

CAP3195 – CAA Working Paper on Regulatory Models

Response by Heathrow Airport Ltd

20 January 2026

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EXECUTIVE SUMMARY:

Heathrow is a regulatory success story

Heathrow is delivering its strongest performance in over a decade:

- 96% of passengers rate their journey Good or Excellent.
- 98% of passengers cleared security in under 5 minutes.
- Heathrow leads European hubs for punctuality performance.

This is achieved with record passenger numbers and the lowest asset base per passenger ratio in twenty years. Our charges - when normalised for the London cost environment, long-haul intensity and UK tax policy - are 23% lower compared to peer hubs.

Our customers evidently value this. The airport is full, airlines pay unparalleled sums for slots and our largest carrier has the highest operating margin of Europe’s major network airlines. This is not a coincidence. It is the outcome of 15 years of investment, made possible through a Regulated Asset Base (RAB) model that works.

We embrace competition — and expansion is how competition increases

Competition happens with other hub airports and in the skies, not through fragmentation of hub airport operations. The additional capacity will enable Heathrow to better compete with other hubs and allow airlines to grow – giving passengers more choice and lower fares.

The right regulatory model is the one that enables expansion quickly – unlocking £3bn p.a. consumer benefit from lower fares. Today, scarcity suppresses competition. Expansion changes this:

- Reduce fares by enabling airline competition
- Expand route choice and frequency
- Improved service and performance from delivery of the 3R masterplan
- Strengthen the UK’s global competitiveness

Megaproject evidence is clear: integration succeeds, fragmentation fails

Expansion is a £33bn programme, to be delivered alongside £15bn required for asset renewal - timely delivery and financeability cannot be taken for granted. Over 9 out of 10 megaprojects fail on cost or time or both, often due to decisions made by Governments, regulators and sponsors in the initial stages of forming the programme.

Megaprojects fail when decision rights are fragmented, governance is slow, or accountability is unclear:

- **HS2:** excessive stakeholder vetoes and complex governance → major delay, cost escalation and scope reduction.
- **Berlin Brandenburg (BER):** fragmented design and build → integration failures, 3–4× cost escalation, nine-year delay.
- **New York JFK:** multi-operator terminal model → inconsistent service, duplicated systems, slower integration and worse consumer outcomes.

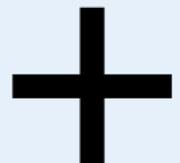
Successful megaprojects are consistently anchored by integrated ownership/delivery, streamlined governance and proven financial models, including:

- **Heathrow Terminal 5 and Terminal 2:** delivered on time and on budget due to integrated client leadership, programme-level risk management and a stable RAB framework.
- **Thames Tideway Tunnel:** RAB-based model and independent assurance allowed predictable financing and timely delivery.

15-year track record of investment



T2 and T5 are world class terminals, delivered on-time and on-budget



Added 20 million passenger capacity



Developed sector-leading construction and logistics



Invested in resilience, including sector-leading Airport Operations Centre



New security screening for passengers and colleagues

- **Sizewell C:** RAB materially reduced the cost of capital vs. Hinkley CfD model – with forecast 20% cost saving for consumers.
- **Ofgem’s ASTI:** accelerated approval of major transmission investments by more than two years through streamlined, fast-track governance.
- **Network Rail’s SPEED:** halved approval times through proportionate, risk-based processes and reduced rework.
- **Ofcom’s Broadband roll-out:** long-term regulatory certainty enabled faster-than-planned fibre deployment, exceeding targets.

Evaluation criteria must be pass–fail tests, directly linked to CAA duties

The CAA’s statutory duties are useful filters to reduce the list of models to only those that will work in practice. We propose binary outcomes – either the model can meet the duty, or it should be discounted.

A. Timeliness — PASS/FAIL

CAA duties: further consumer interests; promoting economy and efficiency.

The Government wants a DCO by 2029 and runway opening by 2035. Every year of delay costs consumers £3bn – rising to £40bn for a ten-year delay. A model that cannot evidence benefits to outweigh the costs of delay should be discounted.

B. Deliverability — PASS/FAIL

CAA duties: further the interests of users; regulate proportionately.

The airport is the UK’s only hub and largest port by value; failure on project delivery has exponential consequences for consumers and the UK. We – Heathrow, CAA, Government – must collectively avoid the pitfalls of HS2 and BER. Any model that embeds known failure modes should be discounted.

C. Financeability — PASS/FAIL

CAA duties: ensure that Heathrow can finance its licensed activities.

Expansion requires £33bn of private capital, plus £15bn in asset renewal. The Government has been clear it must be privately financed. Efficient access to debt and equity keep the cost of expansion lower for airlines. A model that increases financing costs must evidence other efficiency benefits to outweigh it or be discounted.

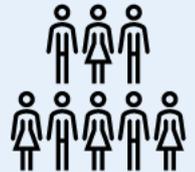
We propose a workable model that delivers better consumer outcomes

To deliver on time or at all, the regulatory model for expansion must build on the success of the existing model: an integrated owner/operator, using a single RAB, targeting an A-credit rating. Any change to these core foundations makes expansion unfeasible.

We recognise expansion is not ‘business as usual’. We have consistently advocated enhancing the existing model to ensure efficient delivery and optimised consumer benefit – based on models 1a, 2, 3, 4a and 5:

- Longer-term regulatory commitments (15-20 years) with periodic resets to building blocks can provide greater certainty to investors, customers and suppliers, leading to lower delivery and operating costs, efficient financing and smoother charge – lowering costs for consumers.
- Transparency and quality assurance for capital spending can assure that costs are efficient without impacting schedule. Our proposals include independent panels, risk-based oversight that leverages airline expertise that assures and consults effectively without delaying delivery.
- Smarter *ex ante* incentives set at programme-level, but vary according to risk profile, can drive efficient scope and delivery without burdening governance, risking delay or closing off access to efficient financing.
- Transparency in procurement can assure without impacting schedule, as well as create opportunities to deliver better service at a more efficient cost.

Expanding on Great Foundations



Record Passenger Numbers



Most punctual European hub



Best Ever Service Scores
(QSM and CAA Pax Satisfaction Survey)



Lowest RAB/pax for 20 years

- Third-party involvement in delivery can be carefully explored where it is proven to drive efficiencies, deliver better service, be financeable and meet runway opening targets – while remaining consistent with the principle that HAL is the responsible owner/operator.

Many of the models result in harm to consumers and should be discounted

The CAA must discount models that:

- **Fragment ownership, delivery or operation of critical assets.** Introducing multiple operators into an integrated hub airport increases cost, delays delivery by a decade and worsens service. We see the same pattern whether fragmentation is by ownership, system planning, procurement mandate, or terminal level competition.
- **Extend veto rights to multiple stakeholders.** Control of cost and schedule are critical, veto rights for non-expert or stakeholders with misaligned incentives repeat the same mistakes that has delayed HS2 for over a decade.
- **Require legislative change or major licence modifications.** Based on comparable examples in other regulated sectors, many of the models could take a decade just to implement, making the Government’s milestones unachievable and costing consumers an estimated £40bn in lost benefits.
- **Break the link between cost and price.** It is highly unlikely that a project as complex as expansion could be more efficiently financed, or privately financed at all, if there was less certainty of recovering efficiently incurred cost.
- **Introduce a System Operator or split planning from operations.** Adds complexity and delay (6 years to establish NESO), requires new entities and risks unintended consequences - no precedent exists for airports.
- **Where there are mandated contracting structures.** Removes flexibility, locks in immature designs and amplifies interface risk – contributing to ~4x cost overruns at BER and the cancellation of HS2 Phase 2.

The CAA should now allow detailed consideration of what will work

It has been one year since the Chancellor announced support for delivering Expansion within a decade. To remain on track the next CAA consultation must move decisively from exploring options to selecting the workable models — and must discontinue the models that cannot deliver on time, or at all.

