to Heathrow itself and the airlines, this includes retailers, ground handlers and others. An appropriate recovery mechanism would place Heathrow in a better position to be able to help these partners with their recovery and ensure that consumers receive the service experience they desire throughout the airport journey.

Despite taking mitigating steps, e.g. support for parking charges and some rents, Heathrow is currently constrained in being able to take a long-term commercial perspective on support for airlines. Without a RAB based recovery mechanism, Heathrow is not in a position to continue to waive charges or increase incentives. The airport is unable to provide the support the airlines are seeking and which would be in both parties and consumers long-term interests. In practice, we are currently in a zero-sum game where actions to help airlines harm our financing and vice versa.

A RAB based recovery mechanism related to revenue losses would allow Heathrow to continue to respond appropriately to airlines in the short term, e.g. by continuing to waive parking charges. This would help the airlines weather the downturn better and in turn enable them to make decisions more focussed on the long-term needs of their passengers, rather than a short-term focus on survival. As a result, airlines would be in a better place to offer consumers a wider range and availability of services from Heathrow as the pandemic recedes.

Why the CAA should adjust the current regulatory arrangements

The CAA's duties

The CAA's primary statutory duty is to 'further the interests of users of air transport services regarding the range, availability, continuity, cost and quality of airport operation services'[3] In doing so, the CAA must have regard to a number of factors, including:

- the need to secure that Heathrow remains financeable;[4]
- the need to secure that Heathrow's reasonable demands for airport operation services are met;[5]
- the need to promote economy and efficiency on the part of Heathrow in its provision of airport operation services;[6]
- ensuring that regulatory activities are transparent, accountable, proportionate and consistent;[7] and
- ensuring that regulatory activities are targeted only at cases in which action is needed.[8]

As we have set out in the previous section, failing to adjust the current regulatory arrangements will have a long-term negative impact on the cost and quality of air transport services, and will (absent regulatory intervention) result in outcomes which are in direct conflict with the CAA's duties, due to:

- short-term cuts Heathrow will be forced to make which cannot be easily reversed;
- a severe curtailment of capital expenditure now and into H7;
- long-term higher prices for consumers from Heathrow's cost of capital increasing; and
- a lack of viability for privately financed expansion, which the CAA has recognised is in consumers' long-term interests.

We are not looking to reopen the Q6/iH7 price control. Instead, we are seeking a policy commitment from the CAA to adjust the principles which govern the RAB for 2020 onwards, and which will be used to set the starting value of the RAB when H7 begins in 2022. This request is made to ensure that Heathrow remains financeable through regulatory activity which is proportionate to address the long-term negative impacts that air transport services will otherwise face.

In addition, the Q6 and iH7 settlements only stand on the basis that they could and would be reassessed if necessary. This is clear in the discussion of risk at the time of the Q6 settlement. If the CAA were not to reassess the balance of the price control as a result of a request by Heathrow in these circumstances, this would clearly be inconsistent with the Q6 decision and contrary to the duty of the CAA to carry out regulatory activities in a consistent manner. In addition, it would represent a major breach of regulatory trust.

Table 5 sets out a summary of the key elements of the CAA's duties, as outlined above, and how an appropriately designed RAB adjustment is consistent with these duties.

[3] Section 1(1) Civil Aviation Act 2012 ('CA Act')
[4] Section 1(3)(a) CA Act.
[5] Section 1(3)(b) CA Act.
[6] Section 1(3)(c) CA Act.
[7] Section 1(4)(a) CA Act.
[8] Section 1(4)(b) CA Act.

Table 5 - Summary of how a RAB adjustment is consistent with the CAA's duties

Area of Duty	Issue	Benefit of RAB adjustment
Range of service	Need to preserve cash hampers ability to invest in new safety measures at pace	Allows Heathrow to timely invest in measures to give confidence that flying is safe enabling a larger choice of routes
	Heathrow and airlines in zero-sum game for cash	The ability to continue to waive some charges will help airlines restart more quickly at Heathrow leading to a faster restoration of an extensive route network.
Availability and quantity of services	Asymmetric cuts to preserve cash will impair ability to return airport to full operation	Allow Heathrow to avoid having to take asymmetric actions
	Foreclosure of expansion option	Retain the option for expansion significantly increasing the availability and quantity of flights from Heathrow
Cost of services and promoting efficiency	Asymmetric actions will increase costs as the airport returns to full operation	Allow Heathrow to avoid having to take asymmetric actions reducing long-term costs
	Opportunities for efficient investment are curtailed	Help Heathrow take advantage of opportunistic interventions and thereby promote efficiency
	Credit downgrade increases debt costs increasing WACC	Help restore A- credit rating reducing charges for consumers in the long term
	Investors perception of risk has increased airport asset betas increasing WACC significantly	Help restore investors' confidence reducing cost of capital and charges for consumers in the long term
Quality of services	Asymmetric cuts to preserve cash will harm service provision as airport returns to full operation	Allow Heathrow to retain skilled and motivated staff that deliver great service to consumers, making it easier for Heathrow to maintain quality as normal service resumes
	Inability to invest quickly in new processes to make passengers feel safe	Allow Heathrow to invest in new processes so that consumers feel safe and passenger numbers increase faster reducing charges to consumers in the long term
	Reduction in capital expenditure for many years will degrade service in future years	Allow Heathrow to undertake a wider range of capital investment activities to maintain high standards
Financeability	Requirement to preserve cash and meet covenant requirements forces Heathrow to take a short-term approach	Will allow Heathrow to take a long-term approach and give investors' confidence to continue to invest with lower cost of capital than would otherwise be required
Good regulation and best practice duties	Breaks integrity of the RAB	Preserves integrity of the RAB
	Inconsistent with requirements for H7	Consistency with requirements for H7

Maintaining integrity of the RAB

Regulatory asset bases have become a key foundation of regulation in the UK. They represent the cumulative balance of expenditure a company has made offset by the amount it has recovered from customers through charges. Companies are allowed to make a fair return on the net amount they have invested (return **on** the RAB) and understand that they will recover the amount they have invested over time through depreciation included in charges (return **of** the RAB). This provides a mechanism by which regulators can assure investors that long-term investments they make today will be able to be fairly recovered over the life of the investments. Strong investor confidence in the RAB has resulted in lower costs of capital for regulated businesses and enabled significant long-term investment in the UK's infrastructure.

A key element of this RAB construct is the return of RAB (depreciation) reflected in revenue collected from consumers. Where an external shock means that this revenue is not collected, as is anticipated for Heathrow in 2020 and 2021, then in practice return of the RAB is not happening. In other words, not only are investors not earning a return on the RAB for the years in question, they are also losing return of the RAB. If this is not addressed, then it has the potential to severely undermine investors' confidence in the RAB as a way of ensuring they recover their investments appropriately.

An adjustment that allows an appropriate amount of lost revenue to be recovered over a longer timescale will give investors confidence that the integrity of the RAB is being maintained, retaining the benefits to consumers that such investor confidence in the RAB has delivered. This will help avoid an otherwise higher WACC and would allow lower charges for consumers than if no adjustment is made.

Maintaining consistency with requirements for H7

The Covid-19 epidemic has led to a recalibration of investors' perspective of the risk of aviation. This will require adjustments to the regulatory regime for H7 to ensure that the risk-reward balance for investors is appropriately balanced.

A RAB adjustment will mitigate the impact of extreme events and ensure the CAA continues to be perceived as allowing a "fair bet" for investors. It will also enable Heathrow to deliver the right services to consumers. Such a mechanism must provide a clear set of rules for determining the specific adjustment that would be made to the RAB so that it is bankable and investors can rely upon it and be confident in providing finance to Heathrow to enable it to deliver for consumers.

Our proposal recognises the importance and value of an appropriately balanced risk-sharing mechanism, which Heathrow considers should also be an important element in the H7 and future price controls. This could also avoid the need for future ad hoc adjustments to ensure consumer interests are protected. We consider that it is an important part of regulatory consistency that any mechanism in place for H7 should be consistent with that in place for iH7 and vice-versa.

Approach in other Airports and Sectors

We have reviewed the regulatory frameworks and options in place for other airports and UK regulated businesses. A description of the approaches taken are discussed in Annex 2 for:

- European airports;
- Nerl;
- Other UK regulated companies.

In summary, all of the European airports considered have mechanisms in place to deal with the impact of extreme circumstances. In addition, ADR and AENA have the specific ability to recover losses of over 6% and 10% respectively that occur in the year. Schiphol has the ability to recover all lost revenue over the following three years. None of the comparators are expected to bear more than one year's impact to an exceptional event and others have specific limits to the amount of risk they are expected to bear. Where specific limits are in place, no airport is expected to bear losses of greater than 10% of revenue and in some cases much less than this. Note that given the reference made to these other European airports in setting Heathrow's price control, equivalent treatment of and exposure to risk is a fundamental assumption of the settlement.

Table 6 sets out a summary of the approach for each airport.

