

# Economic regulation of Heathrow airport: CAA mid-term review of Outcome Based Regulation Heathrow's response

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## Introduction

1. This document sets out Heathrow Airport Limited's (Heathrow) response to the CAA's (Civil Aviation Authority) consultation on the H7 Mid-term review of the Outcome Based Regulation (OBR) framework.
2. Heathrow is supportive of finalising, where possible, relevant outstanding issues from the H7 Final Decision (FD) that are in the interest of the consumer. Any proposed changes by the CAA must be supported by evidence and aligned to consumer research.
3. The H7 FD was published in March 2023, which included the move from the Q6 service quality rebates bonus (SQRB) regime to the H7 OBR framework. This change took effect from May 2023.
4. The change in the framework to OBR sought to capture the broader consumer experience provided at the airport, which are not all provided solely by Heathrow. This intended to capture a wide range of services and those that are underpinned by evidence that consumers value.
5. We remind the CAA that the OBR framework has not fully matured. This has only been in place for one year and the full learnings and data robustness to derive any conclusions is not possible yet.
6. Therefore, the CAA must exercise caution and judgement before drawing any conclusions. More broadly, consideration must be placed on deliverability of the overall price control and a "fair bet", there needs to be a clear link between service level agreements and the cost allowances (including both Opex and Capex).
7. However, we do agree there will be some emerging learnings after one year of the OBR framework being in place. Therefore this review will help evaluate learnings and aspects that should be considered and developed as part of the H8 price control review. The review may also propose change ahead of the H8 price control review, in such instances those proposals must be supported with robust and clear consumer evidence.
8. We look forward to working with CAA to ensure the OBR framework delivers what our customers and airline stakeholders value.
9. The following sections of this document provide a detailed response to each aspect raised by the CAA.

*Q1: What do you consider would be an appropriate definition for a measure of Heathrow's carbon footprint? Please provide supporting evidence for this definition.*

Heathrow Response:

10. Decarbonising the aviation sector remains a key priority for Heathrow. We published our Net Zero Plan, as part of a refreshed Heathrow 2.0, in February 2022. The plan focuses on the changes we want to make this decade to ensure by 2030 we achieve absolute cuts in our carbon footprint to put us on the path to achieve Net Zero by 2050. The plan cannot be delivered without all stakeholders in the aviation sector working together.
11. 88.8% of the carbon footprint at the airport is related to all departure flights, aircraft in the landing and take-off cycle 6.8%, passenger surface access 2.3%, colleague surface access 0.7% and other sources 1.2% and 0.2% relates to Heathrow emissions<sup>1</sup>.
12. This highlights the importance of collaborative working, and we continue to be supportive of a reputational measure that helps to reduce the carbon impact of aviation, which has also become increasingly important to consumers based on our research. This measure would be a key enabler to the success of reducing the carbon footprint at the airport.
13. Any measure in reducing the carbon footprint at the airport should take account of the entire emissions scope as set out by the Greenhouse Gas (GHG) protocol<sup>2</sup> and be limited to a reputational measure given that performance on this is largely attributable to industry and not Heathrow alone. In summary the three scopes cover:
  - Scope 1: Direct emissions from sources owned or controlled by Heathrow;
  - Scope 2: Indirect emissions from purchased electricity, steam, heat, and cooling; and
  - Scope 3: All other emissions associated with Heathrow's activities, both upstream and downstream.
14. We propose that the existing carbon measure reported in Heathrow's annual accounts can be adopted as a reputational measure within Measures, Targets and Incentives (MTIs). The proposed measure is "Total Footprint (tonnes CO<sub>2</sub> equivalent)", which we have reported against each year since 2019.
15. The Total Footprint includes Scope 1, 2 and 3 and therefore captures all emissions at the airport. The data for this measure is collected and reported in a way that is fully consistent with the GHG Protocol Corporate Reporting Standard (2015)<sup>3</sup> and Airport Carbon Accreditation (ACA) Standard<sup>4</sup>. We also comply with the requirements of the ACA Scheme Level 4+. Our greenhouse gas emissions data and calculations used in our carbon footprint are verified by an external party, currently Bureau Veritas UK Limited.
16. We also note that carbon footprint (on air and ground) is now becoming a feature to outline the benefits of each project (where relevant) on the carbon and substantiality capital programme, which highlights the importance of this measure.
17. Notwithstanding this, a more holistic approach to regulation will be required going forward that provides the right incentives to enable the technology and infrastructure to support our path to Net Zero by 2050. We will need to invest in assets that enable stakeholders to deploy vehicles, machinery and equipment that move away from fossil fuels and the infrastructure to enable this. The technology that will be deployed will be a mix of

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<sup>1</sup> [2023\\_FY\\_HAHL\\_ARA\\_Final.pdf \(heathrow.com\)](#), page 41

<sup>2</sup> [Corporate Standard | GHG Protocol](#)

<sup>3</sup> Available at: <https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf>

<sup>4</sup> Available at: <https://www.airportcarbonaccreditation.org/>

established and innovative technologies, for example EV charging stations, Pre-Conditioned Air provision etc. A reputational measure is a first step on this path.