A workable model that delivers for future consumers

Single RAB that targets A minus credit rating to leverage what already works and is efficiently financeable

+

Quality assurance & smart incentives that drive the right behaviours without compromising schedule

+

Longer regulatory commitments that lower the cost of capital and smooths charges for consumers

+

Transparent procurement that assures customers while driving consumer value through competition

+

Consider targeted third-party involvement in delivery where it benefits consumers and doesn’t compromise schedule

=

- Timely delivery
- Efficient cost
- Lower fares
- Private finance
- **Consumer Benefit**

1. INTRODUCTION:

- 1.1. Heathrow believes that a clear, focused and targeted review of the current regulatory model is a key milestone in the future delivery of an expanded Heathrow. The publication of the CAA's working paper on future regulatory models (CAP3195) comes at a pivotal moment not just for UK aviation – but for the overall Heathrow expansion process.
- 1.2. The UK's aviation sector delivers significant economic benefits for UK PLC and continues to witness record passenger numbers and strong service performance. The Government's clear ambition for timely growth of airport capacity at Heathrow in early 2025, and its decision to choose Heathrow's expansion proposals as the preferred scheme for delivery in late 2025, aims to maintain and further build on these successes. Therefore, it is key that the CAA's working paper, future consultations and any future decisions on Heathrow's regulatory model act as an enabler for the future growth of the sector, in a way which are consistent with the CAA's duties.
- 1.3. Heathrow's response to CAP3195 is constructive, evidence-based and focused on securing a model that offers the best opportunity to deliver consumer benefits through a project that is deliverable, financeable and meets the Government objectives on timeliness. While the response builds on existing positions, particularly those submitted to Government and shared with the CAA in July 2025, it introduces significant new evidence, including:
 - Updated benchmarking
 - Emerging capital governance and incentives principles
 - Emerging procurement strategy
 - Updated megaproject analysis
 - Airline profitability analysis
 - Updated financial analysis
- 1.4. Our response demonstrates that change can be a positive force when applied to clear outcomes, and where it is seen to add genuine value, drive competition and deliver efficiency where it benefits consumers. Change applied badly, failing to learn the lessons of other megaprojects and infrastructure programmes, risks undermining deliverability, timeliness and financeability. The interests of current and future airport users would not be delivered in this regard. Our aim is to set out the best way forward for the former and identify and learn the clear lessons on the latter.
- 1.5. Overall, the outcome of this full process must be a framework that that is practical, proportionate, and capable of supporting one of the UK's most critical future infrastructure programmes.
- 1.6. The CAA have set out six questions for consultation. We answer them all, directly, across three sections of our response, and include a proposed shortlisting based on a revised evaluation framework.
 - Chapter 2: Case for Change - review of evidence and a refreshed approach
 - Chapter 3: Review of Evaluation Framework
 - Chapter 4: Heathrow's Proposed Model
 - Chapter 5: Review of Long List of Models
 - Chapter 6: Conclusion
- 1.7. Heathrow believes that despite the need for an updated regulatory framework, it is clear in the submissions by the airline campaign group (Heathrow Re-imagined), CAP3195's interpretation of these submissions and the insufficient engagement with a wider set of data and information ahead of publishing CAP3195, that corrections in approach need to be made. As part of our response, Heathrow sets out our view on why the CAA's assessment does not reflect the reality of consumer views on service and evidence of delivery and sets out a different approach to be considered.

-
- 1.8. As a result of this process, it is also important that the CAA set out its objectives for future consultations on the long-term regulatory framework at Heathrow. It has already been established that expansion is in the interest of future consumers – and Government policy recognises the importance of timely delivery to the UK economy. Therefore, the CAA's future steps for determining a long-term model should seek to dismiss those models whose continued consideration could chill investment at pace and those which fail to meet Government timeline ambitions.
- 1.9. Our expectation is that the next consultation radically reduces the list of models to those that are workable and invests time in the detail of the models that could work – bringing them together into a whole framework that will underpin delivery. As such, our position in this response also seeks:
- An updated case for change that reflects what is required of any new framework in order to deliver expansion efficiently and on time, and the CAA's role in supporting this.
 - An evaluation framework that is properly weighted to factors that underpin success, enabling exclusion of models that evidently will not work, and identifying models that driven real benefit for airport users.
 - Greater consideration as to how some of the models can be stitched together to make a coherent framework that is aligned with megaproject best practice, and supports delivery of Heathrow expansion in line with the CAA's statutory duties and government ambitions.
- 1.10. We look forward to discussing our response, our approach and the evidence provided in more detail over the coming weeks and months.

2. CASE FOR CHANGE – REVIEW OF EVIDENCE AND A REFRESHED APPROACH:

Heathrow agrees with the CAA that **the regulatory framework must evolve to deliver Expansion** given its unique size, scale and impact. However, **the CAA’s basis for and evidence to support the need for change, should be reviewed and updated.**

Positions within CAP3195 on historical and current service quality are **not reflective of a wider range of data**, do not consider the **impact of clear capacity constrained challenges**, and **use selective 3rd party information, ignoring CAA’s own collected data** on airport service standards.

Views on capex efficiency are driven by **third-party evidence that does not reflect comparable scopes; we provide additional benchmarking to support this.**

The approach to Heathrow’s airport charges levels **does not account for the variation in funding sources and commercial models that drive differences in airport charges, as well as airline profitability driven by Heathrow’s operating environment.**

In updating the case for change, Heathrow suggest that future consultation rounds are focused on the **success and failure factors of other megaprojects** – including the prevailing consensus among other UK regulators- as the basis for how and why the future regulatory model should evolve.

2.1. CAP3195 asks two questions relevant to the section, ‘Case for Change’:

- *Do you agree with our assessment of how the regulatory model has performed to date in terms of protecting the interests of consumers?*
- *Do you agree with our assessment of how the current regulatory model might perform on a forward-looking basis?*

2.2. This chapter evidences the following points in response to both of these questions:

- A. CAP3195’s assessment of how the model has performed to date is incomplete.
- B. Heathrow delivers great service, to record passenger numbers, with an asset base at its lowest point for twenty years.
- C. Heathrow has a track record of delivering cost efficient, on time capital projects, as well as driving competition in its supply chain.
- D. Heathrow charges are currently competitive given the range of important real-world impacts unique to Heathrow’s operations and financing; and have delivered value-for-money to airlines in terms of high levels of profitability. Heathrow’s charges will remain affordable with expansion set in this context.

2.3. As outlined previously, Heathrow supports the need for changes to the regulatory model for expansion to be delivered successfully and efficiently, and to provide clear benefits to consumers. A careful and accurate diagnosis of historical regulatory performance is critical for defining the regulators’ role in supporting successful Expansion delivery. The objective for the review into regulatory models takes this approach – however, it is important to reset the evidence base on which the case for change is built, as the CAA request in Q1 above.

2.4. Below, Heathrow takes each area outlined in CAP3195 in turn, in order to answer Q1 on the CAA’s assessment of the current regulatory model’s performance. This chapter then turns to Q2 and what else the CAA needs to consider adjusting within the regulatory models on a forward-looking basis.