Table 6 - Adjustment mechanisms for comparator airports

Airport	Adjustment mechanism
Aena	If traffic is 10% lower than forecast, losses beyond this can be recovered through charges in the following year (n+2)
AdP	AdP has a traffic sharing mechanism for small deviations in passenger numbers and the ability to reopen its regulatory arrangements in the event of large deviations. AdP has applied for its charges to be redetermined due to exceptional circumstances
Dublin	A reopener mechanism within the Aviation Act allows for reopening of price control where there are substantial grounds for doing so
Fraport	Can reset prices at any time for the following year
ADR	If traffic is more than 6% different from forecast, then a tariff balancing mechanism is implemented for remainder of period
Schiphol	Charges for the next year can be reset to reflect over/under recovery spread over three years

In this context, the RAB adjustment proposed by Heathrow is <u>significantly more favourable in terms of airport charge impact</u> (and thus potentially to consumers) than the arrangements in place for the airports considered above. We understand that all of these airports, apart from Schiphol, have approached or plan to approach their regulators to examine options that allow recovery to be spread over a longer period to mitigate the immediate impact on charges. Our proposed approach also avoids the drastic price changes that would result from attempts to recover losses over the short-term; instead Heathrow is proposing changes to the RAB which will result in much more gradual cost recovery, in a way which mitigates impacts on consumers. Furthermore, Heathrow is accepting a proportionate amount of the financial impact.

In other regulated sectors a range of approaches exist for dealing with exceptional circumstances. In all these there is a clear acceptance of the need to ensure that regulated companies do not suffer severe financeability shocks for reasons outside of their control.

The appropriate form of RAB adjustment

Having established that a RAB adjustment is consistent with the CAA's duties and is in the long-term interests of consumers, this section sets out the appropriate form of RAB adjustment and how it should be implemented. In arriving at this proposed approach, Heathrow accepts that – consistent with comparator airports considered in Annex 2 – it should expect to bear some risk.

In this section we set out:

- key criteria that a RAB adjustment will have to meet to deliver the benefits identified above;
- potential approaches to implementing a RAB adjustment;
- how the amount to be recovered through the RAB adjustment should be calculated (the recovery amount); and
- how the recovery amount should be recovered from customers.

Key criteria a RAB adjustment will need to meet

To deliver the benefits identified above, the adjustment will have to meet all the following criteria.

Firstly, a key benefit from a RAB adjustment would be that it allows Heathrow to take different actions during the pandemic – in particular, avoiding short-term decisions to maintain liquidity that run counter to long-term consumer interests. However, for Heathrow to be able to take these decisions, the adjustment must be in place quickly. This means that the adjustment:

1) **Must be in place in sufficient time so that asymmetric decisions can be avoided and that the appropriate activities that the adjustment will allow can be commenced in a timely manner.**

Secondly, the eventual impact of the pandemic at Heathrow will only be clarified as a result of the passage of time, and therefore the precise impact and scale of any adjustment correction cannot be known when the policy needs to be in place to meet the criteria above. Therefore, for Heathrow and its investors to have an appropriate level of confidence, it must be based on rules set out clearly in advance that investors can rely on as the situation evolves and avoid ex-post discretion to the extent possible. If this is not the case, then Heathrow will not be able to raise finance on the back of the proposed recovery and the CAA would be failing with respect to its financeability duty. To comply with the financeability duty, the adjustment:

2) **Must set out a clear ex-ante approach that allows Heathrow to assess the impact the adjustment would have as the situation evolves.**

Finally, in order to be effective and avoid unintended consequences, the adjustment should not have an impact that undermines the wider aviation business or leads to incentives on Heathrow that are not in the long-term interests of consumers. This means the adjustment:

3) **Must avoid significant short-term impacts on charges and airport operations; and**

Given the financial pressure on consumers, airlines, others in the aviation industry and indeed Heathrow's itself it is important that an adjustment not harm short-term recovery of flying or the commercial growth of all the businesses at Heathrow. In the same way, the adjustment:

4) **Must be designed so Heathrow has the appropriate incentives to make the right long-term decisions for consumers.**

In the following Sections we set out an adjustment that we consider meets these criteria, is consistent with the CAAs duties and will deliver the benefits to consumers set out above.

Potential approaches to a RAB adjustment

Price caps are currently in place for Heathrow for the years 2020 and 2021. Prices from 2022 onwards will reflect the H7 determination. This will reflect forecast passenger numbers from 2022 onwards, therefore there is no need to consider the impact of the pandemic beyond 2021 at this stage. Adjusting prices for 2021 onwards does not make sense given the current uncertainty about traffic in that year and therefore we consider the best approach is to apply a correction mechanism for both years consistent with a reasonable ex-ante approach to limiting extreme risk.

The reasons we consider that it is the best approach include:

- It would meet all four key criteria set out above;
- A clear ex-ante mechanism would give investors confidence in the underlying risk of Heathrow. This would enable it to not only finance itself through the crisis in line with the financeability duty, but would also help mitigate long-term increases in the cost of capital;
- It would leave Heathrow in a less weak financial position allowing greater investment in 2021 and H7 and would retain the option to expand the airport later;
- It would result in the integrity of the RAB being preserved giving investors long-term confidence in the regulatory regime for the airport;
- It would avoid large swings in aeronautical charges;
- It would provide an appropriate approach that was also suitable for H7 ensuring regulatory consistency and longer-term investor confidence; and
- It would better deliver all of the key benefits from an adjustment set out above including avoiding asymmetric actions and preserving the integrity of the RAB.

How the adjustment should be calculated

Any RAB adjustment needs to make an assessment of the appropriate loss and the proportion of that which should be recovered.

We propose that revenue[9] is used as the basis for assessing loss. Revenue best measures the externally driven financial consequence to Heathrow of the pandemic. The regulation of Heathrow is based on a single till, and therefore the relevant revenue is both aeronautical and non-aeronautical revenue. Revenue is direct to measure and compare to a baseline and therefore is straightforward to use in an ex-ante approach that can support financing.

The use of revenue is also consistent with the regulatory recovery models of other airports across Europe.

We do not think the alternatives are as suitable:

- Using passenger numbers will not have clear ex-ante value unless an explicit £ per customer adjustment is set. Depending upon the circumstances this adjustment may over or underestimate the actual impact on the airport. For example, Heathrow does not recover any retail revenue from passengers if retail outlets are closed even if they fly. In addition, the balance between landing and departing passenger charges can vary when the airport is

[9] We propose the mechanism is based on the total revenue excluding ORCs. Under the current framework from ORCs, Heathrow can recover under recovery of ORC costs directly from airlines in the following years charges and therefore there does not need to be a new regulatory policy in place to enable this recovery. We are currently in discussions with airlines over the best approach to take to recovering these costs. One potential result of these discussions is that we agree with airlines that a RAB based approach allowing us to recover the costs over a longer timeframe might be an appropriate approach to take in the current circumstances.

operating very differently from normal changing the actual income per passenger. This means that differences in passenger numbers do not accurately measure the externally driven financial consequences.

- Using Ebitda as the measure of loss reduces any incentive on Heathrow to mitigate its losses by reducing costs. In addition, the overlap with costs associated with ORCs means that this approach is not straight forward and requires careful and precise cost allocation. This means that it is more difficult to have a clear ex-ante calculation of the impact reducing its ability to address financeability concerns.
- Using RoRE also risks negative incentive properties as it reduces incentives on financing costs and could also potentially resemble profit protection to some external stakeholders. Moreover, it is even harder than ebitda to calculate on a clear ex-ante basis and support financeability, so therefore is less suitable for this reason too.

Scale of adjustment

A clear set of revenue triggers and associated actions must be set including:

- The revenue threshold up to which Heathrow bears the risk; and
- The recovery rate – the proportion of revenue loss beyond the threshold that is recovered.

Based on the comparison with other airports, Heathrow considers that a conservative yet appropriate approach would be a revenue threshold of 10% and a recovery rate of 100%. This is equivalent to the situation for AENA that has the least protective of the specified mechanisms. However, as explained below, we propose a revenue trigger of 8% of forecast revenue, and a recovery rate set at 95%. We consider this has better incentive properties than a 100% recovery rate, but retains the same overall balance of risk, although Heathrow could have to bear up to 13% of revenue losses.

Revenue Threshold

The threshold of revenue beyond which Heathrow is entitled to begin recovery should be:

- Consistent with the risk implicitly included in the cost of equity for Heathrow at Q6;
- Consistent with regulatory precedent in other sectors; and
- In line with expectations that the mechanism would only be invoked in exceptional circumstances.

Consistent with the cost of equity for Heathrow at Q6

The cost of equity for Q6 was based on an asset beta determined from the observed betas of listed airports. It is important to note that the current market assessment of asset betas for listed airports is much higher than the asset betas observed before the pandemic (see Figure 5). This demonstrates that the specific risk from a Covid-19 type event was not priced into the assessment of risk for airports and therefore that the Q6 beta did not ‘anticipate’ Heathrow having to bear this level of risk. Therefore, it is clear that Heathrow bearing the majority of the risk from the shock is not consistent with the Q6 cost of equity.