18. Appendix 1<sup>5</sup> sets out Heathrow’s carbon footprint methodology document that details the approach taken to collating and reporting the carbon footprint measure. This provides the sufficient detail to enable the CAA to place a definition for reducing carbon footprint at Heathrow.

*Q2: In light of recent performance levels, what do you consider would be an appropriate target for:*

- a) the airport departures management measure;*
- b) the airport arrivals management measure;*
- c) the “an airport that meets my needs” measure.*

*Do you consider there are any issues related to the targets you propose that should be taken into account by the review?*

Heathrow Response:

**Arrivals and Departures Management – Targets and general comments**

19. Heathrow’s Air Traffic Management (ATM) system is among the best performing in the world and despite operating with only two runways, we manage flight volumes comparable to other major European hubs with more runways. This achievement is largely due to our advanced ATM system, which stands as evidence of our continued commitment to operational excellence and collaboration. Over time, we have made substantial investments and worked closely with our Air Traffic Control (ATC) provider to enhance our ATM capabilities, establishing Heathrow as a leader in airfield resilience and runway throughput efficiency.

20. We have spearheaded several pioneering initiatives aimed at optimizing both arrivals and departures management, as well as enhancing the overall throughput of our ATM system. Some of these initiatives are explained in the table below:

*Table 1 – Heathrow Initiatives aimed at improving the ATM system*

Initiative	Description
<b>Airport Collaborative Decision Making (A-CDM) and Airport Operations Plan (AOP)</b>	<p>A-CDM is an initiative aimed at improving air traffic flow and operational efficiency at airports through enhanced data sharing among airport operators, airlines, ground handlers, and air traffic control. By ensuring all parties have access to accurate and timely information, A-CDM helps reduce delays and optimize resource usage.</p> <p>AOP is a dynamic, single, common, and collaboratively agreed rolling plan that builds on A-CDM and contains all the airside and terminal airside operations. It integrates different operational processes and resources, providing all stakeholders with a clear view of planned and scheduled activities at the airport.</p>

<sup>5</sup> Heathrow Airport Carbon Footprint Methodology Document, 2022  
<https://www.heathrow.com/content/dam/heathrow/web/common/documents/company/heathrow-2-0-sustainability/further-reading/2022%20Carbon%20Footprint%20Methodology.pdf>

<b>Demand and Capacity Balancer (DCB)</b>	<p>DCB is used to optimize the flow of incoming and outgoing flights by balancing the airport's capacity with the current and predicted demand. This tool is used in air traffic management to manage congestion and minimize delays. DCB is also used in pre-tactical capacity reductions when adverse weather conditions mean the full schedule cannot be flown. Therefore it provides a better outcome for consumers and airlines through pre-tactical cancellations rather than on-the-day cancellations.</p>
<b>Time Based Separation (TBS), Enhanced Time Based Separation (eTBS), and eTBS Pairwise approach</b>	<p>TBS changes the way aircraft are separated at busy airports from the traditional method based on distance to one based on time intervals. It is particularly useful in maintaining landing rates in strong headwind conditions, thus reducing delays and increasing capacity.</p> <p>eTBS is an advanced version of TBS and recategorized metrics and algorithms to further optimize the intervals between landing aircraft, based on their specific characteristics and prevailing wind conditions, to maximize runway throughput.</p> <p>The eTBS pairwise approach is a further development on TBS and eTBS and involves techniques which determine a more granular aircraft separation based on each individual leader-follower pair of aircraft and their specific interaction. By pairing aircraft strategically, air traffic controllers can reduce in-air holding times and sequence landings more efficiently, thereby enhancing runway resilience and capacity. This will be deployed in Q4 2024.</p>
<b>Tactically Enhanced Arrivals Mode (TEAM) landings</b>	<p>TEAM is used at Heathrow to manage severe congestion by allowing both runways to be used for arrivals under specific conditions. Normally adhering to a runway alternation schedule, TEAM permits deviations when delays exceed 20 minutes, particularly during westerly operations post-07:00. Up to six aircraft per hour may land on the departures runway during such periods.</p>

21. Despite these innovations and improvements, the ATM system heavily relies on the collaborative efforts of multiple stakeholders. Since the pandemic, there has been a noticeable decline in punctuality compared to pre-pandemic levels, posing significant challenges to the efficiency and resilience of our flight operations. Planning becomes increasingly complex with fluctuating punctuality, thereby impacting the overall effectiveness of our airfield operations.
22. We support the CAA view expressed in its H7 Final Proposals that “in general, HAL will not face financial incentives for measures over which it has only limited control”<sup>6</sup>. This is the case for Arrivals Management and Departures Management measures. The two measures are impacted by a range of factors that are outside Heathrow’s control, as explained in the paragraphs below.
23. The Arrivals Management measure is impacted by several factors outside of Heathrow’s control:
- Airfield congestion as a result of a range of factors could mean increased taxi times;
  - Stands could be occupied by a delayed departing aircraft that increases stand holding;