Service Quality:

- 2.5. Heathrow supports the CAA’s statement in CAP3195 that service quality comparisons and conclusions are “*not straightforward*” and that relying on “*anecdotal observations*” needs to be approached with caution¹. To strengthen the assessment of Heathrow’s service quality set out in CAP3195 and avoid potential reliance on anecdotal observations, we propose consideration of a wider range of evidence that can effectively balance the key nuances of service quality history and data. This will ensure a more robust assessment of service quality, building on the information in CAP3195 and the submissions from the airline campaign group.
- 2.6. Currently, Heathrow is delivering great passenger service, demonstrated by a wide range of important data points that deliver the same, strong service quality conclusions:
- **Quality Service Monitor (QSM):** Over the past few years we have delivered historically high passenger numbers, with Quality Service Monitor (QSM) scores - the preferred measure of the CAA and Airlines – at their highest level historically. In 2025, Heathrow experienced its highest ever passenger numbers – at 84.4m – whilst at the same time delivering its highest QSM rating in over a decade. 96% of passengers rated their Heathrow experience as ‘Good’ or ‘Excellent’ – up from 94% in 2024 (See Supporting Document 12 for full QSM breakdown).
 - **Airport Service Quality (ASQ):** The airline campaign group states that Heathrow ASQ rating has “declined in recent years”. Analysis of evidence shows that Heathrow’s ASQ numbers have actually improved slightly since 2022, despite the record passenger numbers experienced with █████ of passengers rating their experience as Good, Very Good, or Excellent between January – September 2025. And in this same period only █████ of passengers rated their experience as ‘Poor’ which is at the same level as we saw before the start of the pandemic. (See Supporting Document 12 for ASQ breakdown).
 - **Punctuality:** Heathrow ranks as the best airport in Europe for punctuality – a clear and vital service quality measure for passenger, airline and overall consumer benefit. Pre-Covid, Heathrow maintained a strong level of punctuality from 2016-2019, and despite a dip as the industry continued to grow back from the impacts of the pandemic, has now rebounded to pre-Covid levels (see “Punctuality” data in Supporting Document 12).
 - **Security Queues:** Where passenger feedback allows us to understand elements of our operation that passenger value, such as security queues, Heathrow can demonstrate continually positive progress. For example, 98% of direct passengers went through security in 5 minutes or less. 96% went through security in 10 minutes or less. Both of these data points represent the highest levels in nearly a decade (2019: 96.20% in <5 mins; 91.09% in <10 mins).

Table 1: Heathrow Security Queues, Historical, <5mins and <10 mins, 2019-2025

Year	(Direct only)	(Direct & XFR)
	<5min%	<10min%
2019	96.20%	91.09%
2020	74.20%	53.16%
2021	97.97%	96.81%
2022	78.47%	68.27%
2023	95.05%	90.76%
2024	95.07%	88.63%
2025	98.16%	96.59%

Source: Heathrow Airport

¹ CAP3195, Working Paper on Regulatory Models, Para 2.43, Nov 2025

- **Net Promoter Score from CAA Passenger survey:** Alongside these key service quality indicators, the CAA also fail to recognise, reflect and utilise their own passenger surveys that capture passenger satisfaction data. An assessment below of the CAA’s Passenger Survey “Passenger Experience Net Promoter Score”, between 2016 and 2025, shows that Heathrow, (post-Covid) remains the major English airport (major airport is determined by 15 mppa or above, and includes London Gatwick - LGW, Stansted - STN, Manchester - MAN, Luton - LUT) with the highest Passenger Net Promoter Score (NPS). In addition, Heathrow has a high 45% NPS in the CAA’s survey – and has maintained high “promoter (9-10)” ratings in this survey, as well as a clear declining trend of “detractors (0-6)” since 2016 (see Supporting Document 12 for Heathrow specific table and supporting data for below).

Figure 1: Comparison of NPS, Top 5 English Airports by Passenger Volumes, 2024 (NB. No data collected in 2020/21 due to Covid-19):



Source: Heathrow Analysis of CAA Passenger Survey Data

2.7. As result, the combined use of QSM, ASQ, punctuality data, security queue times and the CAA’s own data all point to Heathrow delivering a great service for passengers, contrary to the airline campaign group assertion that passengers receive a poor experience overall. Heathrow believes that this more balanced approach is needed - based on a wider view of these data points – to draw robust conclusions on quality of service. This strengthens the assessment versus the use of SkyTrax and MTI rebates values which draw the wrong conclusions on why change to the regulatory framework is required. Below we set out the challenges of the CAA’s use of this data outlined in CAP3195.

Use of Skytrax ratings to support case for change:

2.8. Skytrax rankings within their Top 100 lists, are based on voluntary passenger surveys with a lack of robust sampling controls, verification, or transparency in data collection. Votes can be heavily influenced by marketing campaigns rather than actual service delivery, making results susceptible to bias. Moreover, Skytrax have

previously been subject to investigations by the Advertising Standards Authority (ASA) surrounding the lack of robust procedures in passenger reviews and lower than stated review totals².

2.9. Our approach to QSM is transparent to the CAA and paints a very different picture in addition to following a more robust approach. Consequently, Skytrax should not be used as a tool to make regulatory decisions, in particular when better, more robust alternatives exist.

2.10. If the CAA continue to include Skytrax, despite its limitations, two key elements should be clearly reflected and noted:

- CAP3195 uses the Top 100 as the only basis by which to judge Heathrow service quality performance from Skytrax, while not noting that through Skytrax’s airport audit product Heathrow is listed as a 4* airport, matching the same star rating as the two main UK carriers that operate from it. In addition, many of the airports listed in the source material, provided by an airline campaign group, as examples of other airports that have regulated models that are successful, consistently sit much lower than Heathrow within the Top 100 list itself (i.e. JFK and LAX).
- The Top 100 overall is concluded by reviewing more than 500 airports worldwide. Heathrow’s current ranking, despite claims from the airline campaign group, means that we sit within the top 5% of airports worldwide.

Use of rebates and Measures, Targets and Incentives (MTIs):

2.11. CAP3195 states that the level of rebates provides a “useful way of measure HAL’s relative performance over time”, and whilst acknowledging improvements made in service quality since 2008-2019, combines a lower Skytrax rating with an increase in rebates between 2021 and 2024 as key reasons for declining service and the case for change.

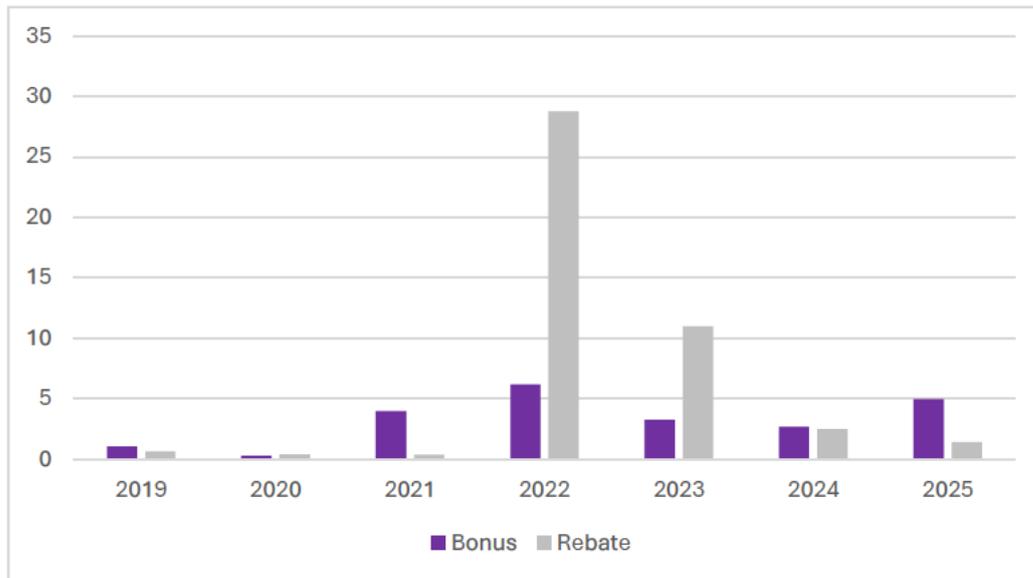
2.12. We believe a more granular view is required than that outlined in CAP3195. The CAA should be clear on the rationale for MTIs, balance rebates collected with bonuses received, reflect strong performance in 2024 and 2025, and engage with the evidence as to why rebates were paid during the period.

2.13. Firstly, it is important to note that MTIs and any rebates paid out as a result of these, are primarily a compliance mechanism ensuring that Heathrow meets agreed passenger outcomes. Whilst they are tied to Heathrow meeting certain service quality targets, they are not the same as the information that is captured by CAA passenger surveys and/or QSM data. As a result, it is important to reference the context that sits behind the rebates paid – rather than use the values at a high level, as an indicator of suggested poor performance.