The derivation of the cost of equity from other airports, however, means that the approach to risk mitigation for other airports is relevant. The approach of other European airports is discussed above and summarised in Table 6. Most comparator airports across Europe have adjustment mechanisms that allow them to recover some or all of their losses in the event of changes in demand or revenue across the period. In addition, many airports are in discussion with their Governments and Regulators about the impact of the pandemic.

For Rome and Aena, there are explicit regulatory mechanisms in place to deal with large variations in revenue. In the case of Rome, its exposure is limited to 6% of revenue. In the case of Aena, its exposure is limited to 10% of revenue. Aena was used as a comparator airport in the assessment of airport asset betas by the CMA in its interim findings for NERL. This showed that Aena had a higher asset beta than AdP or Fraport that were used to assess the asset beta for Heathrow in Q6. Therefore, applying the risk protection available Aena is consistent with the Q6 WACC.

Therefore, we conclude that a risk threshold of greater than 10% of revenue would not be consistent with the Q6 WACC. Given this, we conclude that the maximum exposure of Heathrow to downside risk compatible with the Q6 WACC is 10% of revenue, and that this would be a conservative approach.

UK Regulatory Precedent

In its recent preliminary findings, the CMA assessed the asset beta of NERL to be similar to that of airports, and it identified a range of 0.515 to 0.615. It did not make any adjustment to this estimate of asset beta as a result of the volume risk sharing mechanism in place for NERL that limits its downside to 4.4% of revenue only. This means that NERL's risk mechanism is consistent with the asset beta identified and that no adjustment would have to be made to the asset beta of an airport with a similar risk mechanism.

We are proposing a risk threshold equivalent to 10%, i.e. 127% higher than the threshold for NERL. The evidence from the CMA decision is that the NERL threshold is consistent with the asset beta of comparator airports and therefore that it is consistent with the risk implicitly included in the cost of equity for Q6. This means that a 10% threshold and 100% recovery rate for Heathrow is as large as is reasonably consistent with the Q6 WACC.

The precedents for water set out in Annex 1 show trigger thresholds for adjustment of 10% and 20% of revenue. However, these are based on notional NPVs based on 15 years of revenue effect. This means that a water company can trigger a substantial effects iDoK with a revenue impact of only 2% of revenue per year. In addition, the approach for water uses the threshold as a trigger for action. In the Northumbrian and Bournemouth cases, the recovery allowed to the companies did not make them bear the risk up to the threshold. Therefore, the approach in water is equivalent to a much lower volume threshold than proposed by Heathrow.

The Adjustment reflects exceptional circumstances

The impact of the Covid-19 impact is clearly exceptional. Figure 2 above sets out a comparison of the impact of Covid-19 on passenger numbers compared to previous shocks. The Figure also shows that none of the previous shocks over the last 30 years would have reached either an 8% or 10% threshold and therefore that an 8% revenue threshold would therefore only be triggered in exceptional circumstances.

Heathrow's exposure to volume risk is asymmetric in that it is very difficult and expensive to add significant additional passengers due to the infrastructure required to relieve capacity constraints, whereas external events can lead to a complete loss of passengers. A measure of this can be seen in 2018 which reflected Heathrow's performance at the peak of a five-year aviation boom and drop in the value of sterling that was not anticipated ahead of Q6. In this year, actual revenue was only 5% greater than forecast by the CAA at the start of Q6. This shows that even exceptional unanticipated growth will not lead to outperformance in revenues of more than 5% in one year. Therefore the proposed 8% revenue threshold reflects the exceptional nature of these events.

Recovery Rate

The recovery rate beyond the threshold for the comparator airports is 100%. However, we consider that a lower recovery rate would have better incentive properties for the airport. We therefore propose a 95% recovery rate, but with an adjustment to the revenue threshold to keep the overall risk exposure constant. For a 50% revenue loss, the loss borne by Heathrow would be the same if the revenue threshold were 8% and the recovery rate 95% as if the threshold were 10% and the recovery rate 100%. Therefore we propose, to ensure a broadly similar exposure to risk, that the appropriate revenue threshold for a recovery rate of 95% is 8%. This approach ensures that Heathrow recovers the majority of the economic losses beyond the 8% revenue threshold but retains some incentives to maximise revenue even when it is below this threshold.

Using a lower recovery rate would expose Heathrow to more risk and lead to it having to take more steps to reduce cost in response to the lower traffic. Heathrow has already mitigated costs as passenger numbers have fallen. We consider that explicit adjustment for cost savings in the recovery mechanism would not be appropriate. Reasons include:

- Making an explicit adjustment for actual differences in operating costs removes proper incentives on Heathrow to manage its costs appropriately during the period;
- The revenue threshold proposed of 8% (or 10% with 100% recovery rate beyond) is already conservative in comparison to the approaches at other airports and they do not have adjustments to their recovery to adjust for opex savings. Including an adjustment for opex savings would therefore not be consistent with this revenue threshold;
- Much of the cost base at Heathrow is largely fixed. This makes making savings beyond a particular level very difficult;
- The revenue thresholds proposed and set out in Table 7 below represent over 30% of operating costs excluding those associated with ORCs. The loss Heathrow is therefore retaining is much greater than any amount it can save in operating costs;
- Based on the ratio of operating costs to revenue at Heathrow, using a recovery rate of 95% is equivalent to Heathrow mitigating reducing operating costs by around 1.5% for a 10% reduction in passenger numbers. As a consequence, a partial and realistic adjustment for operating costs is included;
- The exceptional costs of delivering the savings that have been made are considerable. In addition, dealing with Covid-19 and ensuring an effective recovery could lead to a significant increase in operating costs despite the lower passenger numbers.

In addition to the above, incentives on Heathrow to further reduce operating costs are unlikely to be in the long-term interests of consumers. Heathrow has reduced costs as far as it can without having to take asymmetric decisions. Further cost cutting is likely to be difficult to reverse as traffic recovers and would lead to lower service and higher costs in the future.

Basis of determination

The base revenue to which the 8% threshold is applied should be the revenue forecasts for 2020 and 2021 set out in the December 2019 IBP. This is the most recent pre-Covid-19 estimate of Heathrow's revenue and passenger numbers. Table 7 sets out the relevant revenue assumptions for each year and the resulting revenue thresholds. This proposal results in Heathrow bearing in full the first £426m of revenue losses over the two years.

Table 7 - Proposed Revenue Thresholds

(£m 2018p)	2020	2021
Forecast Revenue excluding ORCs	2,783	2,535
8% Revenue threshold	223	203

Table 8 sets out the proposed recovery amount to be obtained in each scenario.

Table 8 - Illustration of recovery through proposed mechanism

£bn (2018p)	Scenario	
	Delayed Recovery	[REDACTED]
Estimated Revenue Loss	2.2	[REDACTED]
Amount recovered in RAB	1.7	[REDACTED]
Amount borne by Heathrow	0.5	[REDACTED]

Table 8 shows that the residual risk expected to be borne by Heathrow is around £0.5bn. This represents a loss equivalent of around 3% of RAB as at the end of 2020, or around 8% of the notional equity in Heathrow. This is a considerable loss and well beyond any that might be expected to be borne by most regulated businesses.

How an adjustment should be applied

Any form of adjustment would need to deliver higher revenue to Heathrow in future years to offset the revenue lost in this year. A clear policy on RAB adjustment is the right approach: it would not only allow appropriate recovery of value, it would also make immediate differences in the financing constraints such as debt to RAB metrics that apply to Heathrow. An additional advantage to a RAB based approach is that it allows more flexibility over time in how the recovery amount is reflected in charges, taking into account affordability and financeability at subsequent price reviews. Other key advantages of a RAB based adjustment approach include:

- The impact on charges of the recovery amount would be lower for a RAB based approach as the recovery would likely be over a much longer timescale;
- A RAB based approach will give investors greater confidence in the long-run durability of the adjustment;
- A RAB based adjustment would avoid the need to severely constrain investment in 2021 and H7;
- A RAB based adjustment will help retain the option to finance expansion at a later date; and
- A RAB based adjustment would help preserve the integrity of the RAB as it would offset the depreciation not recovered through revenue;

Therefore, we propose that the adjustment should be implemented through an adjustment to RAB to reflect the recovery amount.

The expected adjustment is between £1.7bn [REDACTED] (2018p). Regulatory depreciation for Heathrow in 2020 and 2021 is £1.6bn (2018p). At the same time the exact actual adjustment derived by the proposed approach cannot be known ahead of time. Given these, we propose the CAA adopt a formal policy decision committing to the following approach for implementing the adjustment:

1. Apply a depreciation holiday for 2020 and 2021. This means that Heathrow's RAB will be higher at the end of 2020 and 2021 by a known amount. This will increase Heathrow's access

to finance and give short-term confidence to investors. Since the RAB is not currently set out in the licence, we do not consider that a formal licence modification is required for this step. However, the CAA's policy decision should be accompanied by an express 'revision' to the depreciation arrangements set out in the CAA's iH7 policy decision (i.e. CAP1852 Appendix C).