<sup>6</sup> CAP2365, CAA Final Proposals, Page 46, Paragraph 3.9 <https://www.caa.co.uk/publication/download/19737>

- ATC regulations that hold departing aircraft;
  - Pilot behaviour e.g. speed of aircraft;
  - Runway alternation in operation; and
  - The Chocks-on timestamp requires the Ground Handler to enter this manually into the system, thus cannot be fully reliable.
24. The Departures Management measure is also impacted by a range of factors that are outside Heathrow’s control:
- Runway alternation impacting taxi times;
  - Airfield congestion and taxi routes taken from stand to runway;
  - ATC regulations applied impacting departures; and
  - Handlers/Airline can induce delay by not pushing back straight away e.g. another aircraft behind departing aircraft.
25. Arrivals and Departures Management are better described as input measures rather than output measures, and consumers are most concerned about punctuality. Therefore, we support the retention of this measure as a reputational one. Though it is critical to establish a target that provides sufficient flexibility to accommodate a diverse array of operational scenarios.
26. We propose that the target for these two measures be set at the 90<sup>th</sup> percentile of our current measured performance, corresponding to targets of 15 minutes for Arrivals Management and 38 minutes for Departures Management respectively. Setting the target at this percentile ensures that it remains aspirational, encouraging ongoing performance enhancement and innovation. Simultaneously, it provides a safeguard against penalizing for anomalies that fall outside our control, thus protecting us from undue reputational risk. This balanced approach underscores our commitment to excellence and continuous improvement while acknowledging the complexities inherent in airport operations.

Table 2 – “AMAN” and “DMAN” proposed targets for H7

	Proposed end of H7 Targets
Arrivals Management	15 minutes
Departures Management	38 minutes

**Airport that meets my needs:**

27. It is important that the airport meets the needs of both today’s and future consumer. Heathrow has supported the addition of this new measure from the start of H7. We have now collected over 12 months of feedback on how we are performing against this measure:

Table 3 - "Airport that meets my needs" historical performance, Apr 2023 - Mar 2024

	Percentage of passengers agreeing ‘Heathrow meets your needs’ (MAA April 2023 – March 2024)
Heathrow Total	93.3%
Heathrow Terminal 2	95.1%
Heathrow Terminal 3	93.6%
Heathrow Terminal 4	93.8%
Heathrow Terminal 5	92.1%

28. Given the different passenger mix travelling through each terminal along with the terminal design and the wide range of asset ages, the percentage of passengers agreeing with the statement will naturally be different at each terminal.
29. Similar to how we set the existing MTI targets for 'Overall Satisfaction' and 'Customer Effort (Ease)', we have now been able to build a drivers model (see *Appendix 2, "H7 Airport that meets my needs - Target modelling"*) to understand what impact individual attributes have on this measure.
30. This work showed that several of the initiatives that we have planned through the H7 period such as Wayfinding, Cleanliness, Helpfulness of Airport Staff and Ease of Accessing the Airport, will also help to drive improvements against the "airport that meets my needs" measure.
31. By applying the expected uplift in each of these attributes as have already been set out in the CAA H7 Final Decision, we can expect the percentage of agreement at a Heathrow Total level to increase by **0.3%pt** by the time the H7 improvement initiatives are delivered.
32. This would suggest that the Heathrow Total target should increase from 93.3% to 93.6% by the end of H7. However, if the CAA are planning to set targets at a terminal level, then these would need to differ for each terminal, as follows:

*Table 4 - Airport-wide and terminal-specific targets for "Airport that meets my needs"*

	Proposed end of H7 Targets for 'An Airport that meets my needs'
Heathrow Total	93.6%
Heathrow Terminal 2	95.4%
Heathrow Terminal 3	93.9%
Heathrow Terminal 4	94.1%
Heathrow Terminal 5	92.4%

*Q3: Do you consider there are any specific issues arising from the application of new measures and targets that are important to address in this mid-term review? If so, please provide details of the issue and why it should be addressed as part of this mid-term review.*

Heathrow Response:

33. The H7 MTI regime came into effect May 2023, and we now have a baseline one year's data and reported performance. Given the relatively short time elapsed since the introduction of the MTI regime, no critical issues regarding the newly-introduced measures have become apparent, and it is too early to assess with certainty any underlying issues and concerns.
34. We must express our concern that the current framework still includes too many input measures, which detracts from the intended shift towards an outcomes-based regulation approach. The essence of OBR is to focus on the results and experiences that matter most to consumers, rather than on the specific inputs or processes used to achieve those results. The current approach risks missing the broader consumer-centric goals that OBR is designed to achieve, as highlighted by Frontier Economics in their independent assessment<sup>7</sup>.