2.14. For 2024 and 2025, bonuses earned by Heathrow through the MTI scheme have exceeded the amount of rebates paid. Our most recent bonuses have been driven by the progress in the delivery of Next Generation Security which offers a much more predictable and enjoyable experience to passengers during Security searches. Most of the rebates paid in 2024 were driven by Control Post 24 not meeting its target in February, given changes to resourcing with Campus Security Operations, resulting in adverse performance for a week and a score of 93% against a target of 95% across that month (NB. This was balanced with the need to drive operational efficiency). In 2025, the rebates were mostly driven by adverse performance of our Wi-Fi provision in T5 and an incident affecting check-in where the performance achieved 97.98%, against a knife-edge target of 98%.

² Please see: [Skytrax Research - ASA | CAP](#)

Figure 2: SQRB/MTI Bonus/Rebates amount (£m):



Source: Heathrow Regulatory Accounts

2.15. When reviewing the data for 2021-2023, we observe the following in relation to rebates paid during the period the CAA single out in CAP3195:

- Rebates in 2021 (£0.37m) were triggered by a single four-hour queue episode caused by Government quarantine rules affecting colleagues’ attendance at short notice, not operational failure.
- In 2022, £28.76m worth of rebates were paid, with 98.8% linked to security queues exceeding our MTI targets. While Heathrow recognises the impact on passengers, these arose from deliberate decisions, agreed with airlines through our governance framework (Joint Steering Board), to scale up capacity rapidly post-pandemic, prioritising safety and driving volumes to match passenger demand. This strategy enabled faster recovery at Heathrow than comparable airports and supported airline operations. Furthermore, and despite these rebates, it is important to note that no other airport globally operates under such stringent security queue targets (95% under 5 minutes, 99% under 10 minutes).
- In 2023, rebates fell to £11m, 80% being incurred by Security in Q1, largely due to residual pandemic effects (demand versus resourcing levels failing to keep pace with unexpected levels of demand) and isolated technical issues. From 2024, rebates have returned to pre-pandemic levels, reflecting Heathrow’s commitment to the MTI framework and delivery under it.

2.16. For 2024 and 2025, bonuses earned by Heathrow through the MTI scheme have exceeded the amount of rebates paid. The information outlined above, and our positions/ views on Heathrow’s service quality are not delivered without a clear and continuous commitment to build on and improve our passenger service proposition. Our H8 business plan is clear on where gaps exist and where measures/ changes can be made to improve, and we encourage the CAA to support these outcomes in their future initial proposals on both the opex and capex related to delivering them.

2.17. However, CAP3195’s use of data – as well as the lack of inclusion of data within the passenger surveys the CAA has at its disposal and our background information on rebates paid during the period selected – does not fully reflect several strong data points that show where Heathrow *does* succeed on passenger service. It also misses an opportunity to consider how a regulatory model change can be developed to best improve service through the effective delivery of added capacity.

Capital Efficiency:

2.18. In this section we outline that in relation the CAA’s view on capital efficiency in CAP3195 (and information sourced from an airline campaign group):

- Independent assessments, by multiple reviews, across a number of price control periods, do not demonstrate a level of significant inefficiency in Heathrow’s capital investment delivery. This is further supported when compared to other major infrastructure investments.
- Two of the most significant improvements delivered – Terminal 2 and Terminal 5 – were delivered on time, on budget and are widely used as a successful basis for other projects across other UK infrastructure to build upon.
- The current framework and governance rules at Heathrow provide an already significant level of stakeholder involvement and sign off and should form the basis for any review on their overall suitability for a project as large and as complex as Heathrow Expansion.

Assessments on Capital Efficiency:

2.19. CAP3195 outlines that the CAA have “*at an overall level...not to date identified material inefficiency associated with HAL’s capex*”³. The document references potential limitations of scope of these reviews. But rather than reflect on and review the lack of material inefficiency identified, CAP3195 leans heavily on partial and incorrect information on those major infrastructure investments that Heathrow has previously delivered – most notably Terminal 2 and Terminal 5.

2.20. For example:

- In the Q6 Capex Efficiency Review, 9 of the selected 10 projects reviewed resulted in no RAB adjustment with Cargo tunnel being the only outlier. Only £12.7m of capex investment was disallowed - <1% of all capex committed. In addition, the Independent Fund Surveyor (IFS) 2025 Review concluded:
 - Heathrow’s Risk Process is up to date, with a clear, detailed flow from start to finish, concise documentation and well-defined lines of responsibility.
 - Cost Assurance is robust, well-structured, follows a clear, end-to-end workflow and aligned with standard industry practices.
 - Procurement processes appear robust, aligning with industry norms.
 - Good practice is identified with the amendments to the standard NEC4 ECC form providing a focus on the commercial aspects of the Project.
 - Leadership & Logistics is in 35th percentile of the benchmarked data. Indicates main cost drivers, are in line if not lower than industry benchmarks.

2.21. Furthermore, a Best Practice Review conducted by Amey⁴, found Heathrow’s Capital Governance Handbook to be “*closely aligned with best practice*”, and that deviations from efficiency frequently stem from regulations imposed on Heathrow such as the requirement to fix costs prematurely at G3 and the limited flexibility permitted under H7.

2.22. This is strongly corroborated by the analysis of key costs of capex delivery done by KPMG⁵, shared with the CAA alongside our H8 Business Plan, which identifies Heathrow’s delivery context as uniquely complex among UK airports (high security requirements, intensely constrained operating windows, multiterminal interactions, aging assets, and London construction market cost pressures). KPMG confirms that many cost drivers at Heathrow sit outside the control of the airport, and that Heathrow’s delivery processes (procurement frameworks, programme management, risk controls, and design maturity) operate within expected or best practice ranges given the environment.⁶

³ CAP3195, Working Paper on Regulatory Models, Para 2.51, Nov 2025

⁴ Amey, Supporting Document 6.

⁵ KPMG, Supporting Document 8.

⁶ KPMG, Supporting Document 4.

2.23. A large proportion of Heathrow’s capital is also spent on complex, safety critical assets (tunnels, HBS, TTS, runways) and Expansion is likely to contain a similar share of those. Variances identified on such projects often arise from supplier performance, operational windows (embargoes), regulatory change, and integration complexity like adverse drivers identified at Berlin Brandenburg Airport (BER) and High Speed 2 (HS2).

2.24. Later in CAP3195, the CAA also suggests a greater role for the IFS to oversee capex efficiency delivery – however despite this suggestion, CAP3195 does not consider the studies and reviews the IFS have so far conducted on their behalf, or at the very least, adds less weight to these versus apparent concerns from an airline campaign group.

Global and Regulatory Comparisons for Capital Efficiency:

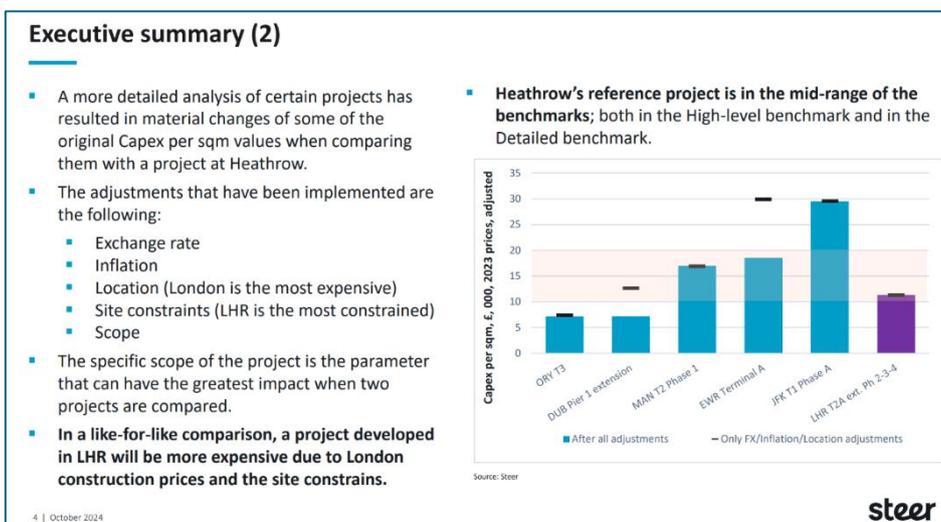
2.25. Heathrow has a strong track record of capex delivery when compared against other airports or critical infrastructure sites, considering the complex physical and regulatory environment within which Heathrow delivers projects.