2. Apply an adjustment to the starting RAB in the H7 determination based on the actual revenue outturn for 2020 and the forecast revenue for 2021 to correct for any difference between the required RAB change and that implemented through the depreciation holiday. The recovery amount in calculated in 2020 and 2021 based on actual and forecast revenue (excluding ORCs) will be:

   Recovery amount = (Forecast revenue * 0.92 – actual revenue) * 0.95

3. No depreciation would be applied to this element of the RAB for H7, but return would be included in prices from 2022 in H7.

4. A final adjustment to RAB would be made at the end of 2022, reflecting actual outturn revenue for 2021 and prices for 2023 onwards adjusted accordingly.

Steps 2-4 would be reflected in the H7 price control licence conditions. However, to provide the necessary confidence, it is essential that the CAA's policy decision setting out step 1 also provides assurance that the CAA intends to adopt steps 2-4 in the H7 price control and recognises that Heathrow and its investors will have to make business decisions in reliance on that statement. Step 4 also ensures that and adjustment will be calibrated to actual outcome rather than a forecast.

Table 9 sets out estimates of the amount of revenue that would be recovered through the RAB as a result of this mechanism for the delayed recovery [REDACTED].

Table 9 - Illustration of recovery through proposed mechanism

£bn (2018p)	Scenario	
	Delayed Recovery	[REDACTED]
Estimated Revenue Loss	2.2	[REDACTED]
Amount recovered in RAB	1.7	[REDACTED]
Amount borne by Heathrow	0.5	[REDACTED]
Estimated impact on allowed yield in H7	£1.2 per pax	[REDACTED]

Table 9 shows that the consequence of the adjustment on future charges at the airport is relatively small and amounts to less than 0.5% of a typical fare of £400. As such it will have little impact upon consumers.

Heathrow has previously provided evidence to the CAA setting out estimates of the congestion premium achieved by airlines due to the capacity constraints at Heathrow. The Frontier Economics analysis showed that the pre-existing premium at Heathrow was conservatively between £2.0 and £2.6bn per annum. This means that the amount being sought for recovery is equal to or less than one year's premium achieved by airlines flying out of Heathrow. The current situation means that the future congestion premium at Heathrow is unclear, however as demand recovers during H7 it is highly likely that the premium recovers to previous levels. Therefore, in practice it is extremely unlikely that there will be any impact from the recovery mechanism on charges for consumers in H7.

We consider this approach allows a clear process to be implemented during the pandemic whilst the precise impact on Heathrow is unclear. It will not lead to any change in revenue from consumers until 2022 and therefore any short-term under or over-recovery will not impact consumers. However, it will assist significantly in helping Heathrow access additional finance and signal very strongly to creditors and rating agencies that there is appropriate and substantial mitigation in place. In addition, we consider that the revenue recovery approach implemented through such a RAB adjustment mechanism best meets the four criteria we set out above.

Annex 3 sets out answers to a number of possible questions the CAA might ask in response to the request being made by Heathrow and shows our proposed approach is fair, reasonable, and in the interests of consumers. We address:

- Why action needs to be taken now and not left until H7;
- How the proposed adjustment affects Heathrow's returns over a longer period;
- Why it is appropriate that Heathrow is supported, given challenges are being faced across the whole aviation sector; and
- Why our proposal is more in the interests of consumers than simply requiring our shareholders to bear the full extent of losses.

Timing for reaching a policy decision

In order to deliver benefit to consumers, an updated Covid RAB adjustment policy needs to be in place as soon as possible. We consider that the following time schedule is realistic and deliverable:

1. Review case for RAB adjustment and publish public consultation September;
2. Consultation responses due September;
3. Publish a new policy decision end October.

If the level of traffic in September is below our forecast, Heathrow would have to start implementing additional actions to protect itself from a prolonged contraction in the next few weeks. The presence of a supportive consultation in September would allow Heathrow to defer or ultimately avoid asymmetric decisions in this situation.

Annex 1: Regulatory consistency with the Q6 arrangements

We show that the proposed adjustment mechanism is entirely consistent with the Q6 settlement:

- Q6 contemplated a mechanism for rebalancing risk in certain circumstances;
- The proposal is consistent with the level of risk assumed in the Q6 WACC;
- The proposal is consistent with the shock allowance in Q6;
- The proposal is consistent with the airline – airport deal for iH7; and
- The proposal leads to the right incentives.

Q6 contemplated a mechanism for rebalancing risk in certain circumstances

During the Q6 consultation period the CAA considered whether specific mechanisms should be included in the licence to address the balance of risk and reward. Heathrow was in favour of such a mechanism, but the CAA concluded that it wasn't ultimately necessary. In reaching the conclusion that it would not include a specific licence modification to address risk sharing, the CAA clearly contemplated that there were alternate routes available to rebalance any inequality and that the CAA would be prepared to utilise those routes if necessary.

In reaching its decision the CAA gave Heathrow a clear expectation that it would use its discretion and review the balance of risk the airport bears in the event of an unexpected situation. The impacts of Covid-19 have resulted in a marked imbalance of risk, which Heathrow is now asking the CAA to remedy via a policy amendment. Heathrow respectfully submits that a failure to address these problems would be fundamentally inconsistent with the basis on which the Q6 and iH7 settlements were determined.

The Q6 and iH7 settlements only stand on the basis that they could and would be reassessed if necessary. If the CAA were not to reassess the balance of the price control as a result of a request by Heathrow in these circumstances, this would clearly be inconsistent with the Q6 decision and contrary to the duty of the CAA to carry out regulatory activities in a consistent manner. In addition, it would represent a major breach of regulatory trust.

The proposal is consistent with the level of risk assumed in the Q6 WACC

We consider that the proposal is consistent with the level of risk assumed in the Q6 WACC:

Asymmetric Risk

The Q6 cost of equity was based on a CAPM approach that used estimates of airport equity betas to obtain an estimate of the asset beta of Heathrow. A key assumption underpinning the approach used to estimate the equity betas was that returns are normally distributed. Heathrow argued at Q6 that its returns were asymmetrically distributed as significant underperformance was far more likely than significant over-performance and that an adjustment should be made for this asymmetry.

In its final determination the CAA concluded that an adjustment for asymmetry would not be appropriate based on analysis by PWC that suggested the long-run standard beta estimate should be used because "on average over the long-run it was within the margin of accuracy of the second moment CAPM".

The Covid-19 epidemic has exposed the extremely asymmetric risk faced by airports. The downside is much greater than is implicitly assumed in the derivation of asset beta, and therefore the asset beta used at Q5 does not result in an adequate remuneration for the risk borne in Q6. In order for this asset beta to be representative, a mechanism would need to be in place to largely mitigate the impact of extreme swings as we propose.

Adjustment mechanisms at comparator Airports

At Q6 the airport beta for Heathrow was largely derived by reference to AdP and Fraport. In the CMA inquiry into NERL they also included Aena in their set of beta comparators. Table 6 sets out a summary of their ability to adjust their prices to reflect exceptional circumstances. This table shows that other listed airports have mechanisms in place to mitigate the risk from large changes in passenger numbers. For example, Aena, whose beta is the highest of the three, has a specific mechanism that allows it to recover revenue losses of greater than 10%. This is equivalent to the protection than being sought by Heathrow.

Estimation of NERL Beta

The CMA in its more recent assessment of the WACC for NERL considered that its risk was in line with that of comparator airports and it used the observed asset betas of compactor airports to determine the range of asset beta appropriate for NERL.

As described above, NERL has a traffic risk sharing mechanism that limits its risk exposure to 30% of the downside outturn between 2% and 10% of forecast and to no risk outside this range. This limits the exposure of NERL to -4.4% of revenue. The CMA did not adjust the estimated beta to reflect this risk sharing mechanism, therefore their estimate is applicable to a company that has a similar mechanism. The mechanism proposed above exposes Heathrow to greater revenue risk than NERL. This means that the mechanism proposed is consistent with an asset beta estimated directly from comparator airports without adjustment.

Underestimation of Q6 cost of equity

Table 10 sets out the estimates of asset beta used by the CAA at Q6, Heathrow's submission at Q6, the CMA's recent estimate of asset beta for NERL, and the current observed betas for airports following the Covid-19 pandemic.

Table 10 - Estimates of airport asset beta (assuming debt beta of 0.05)

	CAA Q6	Heathrow Q6	CMA NERL	Current Airport Beta
Asset Beta	0.471[10]	0.55-0.60	0.515-0.615	0.8-0.9

Table 10 shows that the asset beta used by the CAA at Q6 is significantly lower than the recent estimate of airport betas by the CMA. The mid-point of the CMA range at 0.565 is within Heathrow's submission of 0.55 to 0.60 at Q6.

The recent market data (see Figure 5) for airport asset betas shows that Covid-19 has led to a significant re-rating of the risk of airport equity. This shows that the market had not previously priced in the potential impact of such extreme events. This in turn means that substantial mitigation is required for the Q6 estimate of asset beta to be consistent with the equity risk of Heathrow.