<sup>7</sup> Heathrow's response to the H7 Final Proposals, Independent report from Frontier Economics on Outcome-Based Regulation  
<https://www.caa.co.uk/media/cz0g0hrc/51-frontier-economics-h7-final-proposals-on-outcomes-based-regulation-july-2022.pdf>

35. We urge the CAA to fully embrace the OBR methodology by aligning the regulatory framework more closely with consumer outcomes. As the Frontier Economics independent assessment pointed out, successful implementation of OBR in other sectors, such as water and energy, involves setting clear, outcome-focused measures that resonate with consumer expectations. By reducing the reliance on input measures and instead prioritizing outcomes that consumers value, the CAA can ensure that the regulatory framework drives improvements in service quality that are meaningful to passengers. This includes integrating consumer research more effectively into decision-making processes and setting targets that encourage innovation and higher performance standards.
36. Furthermore, we recommend that the CAA consider the best practices for OBR as referenced in the Frontier Economics assessment. This involves adopting sliding scale incentives that balance the risks and rewards for both underperformance and outperformance, thereby fostering a more dynamic and responsive regulatory environment. By looking to the examples set by Ofwat and Ofgem, the CAA can design a more balanced incentive structure that not only safeguards consumer interests but also incentives enhancements to services. We believe that by addressing these points, the CAA can more effectively achieve its policy objectives and deliver a regulatory framework that truly reflects an outcome-based approach, ultimately benefiting all stakeholders involved.
37. Finally, there are some emerging concerns that are appropriate to be considered as part of the mid-term review. We set these out as follows:

**Airport wide target – reputational measures:**

- a. Heathrow's licence sets out some reputational measures are required to be reported by terminal against an airport wide target. In other words, there is no distinction made for each terminal and a blanket target applied.
- b. As part of our responses during the H7 price control review, we submitted to the CAA that reputational measures that are required to be reported by terminal, should either have separate targets for each terminal or performance is reported at an airport wide level against an airport wide target.
- c. Reputational measures were designed to set aspirational targets based on our H7 Business Plan compared to financial targets that are designed to deliver the minimum level of service. Each terminal at Heathrow is on its journey to be transformed consistent to our two-runway masterplan and each one has a different mix of passengers.
- d. An improvement across each terminal to meet a single target requires significant Capex investment and operating costs that has not been included in the H7 Final Decision.
- e. For this reason, it is proportionate and targeted to apply either terminal specific targets or report on an airport wide measure against an airport wide target. We ask the CAA to consider this as part of its mid-term review.

**Campus Security - Control Post alleviation:**

- f. Heathrow is delivering the Security Programme, which aims to achieve compliance to DfT Next Generation Security checkpoint mandate to protect Heathrow's licence to operate, as well as create operational efficiencies and optimise passenger throughput and service levels.
- g. The programme involves significant transformation of our Security service and involves a complex delivery phase, including, for example, a temporary reduction in passenger processing capacity while the new Security lanes are installed in the terminals. We believe it is in the interest of consumers to ensure that the delivery of the programme is performed efficiently and have detailed plans which aim to achieve this. The two phases of this programme will create complexity and challenges.



- h. As part of the security programme the entire control post security product will need to be revamped to meet the new DfT requirements. We have worked collaboratively with our airlines to agree an alleviation process for terminal security, we are now starting discussions on how we address control posts.
- i. During the security programme, some control posts will be closed and vehicles will use other control posts, with Heathrow having limited influence on which control post they should use. This creates an operational challenge where unexpected congestion may build as a result of the required closure of the control post and Heathrow would be unfairly penalised, if no alleviations are in place.
- j. We will discuss this with the airline community and seek to reach a reasonable alleviation that does not place an undue burden on Heathrow. We will ensure there are mitigations and measures in place to reduce any potential disruption. We ask the CAA to consider this as part of the mid-term review in the event an alleviation process cannot be agreed.

**Runway Operational Resilience term:**

- k. In reviewing the Runway Operational Resilience measure (referred to as the Aerodrome Congestion Term in Q6), we note it evaluates the variance between expected and actual Air Traffic Movements (ATMs) due to “material events” through the measurement of “deferred movements”. The material events are identified as failures by Heathrow Airport or our agents or contractors, rather than external factors affecting runway operations.
- l. While we appreciate the measure's intent, which is to ensure Heathrow provides and maintains resilient airfield infrastructure to minimise delay and disruption to the consumer, we are assessing its current relevance. Various factors, including weather, ground handler or third-party service provider delays, or air traffic regulations outside the UK, can impact deferred movements and are outside our control.
- m. We propose that the CAA re-examines this measure during the OBR mid-term review to determine its suitability or whether it warrants modification. Considering the measure's intricacy, we suggest a shift towards an asset availability-type measure that concentrates on the key infrastructure that is necessary for resilient airfield operations and which is under our (or our suppliers') control. The measure must be measured accurately, removing the possibility of misinterpretation and should build on the solid reporting of other asset-availability type MTIs. We believe this would provide a better outcome to the consumer, would be more straightforward to calculate, and ensure the measure's scope is limited to factors within Heathrow's control.
- n. We support the continued process of engagement with the airline community for pre-agreed exemptions to the measure, particularly where Heathrow is investing in infrastructure to ensure the continued resilience of our airfield and our operation, and thereby providing long term value to the consumer.