2.26. A thorough review developed by Steer⁷ on the construction benchmarking of terminal buildings – including 20 cases worldwide across new terminals, expansion, and refurbishment projects – demonstrated that Heathrow is in the mid-range of benchmarks when compared to other airports across the world. The results support our position that we successfully deliver projects efficiently within a constrained live operational site.

2.27. As highlighted by Steer, on our Terminal 2A extension, 62% of the site space was taken up by the facility itself with 38% of site space being available for welfare, logistics and the room to physically build. This compared to Manchester Terminal 2 phase 2, which had only 22% of the site taken up by the facility itself, with the remaining 78% available for site logistics, welfare and build. At Dublin, the pier 1 extension had 88% of site space available for construction works beyond the footprint of the facility itself.

2.28. Heathrow operates on a smaller footprint in terms of passengers per square kilometre than any other airport. We serve twice as many passengers per square kilometre than any comparable airport. We construct within significantly less available space than other external benchmarks, which also impacts our ability to deliver construction works, adding complexity and pressure on an already constrained area. Importantly, Steer also confirms that the specific scope of the project – the inclusion or not, e.g., of baggage work, aircraft stands and/or car parking facilities – is the parameter that can have the greatest impact on capex costs when comparing projects. Therefore, any analysis must take careful account of a number of factors to allow a like-for like comparison.

Figure 3: Extract from Steer’s report:

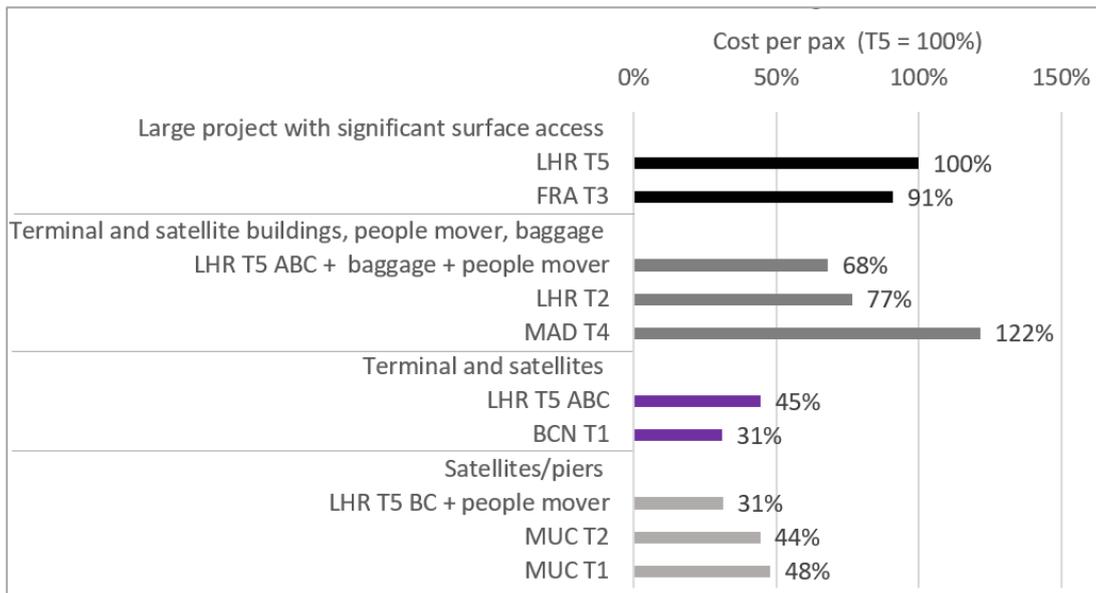


⁷ Steer, Supporting Document 5.

Terminal 2 and Terminal 5:

- 2.29. CAP3195 asserts that “the costs of developing Terminal 5 and Terminal 2 were relatively high”, building upon a narrative that is set out by the airline campaign group Heathrow Reimagined. CAP3195 compares the costs of Terminals 2 and 5 against a set of external comparators drawn from material produced by Heathrow Reimagined. CAP3195 appropriately acknowledges that this represents a limited sample. It also compares projects with widely varying scopes, which is discussed further in Supporting Document 12.
- 2.30. However, this claim contradicts overwhelming evidence that the construction and delivery of both Heathrow Terminals 5 and 2 provide strong, evidence-based lessons on how cost efficiency can be achieved in large, complex, live airport environments. In addition to the benchmarking analysis by Steer cited above, a recent case review by Jacobs confirms that T2 and T5 provide examples of best practice in capital delivery⁸ (further discussion is provided in Supporting Document 12).
- 2.31. The delivery of both terminals broadly on time and within approved budgets remains an atypical outcome for infrastructure megaprojects, where international evidence suggests average cost overruns of 30–50% and significantly higher in comparable transport schemes.^{9 10 11}
- 2.32. We have recalculated the comparison in CAP3195 across terminal projects to provide a more like-for-like assessment. Applying only simple standard adjustments for deflation, Purchasing Power Parity, and aligning project scopes - using different subsets of T5 costs as a basis - we can build a more realistic benchmark.¹² T5 and T2 costs are in line with the distribution of other projects’ costs.

Figure 4: Comparison of per passenger terminal costs, using a sample of CAP3195’s terminal projects



⁸ Jacobs, Supporting Document 14.

⁹ Flyvbjerg, B., Holm, M. & Buhl, S. 2007. *Underestimating Costs in Public Works Projects*.

¹⁰ Brady, T. & Davies, A. 2010. *Learning to Deliver a Mega-Project: Heathrow Terminal 5*. Routledge.

¹¹ Potts, K. 2007. *Managing Megaprojects: Heathrow T5 and the Jubilee Line Extension*. CIB Proceedings.

¹² We present results on a per-passenger basis, as floorspace is less meaningful for elements such as baggage systems, people-mover infrastructure, or surface access. These figures should be treated as indicative only, given the difficulty of determining precisely what is included within other airports’ headline cost numbers.

Scalability of the current capex governance process:

- 2.33. Heathrow fully supports the CAA’s initial reading that the current process developed in H7 may not be scalable for the size and scale of Heathrow Expansion (further commentary on this point is provided in Supporting Document 12, under “Capital Governance – Current Model”).
- 2.34. Heathrow set out some initial views on how to improve capex governance for H8 in the Business Plan submitted in July 2025. However, the challenges in the current process (set out further in this document and within the H8 business plan itself) – costs, delays, information flow – would be further exacerbated if replicated at an expansion, project by project level.
- 2.35. CAP3195 conclusions on capital efficiency however stem from a belief that despite evidence to the contrary, there is an inherent inefficiency in Heathrow’s delivery. The CAA use this as the basis for the need for regulatory model change, rather than an analysis of the current set up and its ability to be utilised for the expansion project overall. Heathrow would support the CAA in working further on their initial hypotheses above on the current governance processes as the basis for change, first and foremost.

Charges and Airline Profitability:

- 2.36. In this section we evidence several key points related to the CAA’s analysis on level of Heathrow charges . The section also explores the following:
- That the next consultation should revisit the initial CAA analysis of the benchmarking reviews on Heathrow’s existing charges against comparators.
 - CAP3195 places too narrow a focus on productive efficiency, given the evidence and impact of large-scale commercial development on which European comparators rely, versus at Heathrow.
 - The analysis of airline profitability at Heathrow under expansion requires further exploration and consideration.
 - Incumbent airlines have significant commercial incentives that may not align consumers’ interests.