[10] CAA estimate of asset beta was 0.501 with a debt beta of 0.1 (CAP 1140). The equivalent asset beta for a debt beta of 0.05 at 60% gearing is 0.471

The proposal is consistent with the 'shock allowance' for Q6

For Q6, a shock allowance of 1.37% of traffic was included to take account of the average impact of small asymmetric shocks on Heathrow passenger numbers. This allowance was based on an analysis of events that occurred between 1991 and 2012 (see Figure 2 above). For the iH7 forecasts, the shock allowance was reduced to 1.07% reflecting the updated actual traffic between 2012 and 2017.

The Covid-19 epidemic is an additional shock that needs to be taken into account for the analysis. If no adjustment were in place, then the shock adjustment factor would have to increase to around 4.2% based on the forecast impact. However, the adjustment mechanism proposed above allows a separate recovery approach for deviations above 8%, therefore for the shock allowance, only the first 8% loss of passengers in any year needs to be considered.

The impact of this can be illustrated by updating the 2017 estimate of 1.07% to take into account two additional shocks of 8% (reflecting the mitigated impact in 2020 and 2021). This results in an updated estimate of the shock allowance of around 1.6%. This shows that the Q6 allowance for shocks was likely too low even taking into account the impact of Covid-19 mitigated through the adjustment mechanism proposed above.

The proposal is consistent with the airline deal for iH7

Heathrow's proposal is fully consistent with the airline deal for iH7. The Heathrow proposal would not result in a change in the existing pricing methodology during 2020 or 2021. Price changes would only take effect in H7, and the iH7 airline deal is clear that it was never intended to pre-empt or dictate the CAA's approach to prices in H7.

The airline deal for iH7 was based on a continuation of the underlying Q6 regulation and a price path of RPI-1.5%. We are not proposing any change to these arrangements which would disadvantage airlines compared to a continuation of the iH7 airline deal in 2020 or 2021. Even leaving aside this fundamental point – airlines are not disadvantaged during 2020 or 2021 because no variable volume rebates would be payable under the iH7 deal; and the risk-sharing in our model is more advantageous to airlines than the iH7 deal in any event.

The iH7 deal set out a risk sharing arrangement for revenue and charges over the two years including: (i) a rebate of £260m for the airlines in the event certain levels of traffic were met; (ii) a reduction in the rebate if traffic levels fell below 79m passengers; and (iii) the rebate being zero if passengers fell below 74.5m and 76m customers in 2020 and 2021 respectively. Passenger numbers have fallen below this threshold for 2020 and therefore no additional rebate is due for 2020. Passenger numbers for 2021 are also anticipated to be below 76m and therefore it is forecast that no rebate will be payable in 2021 either. Early rebates were also payable to airlines based on 2019 passenger volumes but these amounts have already been committed. Therefore, no additional rebates are likely to be payable, and so they do not need to be addressed in Heathrow's proposal.

Furthermore, the proposed RAB adjustment Heathrow is proposing would require Heathrow to bear all the risk from the first 8% of revenue losses, and 5% of the remaining risk. This is equivalent to bearing 10% of revenue losses and none of the remaining risk. The passenger numbers forecast in the IBP for 2020 and 2021 were 81.5m and 80.9m, so the corresponding passenger numbers at the 10% risk threshold are approximately 73.4m and 72.8m. These levels of passenger numbers are below the levels set in the iH7 agreement for which the additional rebate would reduce to zero. This means that at the level of risk borne by Heathrow no rebate would be due from Heathrow to the airlines in any event.

Given this, we consider that the proposed recovery mechanism is not inconsistent with and does not in any way disadvantage airlines either in 2020-21 or later, compared to the continuation of the iH7 agreement.

The proposal leads to the right incentives

We consider that the proposed approach results in Heathrow having the right incentives even in current exceptional circumstances.

The recovery rate of 95% ensures that Heathrow is incentivised to maximise income where this is appropriate – for example through further cost savings or additional revenue in the single till - as increasing income will minimise its losses. A lower recovery rate could provide a yet stronger incentive. However, in order to provide the right overall risk balance in comparison to other airports this would have to be compensated for with a lower revenue threshold than 8% (e.g. a 6% threshold for a 90% recovery rate) to maintain the overall risk balance.

A less stringent revenue threshold of e.g. 6% of normal rather than 8% would result in a greater chance of the approach being triggered in future by events that might not be regarded as exceptional. A lower revenue threshold is also unlikely to align well with airline and partner priorities in a difficult market. Therefore, we consider that the 95% recovery after the first 8% of revenue loss is the right balance with clear support in regulatory precedent.

The proposed mechanism does not make any adjustments for cost savings made by Heathrow. This fully preserves the incentive for Heathrow minimise costs as much as possible taking an appropriate long-term view. However, the fact that it recovers the majority of lost revenue beyond the threshold means that the airport is not forced to make deeper short-term asymmetric costs that would not be in the long-term interests of customers. The revenue recovery rate of 95% means that some account is made implicitly of costs reducing as passenger numbers reduce, and a lower recovery rate would increase this effect. However, as above this would change the overall balance of risk and require re-calibration of the revenue threshold. In addition, it would increase the pressure on Heathrow to make cost savings that were not in the long-term interests of consumers.

Annex 2: Summary of approaches in other airports and sectors

European Airports

Most comparator airports across Europe have adjustment mechanisms that allow them to recover some or all of their losses in the event of changes in demand or revenue across the period. These either give airports the opportunity to increase charges in the next year or the next regulatory period. In the case that there is no specific adjustment mechanism, there is often the opportunity to recover losses in full in the following year due to the flexible nature of the framework.

Aeroports de Paris

AdP's regulatory framework is a contract between the airport and the state for the regulatory period. Within that period, charges are set annually based on the Economic Regulation Agreement (ERA) established at the start of the period. Within the current ERA, which runs from 2016-2020, there are a number of provisions which allow for the price control to be amended or terminated in the event of large changes in passenger demand or a substantial change in economic conditions. The framework also includes an in-period volume risk sharing mechanism, further protecting AdP from changes in demand.[11]

Traffic risk sharing

AdP has a deadband corresponding to a difference of +/-0.5% in which it bears the risk of traffic out/under performance. After this point performance is shared with 50% of surplus or 20% or shortfall added to the airport charge from 2018 onwards. This adjustment can be made up to a cap of +0.2% and -0.5% impact on charges.

Review or termination of the agreement

The ERA includes two specific review and termination clauses:

- The first related to passenger numbers and investment. If passenger numbers breach a threshold of around 2% versus forecast for three consecutive years or if investment is less than 75% of that set out by the ERA then the agreement can be reviewed.
- The second is in the case of exceptional and unforeseeable circumstances that lead to a disruption of the economics of the agreement. In this case, a review or early termination of the agreement can be requested.

As provided for by the framework, AdP has informed the French regulator, DGAC, of its intention to terminate the current agreement and return to a purely annual price setting framework. This will remove the ceiling tariff set by the ERA and allow AdP to price according to its latest forecasts for 2021 onwards.

Fraport

Frankfurt is subject to a relatively flexible regulatory regime, in which charges are agreed between the airport and airlines and signed off by the Federal Ministry. Under this framework, the airport has the power to call for a tariff review in the event demand falls below expectations, thus mitigating the impact of demand deviations on profits and cash-flows Frankfurt's tariff proposals are subject to a statutory consultation process and appropriate revision before being sent to the approving authority. The approving authority then has the power to approve or reject new tariff proposals

[11] https://www.parisaeroport.fr/docs/default-source/groupe-fichiers/finance/relations-investisseurs/r%C3%A9gulation/2016-2020/2016-2020-economic-regulation-agreement.pdf?sfvrsn=242508bd_8

Aeroporti di Roma

Charges at Rome airports are set on a five-year basis as part of a longer concession agreement. The regulatory framework is fixed for the length of the concession agreement, until 2044, but tariffs are updated on a five-year basis to adjust for service quality targets, traffic forecasts, investments and some CAPM calculations. The current five-year period runs from 2017-2021.

The framework includes adjustment mechanisms for deviations of traffic volumes versus the forecast at the beginning of the period. This mechanism adjusts for the impact of traffic volumes at the start of the next five-year period.[12]

Traffic risk sharing

The framework has a deadband corresponding to +/-5% of traffic volumes. If traffic volumes across the period fall into this band, AdR takes all the risk. If traffic volumes fall outside of this 5% band across the five years, there is a sharing rate of 50% on surplus and shortfall revenues. If traffic is more than 5% under the forecast for the period, 50% of the shortfall revenues will be added to the allowed costs for tariff calculations in the next period.

The framework also allows for a rebalancing of tariffs for the remainder of the regulatory period if there is a yearly variation of +/-6% of traffic volumes.

In addition to the regulatory mechanisms, AdR's concession agreement also includes a material adverse changes clause. This entitles the concession holder to a review of the business plan for material changes which are outside of the control of the concessionaire. This review mechanism provides additional protection to the airport, allowing for a potential review of the concession agreement in unforeseen circumstances.