*Q4: Do you consider there are any specific changes required for new investment projects that should be addressed by this mid-term review? If so, please provide details and indicate whether these have been agreed between HAL and airlines.*

Heathrow Response:

38. Heathrow has fully mobilised its capital portfolio in order to progress with the H7 investments. Since the introduction of the H7 Licence, Heathrow and the airline community

have developed the capital governance through the introduction of the H7 Capital Investment Protocol as well as developing our Delivery Obligation Handbook.

39. Moreover, using the governance forums, Heathrow and the airline community have agreed on a set of exclusions from the MTI framework on targeted areas. One of these exclusions relates to the Security Programme, where service alleviations were agreed under certain conditions. This enables a SER to be raised in certain circumstances thus avoiding Heathrow being penalised for performance as a direct result of the construction of projects on security programme.
40. Although the capital portfolio is in progress and moving at pace, at the moment, the actual impact of the projects on MTIs is not fully quantified. Moreover, the postponement of the H7 Final Decision, coupled with the enhanced capital governance, implies that several capital programmes, particularly those related to Efficient Airport, will extend beyond 2026. Consequently, the full benefits from these programs are now expected to be delayed past the end of H7.
41. Overall, we believe it is premature to propose any adjustments for newly initiated investment projects at this stage. We propose this should be considered as part of the H8 price control.

*Q5: How do you consider we should assess the likely consumer benefits of moving to a more granular measurement of security and control post queues, bearing in mind the importance of maintaining consistency with our Final Decision?*

Heathrow Response:

42. The CAA must place the right incentives to deliver service efficiently, focusing on the longer-term outcome and not exposing Heathrow to increased risk of performance rebates that are caused by activities outside of Heathrow's control causing daily variations in performance. It would not be in the interest of consumers to expose Heathrow to uncontrollable risk or to incentivise inefficient resource planning, which distorts the "fair bet" principle.
  43. A move away from monthly measurement granularity would have a number of negative consequences for efficiency, safety and risk. Therefore we consider the monthly targets sets the right balance between achieving a reliable operation and not exposing Heathrow to undue risk.
- Security:**
44. Heathrow is dedicated to providing an exceptional passenger experience and allocating the necessary resources to achieve the highest levels of passenger satisfaction, in alignment with consumer expectations.
  45. Security queue time is key to ensuring an easy and quick journey through the airport for passengers. Almost 90% of our customers rate queuing time between 5 to 10 minutes as either good or excellent and place a higher importance on going through security through in less than 10 minutes.
  46. The H7 price control framework is predicated on a combination of Opex allowances and certain service levels. An increase in the granularity of MTI measurements would substantially alter the risk profile we are facing. The price control must present a balanced opportunity for Heathrow, incentivizing the surpassing of targets and fostering continuous performance improvement. This stance was articulated in our response to the H7 Final Proposals, and we continue to uphold this position.<sup>8</sup> The OBR mid-term review does not

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<sup>8</sup> Heathrow's response to the H7 Final Proposals, Page 70, Paragraph 4.7.4 (<https://www.caa.co.uk/media/ftachvje/heathrow-airport.pdf>)

encompass increases to our Opex allowance. Hence, modifying Heathrow's risk profile without a commensurate increase in operational expenditure would be unfair and against the principles of incentive-based regulation.

47. As the measure is currently set on a monthly basis, days with higher passenger traffic partially offset those with lower volumes, allowing for service recovery within the month without incurring penalties. However, moving to more granular targets would subject us to additional risks which are often out of our control. For instance, our ability to meet the Security MTI target requires us to optimise our Security staff rosters, such that we handle peak demand periods efficiently. In turn, the rostering is closely connected to the accuracy of the booking data provided by the airline community, which varies greatly from airline to airline.
48. In its H7 Initial Proposals, the CAA itself acknowledged that a move to daily measures would be "equivalent to increasing the level of the target by an unknown and potentially significant amount"<sup>9</sup>. The increased detail in measurement would necessitate Heathrow to increase resourcing on a daily basis merely to meet the target.
49. Based on this, we believe a move to more granular measures on Security would be wrong and we propose retaining the current target granularity.

**Asset Availability:**

50. As we navigate the challenges posed by an aging fleet of assets, the imperative to achieve consumer outcomes becomes increasingly demanding.
51. The administrative burden of monitoring asset availability on a daily or weekly basis would be substantial. The absence of real-time data necessitates a reliance on manual processes to compile the necessary datasets. Moving to a more granular reporting would in turn necessitate the recruitment of additional staff for data reporting, thereby incurring further cost without an added benefit.
52. Condensing the timeframe for measuring availability can inadvertently lead to misplaced priorities. For example, if the availability of infrastructure were assessed on a daily basis, it would only take a few hours of downtime of a single unit to miss the daily target for a terminal. If this scenario were to take place, the measure would incentivise Heathrow to re-allocate engineering resources to other terminals in order to avoid further rebate risks, rather than deal with the asset availability issue in that terminal. Nonetheless, this likelihood diminishes substantially when the assessment period is extended to a monthly basis. The probability decreases even further if the evaluation occurs quarterly, thereby facilitating a more strategic approach to issue prioritization and resolution.
53. Based on this, we believe a move to more granular measures would be wrong and we propose retaining the current target granularity.