Charges and Benchmarking:

- 2.37. In considering charge levels and the CAA’s analysis/ conclusions on them, it is important to distinguish airport costs, the way in which these costs are recovered, the land surrounding these airports, and the type of till model (i.e. single or hybrid). Aeronautical charges sit alongside both commercial and Government sources of revenue for many large airports.
- 2.38. KPMG’s detailed benchmarking work of charges, which has been further updated since the previous version analysed by the CAA in CAP3195 (see Supporting Document 4), focused on airport costs. It asks how aeronautical charges would change if operational and demand characteristics and different airports changed, all else equal. Although Heathrow’s headline charges appear high in simple league tables, KPMG’s benchmarking evidence shows that, on a genuine like-for-like basis that reflects the conditions all airports would face if they operated in West London with Heathrow-type airline and regulatory characteristics, Heathrow is fully aligned with, and often cheaper than, its international peers.
- 2.39. However, in CAP3195, the CAA has commented on the global variation in a large sample of airport charges set out in the Jacobs report. In this context, it is important to consider both operational elements, as well as how costs are recovered. In this section we firstly set out important aspects as to why Heathrow’s aeronautical revenue appears high in the Jacobs charges index. The key reasons are variation between airports/countries in:
- local cost of labour;
 - Government support;
 - profit generation from group activity;
 - quality of service

2.40. There are two additional important factors in explaining Heathrow’s charge profile over time:

- depreciation was calibrated relatively low at privatisation;
- the movement cap introduced as a result of the building of T5 has prevented spreading aeronautical revenue across a wider passenger base.

2.41. *Local cost of labour* – this explains around 45% of the variation in Jacobs charge levels, among privatised airport operators. However, local cost of labour does not explain aeronautical charge level in the global sample, given the overwhelming majority of airports in the Jacobs report are under (partial) state ownership. As a result, we can conclude that there is a clear interaction between Government subsidy and its suppression of the impact of local costs of labour on charges.

2.42. *Government support* – this category includes direct grants, low-interest loans, equity injections, tax relief, and other measures. Government subsidy explains anomalously low charges in countries with high cost of labour (see footnote for example).¹³ It is challenging to estimate the quantum, due to the many forms of Government support, because some forms of support keep costs off airport balance sheets, and because of limited transparency in some jurisdictions.

Before 2000, EU state aid rules did not apply to financing of airport infrastructure, during which a material portion of the current working assets of EU airports were constructed. EU regional airports can still receive state aid,¹⁴ which reduces financial pressure on hub airports within their respective airport groups.

2.43. *Profit generation from group activity* – this sits as a key driver of charge differences between European hub airports. All the largest European hub airports aside from Heathrow (CDG, AMS, MAD, FRA, BCN) belong to corporate groups (AdP, Royal Schiphol Group, AENA, Fraport) that have each invested heavily in non-hub airports and/or non-aeronautical property, both of which are intrinsically lower-capex operations. AMS is a model example of commercial investment.

In 2024 the Schiphol Commercial operating result was over 6x its Aviation operating result. Schiphol Commercial operating margin was 12x the Aviation operating margin. When making comparisons, it is important to consider the different roles that non-regulated activity may play within different airport groups, in contributing to the group’s profit margin.

Reflecting other European hub airports, alongside Heathrow’s history and the changes since is important in the context of charges – as it demonstrates that Heathrow’s regulatory model has driven a focus on high-cost activities (aviation services), and suppressed investment outside of the single till to reduce pressure on the aeronautical charge (seen at other EU hubs). Further evidence can be found in Supporting Document 13.

2.44. *Value/quality of airport service* - the greatest improvements in quality of service to passengers and airlines come from substantial capex spend to reflect consumer demands. This can be analysed in many ways. KPMG have highlighted this in Supporting Document 4, where they analyse this issue through the lens of traffic mix, and the cost associated with providing more long-haul, premium services.

A clear example of delivering value through capex occurred when T5 opened. At the BA H1 results presentation in November 2008, the CEO Willie Walsh announced:

¹³To take an extreme example for illustrative purposes, the EEA airport with the lowest aeronautical charge in the 2024 Jacobs sample is Oslo (second lowest charges in entire sample). Jacobs reported that Oslo had a charge level that was only 17% of the charge level of Heathrow, despite Norway having per capita income that is around 60% greater than that of the UK. This is possible through government support (Oslo airport is operated by Avinor Group, which is entirely state-owned). During 2020 and 2021, Avinor Group’s income from government grants exceeded its aeronautical revenue. In 2024, Avinor Group’s investment grants from the state were 40% the size of its aeronautical revenue.

¹⁴ Please see: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:C:2023:244:FULL>

*“Turning to T5...it really is performing well, better than we had expected. We're seeing record customer satisfaction scores on several key metrics, and not only on T5, but on other parts of our customer proposition as well...we're seeing very high scores on issues like the check-in, connections process, the overall departure process, and punctuality, reflecting the significant improvement in the punctuality performance of the airline.... **I think the standard of operational and customer performance is benefiting us, both in terms of our financial results, but also in terms of cost, but also in terms of revenue.**” [bolding added¹⁵]*

The presentation went on to note the financial benefits: *“Now looking at the yield performance by quarter, you can see that there's been a steady improvement over time. There has been some exchange benefit, as I've mentioned. But even at constant exchange, there was a yield improvement of over 7.5% in the half, and over 10% in the quarter.”*

T5 allowed BA to raise ticket fares – the 10% increase in passenger revenue referenced above would translate to an additional £760m per year in BA revenue. The increase in landing fees and en route charges between the 12 months ending 31 March 2009 over the previous year was only £75m.

- 2.45. The evidence therefore suggests that T5 contributed hundreds of millions to BA's operating profit when it opened, a significant increase (BA Group's operating profit for the year ending 31 March 2008 was ~£900m)¹⁶.
- 2.46. *Depreciation* – depreciation choices that suppressed aero charges in the 1990s have shaped the historical timing of Heathrow's capex recovery. Heathrow's charges today are higher than they would otherwise have been as a direct consequence of historic regulatory depreciation decisions to set the rate low in the 1990s and 2000s.

Illustratively, had depreciation been applied consistently at a 5 percent level since 1997, the current RAB would be around £730 million lower. In 2024, this higher RAB translated into higher capital charges in the CAA determination: approximately £175 million of additional regulatory depreciation, inflating charges by ~£2.2 per passenger, and a further ~£0.4 per passenger due to higher returns owing to the higher RAB, giving a combined impact of ~£2.6 per passenger.

- 2.47. *Expansion following capital investment* – this represents an essential strategy for reducing aeronautical charge levels. Among European hubs, airports that managed to significantly reduce their Jacobs airport charge index between 2015 and 2024 were CDG, MAD, and DUB. CDG decreased reliance on aeronautical revenue through AdP's investment in overseas airports; as well as CDG retail floorspace expansion that allowed investment in luxury retail, leveraging tax-free shopping [which Heathrow has lost post-Brexit]. MAD and DUB lowered charges through increasing the passenger base: from 2015 MAD had a 43% increase, and DUB had a 32% increase. By contrast, between 2015 and 2024, Heathrow's mppa increased by only 12%. Due to the movement cap and geographical constraints, Heathrow was unable to fund T5 and T2 by keeping older terminals open to grow traffic.

Airline Profitability:

- 2.48. Heathrow wants to deliver great service to passengers and for our airline partners to have sustainably profitable operations at Heathrow. Our strategy encompasses a customer-focused approach to how we deliver our operation, how we deliver our capital investment portfolio, and how we deliver on our key service objectives. This approach has and continues to underpin the commercial success of the airlines that serve the airport.
- 2.49. Today, the evidence suggests that airlines make high profits at Heathrow. Given its prominence at Heathrow, and mixed route network between short- and long-haul, this can be examined via BA's traffic, which in 2024 generated profits at Heathrow. In its 2024 IAG accounts, BA had an operating margin of 14%, equivalent to around £45 operating profit per passenger, and for Q3 2025 the margin grew to 16%. The industry average

¹⁵ Please see: [British Airways H1 2008/09 Results presentation on Nov. 07. 2008 / 4:00AM](#)

¹⁶ Please note that the magnitude is difficult to assess precisely, due to the weakening of the aviation market over the summer of 2008, leading into the financial crisis.

operating margin was an estimated 6.6% in 2025,¹⁷ equivalent to roughly £20 operating profit per passenger on BA 2024 revenues, meaning BA achieved around £25 more profit per passenger than the industry norm. In an interview with Bloomberg in December 2025, IAG’s former CFO, Nicolas Cadbury, outlines that BA’s outperformance of other airlines within the group was a result of “wealthy passengers in the London market, supporting margins.”¹⁸

2.50. These profits are a function of excess demand at Heathrow. For a given route, pricing is driven by (1) volume of capacity relative to demand, (2) competition on the route, (3) airline costs, and (4) service quality that contributes to passenger willingness-to-pay.