In addition, the Italian Government has passed a new law which, in light of the damages caused by Covid 19, will extend by 2 years all Italian Airport concessions (as such AdR concession would be extended from 2044 up to 2046). The law will be fully implemented once an ad hoc implementing decree is released by the Government.

Aena

Aena's charges are set in periods of five years and are set on the basis of a network control, covering all airports in the Aena network. The current regulatory period, or DORA, runs from 2017-2021. The airport charges legislation underpinning the regulatory framework, Act 18/2014, states that Aena should bear the risk of all deviations in passenger volumes versus the forecast except for in exceptional circumstances as defined in the relevant DORA.[13]

The DORA defines an exceptional event as an annual increase in passenger volumes of 10%. The Act also states that the DORA should be modified during the period in exceptional circumstances that were unforeseeable at the time the DORA was set and are not due to the actions of the airport operator. It defines a trigger for this as an annual drop in passenger numbers of 10%.[14] In this case, the airport operator can apply for a modification to the price control. This effectively gives Aena a symmetrical 10% risk threshold before the price control will be modified.

[12] http://www.adr.it/documents/17615/9522342/2017-21+Tariffe+-+Incontro+Utenti+2016+ +ENG+v+9+settembre.pdf/4f9bd37a-6c53-40a9-b6a7-c2326d306d27
[13] file:///C:/Users/LHRSquireL/Downloads/Airport+Regulation+Document+DORA+2017-2021b%20(4).pdf
[14] https://www.boe.es/boe/dias/2014/10/17/pdfs/BOE-A-2014-10517.pdf

Schiphol

Schiphol's framework, under the revised 2017 Aviation Act, sets airport charges for a three-year period. The Aviation Act states that the charges levied can be adjusted to take account of actual performance on a wide variety of building blocks, including performance against passenger forecast. The airport can choose to recover the difference between the forecast and actual revenue in the form of a 'settlement' split equally over the next three-year period. While this is discretionary, it provides the airport with the opportunity to recover any losses through the period.

The Aviation Act also has a clause for 'exceptional and unforeseen circumstances'. This allows the airport to rest the charges for the remainder of the three-year period in the event that there is a material change in circumstances. Exceptional and unforeseen circumstances are defined as circumstances which:

- The airport operator could not have foreseen at the determination of charges;
- Have a disproportionately significant effect on and disrupt the scope of aviation activities and associated revenues;
- The airport operator has limited influence on;
- Cannot be mitigated or only mitigated to a certain extent
- Mean that unchanged maintenance of the current charges cannot be expected.[15]

Dublin

Dublin airport's economic regulatory framework is similar to that in place at Heathrow. Charges are set for a five-year period using a RAB-based, single-till framework and a building block-based methodology. In October 2019, the Commission for Aviation Regulation (CAR) set out its final determination for charges at Dublin for the period 2020-2024.

Article 32 (14)(a) of the 2001 Aviation Act provides for a review and potential reopening of the regulatory framework where CAR or another party considers that there are substantial grounds for doing so.[16] Given the significant impact of Covid-19, CAR has recently released a consultation on the next steps required to assess whether or how Dublin's regulatory framework and the recent determination should be adapted. CAR has identified the following options for next steps and is consulting on the best way forward:

1. **No interim review or pause action until there is more certainty on the situation**. CAR notes that the regulatory model can do little in the short-term to address the issues without a review and that this could cause issues further down the line
2. **Interim review to address immediate issues.** This review would seek to address immediate unintended pricing issues in 2020/21 but would not be likely to impact the core aspects of the 2019 determination. This could help with issues around yield concentration in 2020.
3. **Full review of the 2019 determination.** This would be a more wide-ranging review of the 2019 determination. This could involve assessment of a number of scenarios over the coming months with the most appropriate scenario selected in 2021.
4. **Combination of options two and three.** CAR considers this may be the most appropriate response.

In addition to the question regarding of reviewing the framework, CAR has taken some more immediate steps to mitigate the impact of Covid-19. On 30 April CAR suspended financial penalties

[15] https://www.schiphol.nl/en/download/b2b/1523624122/1T8kLVjBBmOiaKqOO4WC0K.pdf, Article 22
[16] http://www.irishstatutebook.ie/eli/2001/act/1/section/32/enacted/en/html

associated with all quality of service measures at Dublin for the foreseeable future. While the airport still has to measure and report on performance against the measures, where this is still possible, and provide explanations for any breaches, CAR considered that social distancing measures and other restrictions have changed the way services can be delivered meaning that penalties are no longer appropriate.[17]

NERL

NERL has a volume risk sharing mechanism based on the European Performance and Charging Regulations that sets out what happens to revenues in the event that actual traffic (specifically, TSU volumes) differs from forecast traffic. The impact of this mechanism is:

- NERL bears the risks of revenue deviations of up to +/- 2%;
- The impact of revenue deviations of between 2% and 10% is shared between NERL and its Customers with 30% going to NERL, 70% to customers. The correction is applied 2-years in arrears;
- The impact of revenue deviations beyond 10% is passed on to customers in full.

This means that the total revenue downside for NERL is capped at 4.4% of revenue.

Other UK Regulated Businesses

Water

The water sector has two mechanisms for managing in period risk to events outside management control:

- Interim determinations. These allow the water companies, or Ofwat, to seek revised price limits if specified changes occur in the period since price limits were last set; and
- Substantial effect determinations. These allow the water companies, or Ofwat, to seek revised price limits if a circumstance beyond a prudent company's control changes, providing that the total adverse or favourable impact on the company satisfies a prudence condition (which differs depending on whether the circumstance is favourable or adverse) and also passes a materiality threshold.

The interim determination process relates to pre-specified items or new legal obligations that lead to additional material costs or loss of revenue. The threshold for action is the NPV of additional costs or lost revenue exceeds 10% of turnover. In the event of a successful claim, revenues are adjusted in following years to allow the company to recover any efficient impact.

The substantial effects determination is for situations that are neither notified items nor relevant changes of circumstances that lead to a financial impact with an NPV of greater than 20% of revenue. If the threshold is triggered, then the company is not necessarily made whole, but Ofwat must take action to ensure that it obtains a reasonable return on capital in line with its financing duty.

There have been two successful substantial adverse effect determinations in 2003 made by Northumbrian Water (NES) and Bournemouth & West Hampshire Water (BWH). Both claims were made in 2003 for adjustments for 2004/05, the last year of the 2000–2005 price control period and were made in respect of lower-than-expected revenues. In NES's case, the revenue reduction was driven primarily by a declining level of demand from large users. In BWH's case, revenues were lower than expected for both metered domestic customers and for non-households (mainly caused by local

[17] https://www.aviationreg.ie/_fileupload/2020/2020-04-29%20COVID19%20QoS%20DUB.pdf

business failures). Ofwat adjusted price limits for both companies to recover the majority of the losses they had incurred.

Energy

Managing uncertainty has always been high on Ofgem's agenda, both for the current RIIO price control and the RIIO-2 price control for which the price control process is on-going. In RIIO, Ofgem introduced a number of mechanisms for managing uncertainty. This included:

- Individual re-openers for adjusting price control revenue requirements to reflect updated cost forecasts for uncertain projects/ requirements where these equate to a deviation from expected costs equivalent to one per cent of base revenue; and
- A mid-period review to adjust for "*material changes to existing outputs that can be justified by clear changes in government policy*" or "*new outputs that may be needed to meet the needs of consumers and other network users*"[18]

For RIIO-2, Ofgem has decided to retain the same mechanism and threshold for individual reopeners. However, there will no longer be a mid-period review as the duration of the RIIO-2 period has been reduced from eight back to five years.

While there is no general price control re-opener provision relating to material changes or financial distress, all Licences for regulated energy and gas companies include a special condition relating to the disapplication of the price control. In guidance published regarding arrangements for managing financial distress, Ofgem set out that, while it would consider all disapplication requests, it would be minded to only consider requests for disapplication of price control terms where:

- It can be demonstrated that adequate provision is not provided by the existing price control settlement, including where provision is not already made for movement in risk; and
- The cause of financial distress is largely due to factors beyond management control; and
- Re-opening the settlement could reasonably be expected to relieve the financial distress in a timely manner; and
- The impact of re-opening would not adversely impact consumers or third parties. [19]

Given the potential impact on a company's financial health, Ofgem commits to conducting a review for a disapplication in a timely manner.

Rail

As part of Network Rail's price control, the ORR has specifically included reopener mechanisms in its regulatory settlement. There are two different reopener mechanisms, one for the totality of Network Rail's operations and one which applies solely in Scotland. These are:

- In the case of a material change in the circumstances of Network Rail or relevant financial markets; or
- If Network Rail's expenditure in Scotland is forecast to be more than 15% higher than the determination over a forward looking period of three years.