*Q6: Do you consider there is any evidence yet to suggest that changes to reflect the impact of the security transformation programme or new queue measurement systems should be considered as part of this mid-term review?*

Heathrow Response:

54. Heathrow is currently in the process of executing the Security Programme, which is a comprehensive initiative set to span the majority of the remaining H7 Regulatory Period. Despite Heathrow's diligent efforts to estimate the benefits of the Security Programme, which have received endorsement from the airline community through capital governance,

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<sup>9</sup> CAA Initial Proposals, CAP2265D, Page 34, Paragraph 14.28  
<https://www.caa.co.uk/publication/download/19164>

this timeframe is marked by uncertainty regarding the actual performance and deployment challenges of the programme.

55. As part of planning the security transformation programme, Heathrow has used passenger feedback to guide our thinking and planning. This clearly shows that wherever possible, we must aim to maintain a 10-minute security queue time and there is very little perception differences between a 5- and 10-minute queue.
56. In light of the intricate nature of the programme's implementation, which may lead to a temporary decline in performance during the transition phase, Heathrow and the airline community have agreed on mitigating the MTI performance under specified conditions. This agreement serves as evidence of the performance unpredictability associated with the programme. There will also be a learning curve as lanes are installed to understand the performance of the new technology which will take time to understand.
57. Moreover, certain aspects of the programme are likely to exacerbate the performance uncertainty of the Security Programme. For example, Heathrow is planning a transition to a new operating model wherein some crews will be processed through the terminals instead of the Control Post, the current method. This shift will alter the demand dynamics faced by the staff search areas and necessitate the establishment of designated security lanes. The impact of these changes on performance is challenging to forecast with precision. Any escalation in the targets would consequently heighten the risk profile for Heathrow.
58. Finally, Heathrow is exploring future technology that will be rolled out to improve the queue measurement system. These innovative systems require a period of integration to establish a reliable performance baseline, which is essential before any modifications to the measure are considered. The installation of the lanes is planned as part of a phased approach and this will result in Heathrow having a mix of new and existing lanes, and this places further challenges in understanding the real performance.
59. Therefore the available evidence does not support modifications to the security programme to be considered as part of the mid-term review. We propose that any discussions pertaining to such changes should not be held as part of the H7 mid-term review and that we need to wait until the programme is finished and we are able to establish a new performance baseline.

*Q7: Do you consider that there is scope for relatively rapid agreement between HAL and airlines on an alternative way to apply asset availability targets? If so, please outline the agreed way this could be applied.*

Heathrow Response:

60. Our position on setting the right targets for asset availability highlights the challenges and inefficiencies of measurement which are too granular. We are concerned that aiming for targets on a daily or weekly basis would mean we'd have to schedule more staff and change existing agreements with suppliers, which would increase our operational costs without really benefiting our customers. In addition, the unpredictability of issues outside our control that affect how passengers move around makes it difficult to consistently perform against targets that are too granular. This could lead to our engineers having to rush repairs, which might affect the long-term performance and safety of our assets.
61. We continue to advocate that measuring asset availability on a monthly level is better suited to our operations. It gives us room to handle any unexpected disruptions while keeping our service levels high, without incurring burdensome costs. This fits with our commitment to being efficient and not spending more than we need to, which is ultimately better for our customers and the airport community as a whole.