- 1) Heathrow is severely capacity constrained; it has been operating at capacity for two decades.
- 2) Incumbent airlines have a rational incentive to protect these margins, including by delaying or opposing expansion. This means their interests are not always aligned with consumers, who benefit from competition and choice from new capacity. The capacity constraint not only prices out passengers, but also limits airline and alliance competition at a route level, which inflates airfares.
- 3) Any impact of Heathrow’s airport charge levels on airline profitability is not visible at an airline annual report level. In the operating profit performance reporting of IAG’s 2024 annual report, British Airways’ supplier costs are a lower share of operating costs than for Iberia and Aer Lingus.
- 4) Heathrow’s service quality can affect passenger willingness-to-pay. However, we do not have evidence that currently this is a material driver of airfare differences between Heathrow and competitor airports.

2.51. Based on reliable third-party data, we estimate that annual operating profits for all airlines at Heathrow are in the range of [REDACTED]. We have also estimated the quantum of operating profits that are attributable to the scarcity of Heathrow capacity, using various approaches, and estimate that in 2024 they were in the range of £2bn to £3bn¹⁹.

Expansion lowers margins but is affordable:

2.52. Incumbent airlines will make even more profit without expansion. The same forces that drive a congestion premium today (which CAP3201 accepted would reduce with capacity expansion²⁰) – demand outstripping supply - will become more intense and airlines will be able to extract higher margins from passengers. This creates additional ‘headroom’ in airfares that ensures that expansion will be affordable to airlines.

2.53. For example, as a representative/illustrative airline only, if BA were to pay a Heathrow airport charge of [REDACTED] per passenger (2024 price base), we estimate that they still would achieve a ~10% operating margin, which is well above the industry average for 2024 (6.7%) and is also above a level of operating margin necessary to sustainably maintain their fleet, under some reasonable assumptions about demand in the short-term.²¹

2.54. Although expansion is affordable to airlines, long-haul APD is a policy lever that is available to Government to mitigate reductions in airline profits. Foregoing a ~10% (£10-£15 per passenger) increase in long-haul APD rates to reduce pressure on airline margins will maintain one of the highest commercial aviation taxes in Europe, and receipts to Treasury will be offset by an increase in Heathrow’s long-haul passengers due to expansion.

Incumbent airlines have a rational incentive to protect margins:

2.55. Constrained capacity in the London long-haul market has long been recognised to cause fare inflation. In 2015, the Airport’s Commission estimated that the cost of UK air travel would be driven up by £3-4bn (2015 prices), or £4.2bn - £5.5bn in 2025 prices, by 2050, largely due to airfare rises in the long-haul market, if new capacity

¹⁷Please see: [IATA - Airline Profitability Stabilizes with 3.9% Net Margin Expected in 2026](#)

¹⁸ See more on topic in Supporting Document 13.

¹⁹ We are confident of the order of magnitude and will update the CAA with updated estimates in due course

²⁰ Para 1.9, Page 9, CAP3201

²¹ This is an illustrative calculation. It assumes 83% of BA passengers are at Heathrow; an elasticity of demand of -0.75 (as Heathrow passengers are relatively price inelastic compared with the general air passenger population); a cost-passthrough rate of 25%; an operating margin of 17%; and no ability for BA to reduce operating costs if passenger numbers fall. Please see Supporting Document 11.

is not unlocked.²² We estimate that currently there are around excess profits of £2bn-£3bn. Every incremental billion pounds in fares is a transfer of value from customers to airlines, with no change in the service delivered. It represents a loss of consumer value. This is the main consumer harm that expansion is designed to address.

- 2.56. Incumbent airlines have a rational incentive to protect margins, including by delaying or opposing expansion. This means their interests are not always aligned with consumers, who benefit from competition and choice from new capacity.
- 2.57. The CAA introduced the Consumer Challenge Board (CCB) in 2019 as a direct rationale to provide greater and direct consumer voices in the process, against this backdrop. This is particularly important in the case of expansion where the benefits include additional airline competition, which is a dynamic absent in most comparator sectors, complicating governance models borrowed from energy or water. It is vital therefore that the CAA seeks a framework that includes consumers and delivers for them.

An updated case for change:

2.58. In this section we outline that:

- Success or failure of megaprojects is determined by how ownership is structured, how decision rights are allocated, and how capital is remunerated. These will shape incentives, accountability, and the ability to manage risk – which in turn are determined by the regulatory framework.
- A framework that promotes financeability, timely decision-making, and disciplined delivery can materially reduce the likelihood of systemic failure. This is reflected in best practice in managing megaprojects, as seen in other regulated sectors.
- Conversely, a framework that introduces fragmentation, uncertainty, or excessive rigidity can amplify risks and drive adverse outcomes. These repeat the failures seen at HS2, BER and JFK, and risk being repeated by the CAA with Expansion unless it uses its case for change to set out the challenge.
- The CAA needs to consider this in its “case for change”, and the unique challenges of delivering at the unique constraints and significance of Heathrow.
- It is also important that the CAA reflect on how the consumer voice can be fully represented, and how it considers evidence submitted by incumbent airlines and their role in future governance, noting that their incentives are misaligned with future consumers benefit.

2.59. Heathrow believes the CAA have missed an opportunity to consider both the principles of better regulation to set the initial context for its review, as well as ask the critical questions about its role in ensuring efficient and financeable delivery, and review how other regulators approach megaprojects – including where megaprojects have failed.

2.60. Whilst the pace and interaction with Government decision making adds complexity to the process, the principles of Better Regulation utilised from the start, may have provided an improved initial lens that would have filtered the review and the case for change. For example:

- Proportionate – the CAA review is critical, but the wide range and long list of options has meant a net cast too wide, with certain models not viable from the start.
- Targeted – as outlined above, the case for change does not reflect the challenges and outcomes associated with the expansion project and how it can deliver for the consumer.
- Consistent – the unbalanced use of evidence from the airline campaign group and CAA’s internal conclusions as a result, is not consistent with previous consultation processes.
- Transparent - the framework for review is opaque and has not set out clear metrics/ criteria for decision making.
- Accountable – future decision points and use of future evidence remains unclear, as well as the review’s interaction with planning and the overall ANPS review process.

2.61. Such an approach should be the basis for change, especially given the Government’s clear direction in Autumn 2025 that Heathrow’s scheme was selected given it is the most likely to meet the Government’s timelines.

²² Please see: [Airports Commission: final report](#)