ORR notes in its determination that, given the importance of an enduring regulatory settlement on Network Rail's incentives and certainty for the industry, reopener mechanisms are only intended to

[18] https://www.ofgem.gov.uk/sites/default/files/docs/2013/02/riioed1decuncertaintymechanisms_0.pdf, paragraph 5.2
[19] https://www.ofgem.gov.uk/ofgem-publications/50667/guidance-document-final-oct-09pdf, Section 4.3

be used sparingly to cover "*exceptional events that have a material effect on Network Rail*".[20] However it also notes that reopener mechanisms are required where material events which could not reasonably have been foreseen and are beyond management control have an impact on Network Rail. ORR sets out explicitly that in this situation some of this risk should be transferred to customers and funders.[21]

[20] http://www.infrastructure-intelligence.com/sites/default/files/article_uploads/ORR%20CP5%20Draft%20%20Determination.pdf, paragraph 12.57

[21] http://www.infrastructure-intelligence.com/sites/default/files/article_uploads/ORR%20CP5%20Draft%20%20Determination.pdf, paragraph 12.65

Annex 3: CAA Questions

During the course of initial discussions with the CAA it raised a number of specific questions. We consider that the relevant issues have all been addressed in this submission, however, for the sake of completeness we have also addressed the questions individually below. Heathrow notes at the outset that the CAA should be focussing on the solution which delivers the best outcome for consumers within the context and should not be distracted from that by unrelated analogies or issues.

Why the CAA must take action now and not wait until H7

We have set out in this submission how the proposed RAB based adjustment is in the interests of consumers. A significant proportion of the benefits to consumers that arise from the mechanism require the CAA to take action now and implement it as soon as possible. Failing to take action now would:

- Not be consistent with its duty to further the interests of consumers; and
- Not be consistent with its duty to ensure that Heathrow is financeable.

Impact on consumers by delaying action to H7

A key benefit from the proposed adjustment mechanism is that it will enable Heathrow to avoid asymmetric actions now in 2020/21 that are not consistent with the long-term interests of consumers. If the adjustment mechanism were not decided until the H7 Final Determination, then Heathrow would not be able to rely upon it to avoid such decisions. Therefore, it would have to take such actions when required and the delay would lead to significant ongoing consumer detriment.

In addition, if the adjustment mechanism is not set out clearly in 2020 then Heathrow will not be able to increase investment in service and the recovery in 2021. This will have impacts on millions of consumers in 2021 alone. On an even larger scale, an inadequate adjustment mechanism would also constrain investment in H7 as the company focus would have to be solely on rebuilding its balance sheet for many years to come. Such constraints on investment would lead to further consumer detriment as critical airport developments were unnecessarily delayed or prevented.

Impact on financing by delaying action to H7

As set out above, the Covid-19 pandemic has had a significant impact on the finances of Heathrow. Forecasts indicated we would be in breach of lending covenants and therefore we have sought and achieved a waiver from our creditors that has allowed the airport to continue to operate.

[REDACTED]In contrast, by changing prospective RAB clearly in advance through policy action, the proposed RAB based reopener would reduce anticipated gearing in the near term. This would allow more debt to be raised whilst being in compliance with the waiver. In addition, it would radically improve the case for new equity both in terms of potential equity return and confidence in the regulatory mechanism overall in the longer term. This would allow Heathrow to continue to finance its activities in 2021.

If the adjustment mechanism, even if retrospective, were not to be decided until H7 then it can give no comfort to investors ahead of the final determination. [REDACTED]Therefore, delaying until late 2021 or 2022 is inconsistent with the CAA's financeability duty.

The CAA must act to allow recovery of current losses not just adjust H7

This submission has set out in detail why failing to allow Heathrow to adjust for some of its current losses by way of an adjustment to the RAB would have an adverse effect on consumers and risk the

CAA not fulfilling its statutory duties. By way of summary, the key issues and detriments that will follow from a failure to allow the RAB adjustment to account for iH7 impacts are:

- Heathrow's financing position will be severely undermined, resulting in an inability to invest in projects or maintain operations and services which would benefit consumers both in 2020/21 and onwards into H7 (as Heathrow will have to focus on rebuilding financing).
- Heathrow will also be unable to provide material support to airlines now, and cannot therefore be part of helping the aviation sector as a whole recover, simply because of the misalignment and constraints of regulation.
- Investor confidence in the airport regulatory regime will be undermined – as the expectation that regulatory actions would be taken in extreme circumstances which was integral to the settlement would not have been met in practice. This will lead to far higher perceived risk, and thus a long-term higher WACC. Aeronautical charges will increase long term, most likely leading to direct increased costs for consumers.
- Heathrow's ability to respond positively to the Covid-19 crisis and rebuild consumer confidence will be seriously impaired – damaging the interests of consumers and other stakeholders. Long term this will only undermine the position of Heathrow as a hub resulting in further negative impacts for the whole UK at a time of great uncertainty.

How the proposed action affects Heathrow's returns over a longer period

The CAA is required by statute to consider this proposal by examining whether the proposal achieves the CAA's primary statutory duty to further the interests of consumers. Any prospect of higher potential returns for Heathrow, however low in returns are in practice, will of course be relevant, in particular insofar as they lead to higher costs for consumers. However, as we have demonstrated in this submission, given the extraordinary circumstances of the Covid-19 pandemic, the alternative is demonstrably far worse for consumers – it will lead to a situation where:

- Cuts have to be made for short-term survival, which will compromise long-term efficiency, and the ability of the airport to meet operational requirements and maintain availability, quality and choice for consumers as demand scales back up;
- The viability of any future expansion will be at risk, compromising service availability and the ability to address long-term capacity constraints which harm consumers; and
- Heathrow will be permanently perceived as a riskier business, with consequences for its credit rating and the cost of capital, leading to higher charges for consumers in the long term.

Our submission clearly shows that implementing the type of risk-sharing mechanism Heathrow is proposing provides a fair outcome. It is one which provides less financial support than other major airports around Europe might expect from their regulatory frameworks. It is therefore at least consistent with the return comparisons upon with the CAA bases its return assumptions. Fundamentally and importantly, it is a mechanism which delivers more for consumers, regardless of any impact on Heathrow's realised returns.

It is simply not correct (and would be a fundamental legal and economic error) to assume that because the proposal involves support for Heathrow's financeability, it 'must be' inconsistent with consumer welfare. Indeed, the opposite is true: the Civil Aviation Act *expressly specifies* that financeability of licence holders is a fundamental and essential consideration in furthering consumer interests.

More broadly, it is widely accepted in UK economic regulation that the best results are achieved when returns for investors and consumer welfare improvements are *not* perceived to be fundamentally in tension but where the regulatory system can align these interests. That is exactly what Heathrow's proposal does: it requires Heathrow to bear a significant burden of the losses (thereby incentivising Heathrow to reduce those losses) while not requiring it to bear so much of those losses that further investment (including investment which would lead to efficiencies or a faster recovery) becomes impossible and consumers are forced to bear higher costs simply to compensate for Heathrow's higher perceived level of risk.

Two other points are also worth drawing attention to in the context of this question, to demonstrate that Heathrow's proposal is fair and reasonable.

First, an adjustment is only required as a result of this most exceptional of circumstances. Applying the same mechanism to previous circumstances demonstrates this well. For example, Heathrow suffered very low returns during the Global Financial Crisis in 2008 to 2010 – far below the regulatory expectation. However, the revenue lost even then was not enough that Heathrow would have triggered the adjustment mechanism proposed. The mechanism as proposed can thus be understood as in no way intended to provide a regulatory 'guarantee' of achieving any particular level of return. Instead, it is a proposal which recognises that, in this case, the airport's losses – and the consequent impacts on investment and cost of capital – are so severe that the consumer interest would not be served by doing nothing and such losses were in no way anticipated in the settlement.

Secondly, as further evidence that Heathrow's proposal is far from being a 'guarantee' of returns, let alone adequate or excessive returns, is the comparison to CAA targeted returns over the long term. Heathrow has now consistently underperformed against those targets. Apart from a few years at the end of an unprecedented boom for aviation in the late 2010's Heathrow has not made returns in any single year anywhere near those targeted by the CAA as being appropriate for Heathrow. More fundamentally, taken as a long run average over multiple settlements, the underperformance is stark. This is illustrated in the two graphs below.

Figure 6 shows that even before the impact of Covid-19, the long-term return on RAB was below the appropriate rate identified by the CAA. The impact of Covid-19 in 2020 and 2021 has made this worse. This represents a level of sustained shortfall in appropriate returns for at least 19 years. The chart also shows that even after implementing the proposed adjustment mechanism, the returns for Heathrow remain below the CAA target return over this period.