### **Pier Service availability measure**

62. In the aftermath of the pandemic recovery, Terminal 3 at Heathrow has experienced a surge in activity. The terminal is in high demand, a trend that is projected to continue. Notably, routes to North America have played a significant role in the recovery from Covid, particularly due to a slower rebound in Eastern flights. Terminal 3 has the highest number of airlines operating transatlantic routes out of all Heathrow terminals.
63. Moreover, in recent months, Terminal 3 has consistently managed more Air Traffic Movements (ATMs) on a daily basis than before the pandemic, a pattern that has yet to be mirrored in Terminals 2 or 4, where the pier service measure is also recorded.
64. Airlines are increasingly opting for remote operations for various reasons, often driven by ground handling resource considerations, but also to enhance their efficiency throughout the day. Generally, we aim to accommodate all such requests, but they exert pressure on our overall Pier Service Level (PSL) performance. In the last six months, Heathrow has collaborated with the Airline Operators Committee (AOC) to agree on an amendment to the calculation in Terminal 3, where flights that arrive at Terminal 3 and depart from Terminal 5, (or vice versa) and utilize remote stands are excluded from the PSL calculation.
65. Furthermore, Terminal 3 was originally designed to accommodate smaller aircraft than those currently in operation. Post-Covid, there has been an increase in the size of aircraft, with the retirement of 747 (Code E2) aircraft occurring sooner and more rapidly than anticipated, and their replacement with more modern and fuel-efficient fleets (E3). This transition has intensified the demand for larger E3 stands at Terminal 3. As Heathrow operates increasingly close to the 480k annual movement cap, the scarcity of available ATMs implies that short-term growth will be facilitated through larger aircraft sizes rather than increased frequency of flights, thereby perpetuating this pressure.
66. Moreover, Heathrow cannot respond quickly to the need for additional pier served larger stands – infrastructure modifications are typically synchronized with long-term airline fleet strategies. Each terminal at Heathrow possesses distinct characteristics, demand profiles, and schedules, over which Heathrow has limited control. While we provide the overarching capacity, airlines retain the discretion to utilize their slots as they see fit. Consequently, it is imperative to engage with the airline community to consider how the schedule could be factored into the measure.
67. Finally, Terminal 3 is challenged by stand inefficiency due to its design, in contrast to the more efficient toast-rack layout of Terminals 2 and 5. Heathrow is committed to facilitating growth where feasible, as strongly advocated by the airline community. However, this ambition strains our capability to supply pier-served stands for all aircraft types.
68. For these reasons, Heathrow has encountered challenges in meeting the Moving Annual Average measure over the last few months. We anticipate that this downward trend will persist, likely leading to us not being able to meet the current target from January 2025 onwards. Given the urgency of the situation, we propose a re-evaluation of the measure as part of the mid-term review. We are eager to engage in dialogue with both the airline community and the CAA to explore the most viable options moving forward, taking into account all influencing factors.
69. To address this measure, we propose modify the T3 PSL MTI target downwards to reflect operational realities and ask the CAA to consider this change as part of the mid-term review.

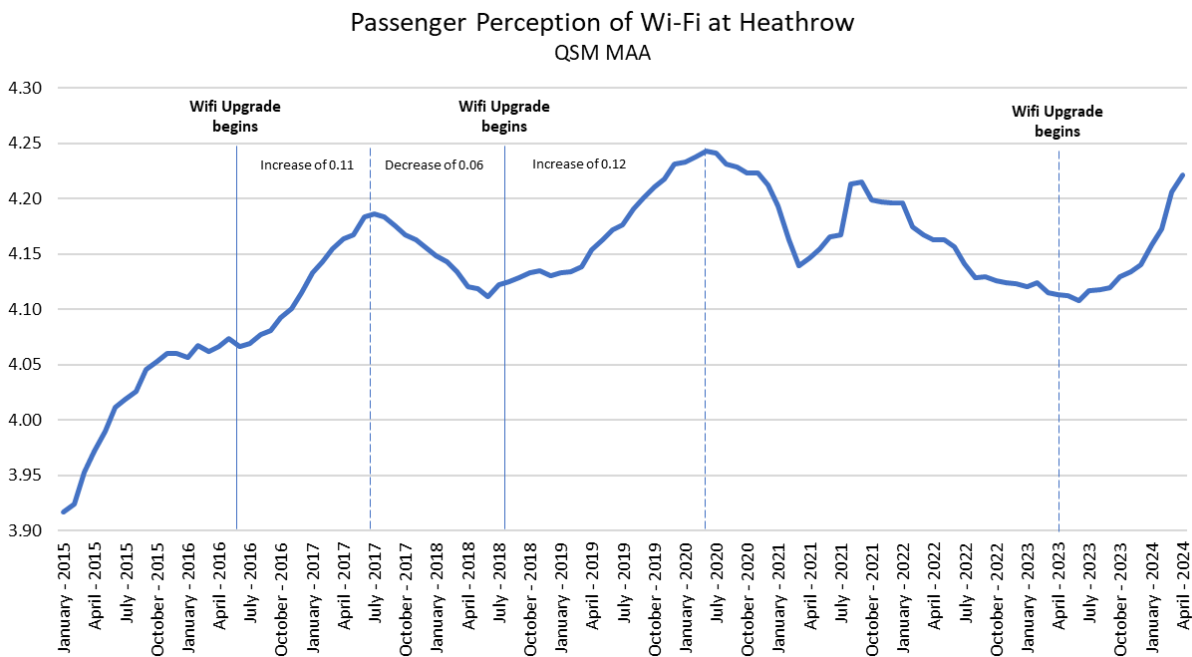
Q8: Do you consider that recent performance levels do or do not support an increase in:  
 a) the wi-fi performance target to 4.10;  
 b) the availability of check-in infrastructure target to 99 per cent;  
 and  
 c) the availability of pre-conditioned air target to 99 per cent.  
 Please give reasons in support of your answer.

Heathrow Response:

**Wi-fi performance**

70. Wi-fi is an important service that consumers value. Our Wi-fi performance ranks amongst one of the best compared to other hub airports in Europe. Across the period February 2023 to April 2024 over 85% of consumers at Heathrow rate our Wi-fi as either excellent or good.

Figure 1 - Passenger perception of Wi-Fi at Heathrow. Source: QSM / MTI Passenger Satisfaction Survey January 2015 – April 2024



71. This evidence points to performance that is expected by consumers. The existing target mirrors consumers expectation of Wi-fi service being “good”. If the CAA is seeking to incentivise ‘excellent’ performance, this should be done through the inclusion of a bonus for achievement of ‘excellent’ service, rather than through penalising the delivery of a ‘good’ service through rebates.

72. Moreover, the passenger satisfaction with the Wi-fi performance element has a cyclical nature. Currently, we see a positive response from passengers following Heathrow’s investment in modernising the Wi-fi access ports. However, with technology rapidly changing and consumer experience with public Wi-fi in other transport hubs improves, the QSM scores decrease over time, reflecting an increase in the consumer expectations. Should the Wi-fi performance target increase, Heathrow will be required to make investments to ensure it keeps abreast of new innovations that consumers will expect going forward. The H7 plan does not cater for such investments and H8 will require upgrade to the infrastructure.

73. In mid-2022, Heathrow identified the downward trend in passenger perceptions towards Wi-fi and so brought forward it’s planned H7 investment in its Wi-fi infrastructure. This proactive move meant that T5 reached an MAA of 4.11 in May 2023, only just above the

potential increased target of 4.10 and without any further investment now happening in H7 if historic patterns continue it will mean that performance will be around 4.10 by the end of 2026.

74. Therefore, we do not consider increasing the target to be proportionate or targeted. Increasing the target will lead to diminishing marginal returns. Whereby delivering an additional unit of improvement becomes more costly and consumer evidence points to current performance as what consumers expect.
75. For these reasons, we do not consider it appropriate to increase the Wi-Fi target and ask the CAA to consider this as part of the H8 price control review, at which point we will have an informed view on new technologies and developments required.

#### **Check-in infrastructure availability**

76. Throughout H7, the target for check-in infrastructure availability has been ambitious. This MTI is designed to trigger rebate payments on a terminal basis if the performance criteria are not met. From May 2023 to March 2024, Heathrow faced penalties for failing to meet the MTI twice out of 44 opportunities, resulting in a rebate payment of £600k. Under a 99% target, we estimate our financial exposure would have been nearly 30 times higher, which shows the extent to which the risk profile would change for Heathrow under an increased target, leading to an unfair bet.
77. First, we note that in its current form, the *Check-in infrastructure availability* MTI is a proxy to the main driver identified by our consumer insights, which is the “*Ease of check-in process*”. Within this main passenger experience driver, check-in hardware availability represents only a small proportion of the passenger experience and in practice there are mitigations in place to address equipment failures, such as replacement scales, or using alternative desks, which do not impact the passenger experience.
78. Moreover, from discussions with our Check-in automation supplier, Amadeus, the methodology employed by Heathrow to calculate asset availability is notably more rigorous than that of other airports where it provides similar automation services, such as Singapore, Sydney, and Paris Charles de Gaulle. These airports base their calculations solely on significant incidents that result in the unavailability of multiple units or an entire terminal due to major issues like software or server outages, power problems, or network faults. In contrast, Heathrow's approach is unique in that it also accounts for downtime caused by minor faults, such as individual machine printer jams. Considering that the majority of faults are automatically detected rather than reported by airlines—meaning downtime is recorded from the moment a fault occurs, regardless of whether the unit was in use—this underscores the exceptionally high standard set by the 98% availability target.
79. Finally, the operational model in Terminal 2 is particularly challenging, as some airlines only have access to two or three self-service bag drops. This limitation is far from ideal, as effective automated operations require a larger scale to be efficient. Even with strong availability performance, routine and unavoidable faults like printer jams can lead to significant reductions in bag drop capacity, causing considerable frustration for airlines.
80. For these reasons, we propose the measure target for Check-in infrastructure availability should not be increased beyond its current level of 98% as part of the mid-term review.

#### **Availability of PCA**

81. Pre-conditioned air (PCA) is a core part in reducing emissions and improving environmental performance at our airport. Our investments in PCA systems are a key part of our commitment to sustainability and enhancing the quality of services provided to airlines and passengers. By utilizing PCA systems, we significantly reduce the use of aircraft auxiliary power units (APUs), thereby lowering carbon emissions and improving air quality around the airport. These efforts align with our broader environmental objectives

and our strategy to meet regulatory requirements and consumer expectations for greener airport operations.

82. However, our array of Pre-Conditioned Air (PCA) systems spans several generations, with the earliest models designed for 95% availability and only the newest reaching the current level of 98%. As demand for the PCA systems increases, maintaining this level of performance becomes increasingly challenging. It demands significant cost and effort from our Engineering teams, pushing the systems beyond their intended capacity in a high-demand setting. The marginal cost of increasing the current target would significantly worsen Heathrow's risk profile on this MTI and necessitate additional resources, without a corresponding Opex and Capex allowances.
83. Furthermore, PCA availability is not solely within Heathrow's control, as it is also influenced by ground handling procedures. For instance, the PCA's operational guidelines stipulate a two-person operation for hose handling, yet ground handlers often deploy only one person, accelerating the wear and tear on the hoses.
84. Given these constraints, it is impractical to enhance the availability of our existing PCA systems to 99%. Therefore, we propose that the PCA availability target should remain capped at 98%.