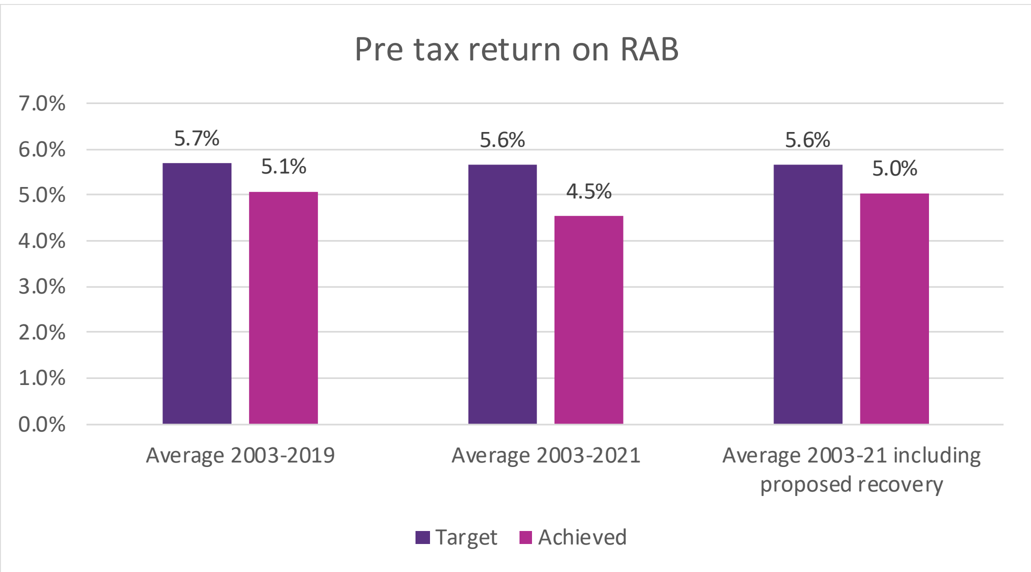

Figure 6 - Return on RAB

Figure 7 shows that the dividends paid to shareholders[22] are considerably and consistently below the cost of equity, which is the level for dividends that would be expected for a regulated company in steady state.

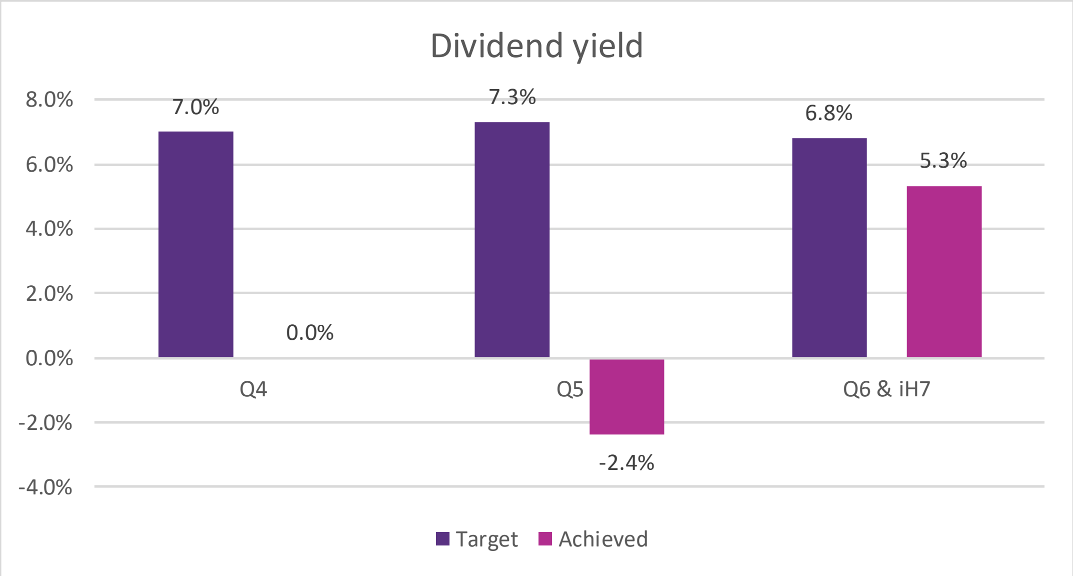

Figure 7 - Dividend Yield

Between 2006 and 2012 Heathrow did not pay any dividends and it will pay no further dividends in 2020 or 2021. Equity injections were required in Q5.

In combination, these charts show that Heathrow's regulatory framework has not allowed it to make the appropriate level of returns over an extended period. The proposed adjustment will help ensure that this regulatory misalignment is not made worse.

It is appropriate that Heathrow is supported through regulation even if others are not

Challenges are currently being faced across the whole aviation sector. However, Heathrow is a regulated business, and the only price-controlled airport in the UK. This limits the ability of Heathrow to respond through changing price. We have clearly demonstrated above that to recover the losses from the Coivid-19 pandemic would require sustained outperformance of over 5% on top of the cost of equity for ten whole years. This cannot be delivered through outperformance of regulatory settlements – either in practical terms or in regulatory good practice. Nor do we foresee that returns for future settlements will be set at some higher than market level to somehow 'compensate' for past underperformance. The airport cannot raise prices above the regulatory cap to do likewise. Therefore, the only way that Heathrow can actually achieve anything approaching the long-term outcomes sought by the regulatory settlement is to use a regulatory mechanism to recover some of the losses.

In contrast, airlines are able to change their prices and are thus able to recover their losses over a longer period. The price that they can charge will be limited by competition between airlines. However, the additional financing costs airlines have incurred will need to be recovered and therefore these costs will be reflected in competitive prices. As demand returns, competition will therefore allow them to recover their costs over the longer term through slightly higher fares. At Heathrow in particular, airlines have benefitted for many years from higher fares due to congestion (which in turn is why Heathrow is regulated). As the pandemic crisis recedes, they can expect this congestion

[22] Dividends are from 2006 and exclude those related to disposals

premium to return significantly increasing their ability to recover their losses on routes from Heathrow. In addition, many of the airlines using Heathrow have received substantial financial aid from their Governments that offset their losses.

Importantly, in respect of regulation of Heathrow, the CAA's duties are to consumers and to the airport's ability to finance its function. The reason the CAA has these statutory duties in respect of Heathrow is because the CAA understands Heathrow to have a critical role in the market – as the operator of the UK's only hub airport; and its importance for cargo, premium passengers and connecting passengers.[23] As we have set out above, given the evidence we have presented about the impact on consumers of doing nothing, the CAA must implement the proposed recovery mechanism is the best way to meet these duties and deliver the best long-term outcome for consumers. We are of course sympathetic to the situation of other players in the aviation sector – and we recognise the need for the sector as a whole to be supported. However, in respect of Heathrow, delivering the basic duty of furthering consumers' interests and protecting financeability is the CAA's obligation, irrespective of the commercial responses, recovery mechanisms, Government aid or lack thereof experienced by the rest of the aviation sector.

Shareholders cannot provide all the required adjustment

Shareholders are already providing very large additional funds to Heathrow via both the loss of net equity as a result of increased borrowing to finance negative cashflow and also forgoing dividends for the foreseeable future. To avoid asymmetric decisions, allow additional future investment and enable the airport to deliver an effective return to full operation, additional shareholder equity is likely to be required, be that through retained earnings or other methods.

However, it is currently not rational for equity investors to invest more money to fund greater expenditure. To invest, the expected incremental cashflows arising from the additional investment need to at least meet the cost of capital for the investor. In this case, the incremental cashflows would be to enable greater expenditure and would therefore be negative. Moreover, at the current time the marginal cost of equity for shareholders is very high - around 14% based on current market data for airports. Not only would such an investment not make economic sense for Heathrow's shareholders, it would be contrary to their fiduciary duties to their own shareholders.

This is further compounded by two decades of failing to consistently achieve the cost of capital. Shareholders, existing or future, will require concrete evidence that the regulator is in actual practice prepared to implement adjustments, as the Q6 settlement assumed. Recall that as investors in a regulated entity they cannot even theoretically expect outsize upside returns at any point in the future to compensate for extended underperformance. They fundamentally need evidence that there is a genuine, fair bet of achieving the returns targeted by the regulator. Absent that, the confidence for long term patient capital locked into a regulated framework is simply lacking.

The CAA has a duty to ensure that Heathrow can finance its functions. This means that it must create a regulatory framework where it is rational for investors to provide more money when it is required in the best interests of consumers. Without an appropriate recovery mechanism, the CAA is not meeting this requirement and would therefore not be meeting its financeability duty.

In addition, without a recovery mechanism, investors perception of the risk at Heathrow will be permanently increased. The cost of capital required for future investment would thus inevitably be much higher than it otherwise would be. Current market parameters for debt and equity for Heathrow suggest that its cost of capital today is around 3% higher than the level before the pandemic. If sustained, this would lead to an increase in airport charges of over £7 per passenger. Even if only a third of this increase were mitigated by the adjustment mechanism it would reduce the long-term cost to consumers by more than the £1-2 impact on charges resulting from the proposed recovery mechanism whilst giving consumers far more benefit.

Implementing the recovery mechanism as proposed in this document would provide shareholders with a long-term framework that would make additional investment during the pandemic rational. It would thereby enable the company to invest more and deliver better outcomes for consumers. It would reduce investors' and financial markets perceptions of risk at Heathrow and in the longer-term lead to lower prices for consumers than if no recovery mechanism had been applied.