- 2.62. The delivery of large-scale infrastructure projects is inherently complex, involving multiple stakeholders, long time horizons, and significant financial commitments. Empirical evidence from global megaprojects demonstrates that the majority fail to meet their original cost, schedule, and performance expectations. Analysis suggests that 91.5% of megaprojects fail on cost and time, with average overruns of 79% and delays of 52%²³. Studies consistently show that optimism bias, fragmented governance, and misaligned incentives are systemic drivers of overruns and delays. These patterns are not isolated; they recur across sectors and geographies, including aviation, rail, energy, and water infrastructure.
- 2.63. For the CAA, assuming successful delivery as a given would be a material risk. The scale and complexity of Heathrow’s expansion place it firmly in the category of megaprojects, where failure modes are well documented and often severe. Cost escalation, schedule slippage, and degraded operational readiness can impose significant consumer harm, undermine investor confidence, and erode public trust. These outcomes are not typically the result of technical shortcomings alone but of structural and regulatory choices made early in the project lifecycle.
- 2.64. The acknowledgement of the extent of this challenge is missing from the current case for change, and consequently the approach outlined in the current consultation appears to consider incremental adjustments to the existing framework, without considering if it can support delivery. It then juxtaposes these incremental models with radical re-design with no view as to whether that overhaul is consistent with best practice. CAP3195 misses the need for a starting point that assesses what has been successful elsewhere, relying instead of piecemeal case studies that outline an option to consider, rather than an example to analyse.
- 2.65. This “pick and mix” approach, with no reference to the deliverability of the whole, risks repeating patterns observed in other megaprojects where governance and incentive structures in particular were insufficiently adapted to the complexity of the undertaking. Further information on these megaprojects can be found within the review of models, however some key examples include:
- At Berlin Brandenburg Airport (BER), fragmented accountability and rigid governance processes created systemic delays and late-stage integration failures resulting from poor procurement and planning practices. Despite secure funding, the absence of a single empowered delivery entity and reliance on standard approval mechanisms led to repeated re-baselining and cost escalation.
 - Similarly, High Speed 2 (HS2) suffered from diffuse decision rights and premature schedule commitments embedded in political and regulatory processes, as well as poor procurement practices mandated by non-expert stakeholders. These factors drove unrealistic baselines, rework, additional cost and ultimately scope reduction.
 - At JFK, a model that prioritised competition for airport services over integrated planning and delivery entrenched fragmentation, weakening system integration and prolonging delivery timelines. The consequence is an airport that is less efficient, delivers worse service and constrains competition among airlines.
 - Madrid-Barajas T4, a model that did not include specific capex incentives, and was around 48% over-budget.²⁴
- 2.66. The regulatory model must explicitly address systemic risks – through clear allocation of authority, proportionate escalation mechanisms, and stable, financeable remuneration structures. Whilst the probability of delay, cost escalation, and degraded consumer outcomes is an inherent risk in any major project - the evidence from BER, HS2, and JFK demonstrates that these risks are not theoretical. These risks are recurring consequences of frameworks that underestimate the interaction between regulatory design and delivery performance.
- 2.67. Accordingly, the starting point for this review should consider how megaprojects succeed and fail. This understanding will enable the design of a regulatory model that mitigates known failure modes and supports the conditions for success. Indeed, it is incumbent upon the CAA to do so in line with its primary statutory duty

²³ Flyvbjerg, B. 'Introduction: The Iron Law of Megaproject Management', in Bent Flyvbjerg (ed.), *The Oxford Handbook of Megaproject Management*, Oxford Handbooks (2017).

²⁴ Oxera, Supporting Document 3.

to further the interests of users of air transport services. Without such deliberate consideration, the probability of cost escalation, delay, and compromised service quality remains high, with consequences borne by consumers, investors, and the wider economy.

- 2.68. Within this review, we suggest that the CAA could reflect the prevailing consensus on best practice for megaprojects in other sectors. Other regulators have taken a clear path that the CAA does not comment on in either its case for change or in its approach to new models. For example, Ofgem’s ASTI fast-track framework accelerated strategic transmission projects, showing how bespoke regulatory pathways can improve timeliness, efficiency and financeability. Thames Tideway and early successes of UK nuclear projects in attracting the required level of financing under RAB-based models. If the trend is streamlined for delivery of successful infrastructure investment is balanced governance, clear incentives, built on longer regulatory periods and a RAB model, Heathrow would welcome clarity on why the CAA is either not considering or risking departing from this consideration.
- 2.69. Moreover, Heathrow also believes the CAA have not acknowledged that the unique challenges of delivering expansion at Heathrow that could mean wholesale adaption of some of the regulatory case studies listed into its case for change are not reasonably applicable. The Government and Heathrow have a clear ambition – this must be an entirely privately financed project. CAP3195 acknowledges this and the size of finance required to be raised via both equity and debt investors. However, this acknowledgement should be reflected and applied to the suggested models.
- 2.70. Critical to this also is scale. Heathrow’s expansion is a £33bn megaproject, on top of a £15bn need to replace existing assets (e.g. T3²⁵) — far larger and more complex than typical regulated projects, making direct comparisons with smaller, in period delivery of infrastructure, challenging. In addition, and unlike BAU projects, the earliest, and largest, components of Heathrow’s expansion programme contributes to runway opening and the terminal capacity designed to serve it. Therefore, delays in any single project jeopardise the entire programme and the onset of all benefits. This includes the unprecedented scope (major earthworks, asset relocations, greenfield terminals) that differ fundamentally from routine regulated infrastructure and/ or replacing assets within the existing airport footprint.
- 2.71. Alongside scale, timeliness is perhaps the single most important driver of any future regulatory model and how and why the current model needs to change. The Government is clear that expansion must meet clear milestones (DCO approval by 2029, runway by 2035).
- 2.72. In addition, Heathrow role as the UK’s hub airport and largest port by value and the busiest globally by space constraint (pax/ha, movements per runway), makes models that would result in fragmentation used in other sectors incompatible or too risky to trial given the economic consequences of failure.
- 2.73. Heathrow is also adjacent to densely populated communities, requiring complex mitigation measures (e.g., Sustainable Travel Zone, noise reduction, air quality commitments). These obligations add layers of planning and cost that case studies from energy or rail - often based in remote corridors or greenfield sites - do not face.
- 2.74. Consequently, Expansion attracts intense national and local scrutiny, requiring robust stakeholder engagement and environmental commitments. Other regulated sectors rarely face this wholesale combination of political, social, and economic pressure. The reputational and economic risk of failure, or perception of failure, is greater and therefore CAA appetite to use Expansion to test novel and complex regulatory models that are misaligned with best practice should be reflect this.
- 2.75. The following chapters seek to build on this updated case for change, setting out a framework that reflects these challenges and how to apply models, case studies and examples to meet them.

²⁵ Due to rounding, the components total £49 billion.

3. REVIEW OF EVALUATION FRAMEWORK:

CAP3195's stated ambition is to reduce the long list of options, into a short list for further consideration and that aligns with the current expansion programme timelines. We agree with this objective. However, the current framing remains **ambiguous, subjective** and does **not reflect the evaluation criteria most important to delivery**.

Given the renewed focus from Government on timely delivery and financing – and the consumer benefits that will flow from a model that prioritises both and avoids risk to deliverability – moving forward, the consultation process **should aim to revisit the evaluation framework** and give **higher priority and weighting to timeliness, financeability and deliverability** – creating pass/fail tests for each model. To do so would ensure that the framework is focused on how any regulatory model best enables the realisation of consumer benefits.

Doing so will not only **help the CAA reduce the long list quickly and effectively** away from those models that are inherently more complex to implement and riskier to delivery, but it will also preserve **the ability of meeting the Governments ambitions** – DCO by 2029 and runway opening by 2035.

Remaining criteria require more careful consideration – **particularly with regards to competition to ensure it assess how a model promotes competition across the entire value chain**. To be relevant, these criteria should be anchored in whether a model improves or worsens outcomes relative to no change.

3.1. The CAA ask three questions relevant to its framework for assessing regulatory models:

- *Do you agree with our broad approach of using the framework set out above to assess alternative regulatory models?*
- *Does the proposed framework appropriately reflect our statutory duties and is it complete?*
- *Do you agree with our proposed use of qualitative assessment supported where practicable by quantitative analysis?*

3.2. This chapter evidences the following points in response:

- A. The proposed criteria are subjective, unweighted and not sufficiently mindful of timeliness, financeability or deliverability.
- B. A timeliness test should fail those models that do not meet Government objectives on schedule.
- C. A financeability test should fail models that do not support Government objectives on private financing, or are not cost effective if they are anticipated to be considerably more expensive.
- D. A deliverability test should fail models that run counter to established megaproject best practice
- E. Competition is a means, not an end, and should be viewed holistically as to how it delivers consumer benefits across the value chain, including the impact on competition between airlines.
- F. Service is an outcome that should be defined relative to Consumer Willingness to Pay, rather than constrain the criteria to what the CAA deems “appropriate”
- G. The criteria need to reflect the uniqueness of expanding Heathrow and the externalities that need to be appropriately managed in delivery and operation.

3.3. The proposed updated criteria are summarised below:

Table 2: Proposed assessment Criteria

	Considerations	Test
Timeliness (New Test)	<ul style="list-style-type: none"> Can the model deliver DCO by 2029 and runway by 2035? Does the model require legislative change, a new Market Power Determination (MPD) or commercial contracting? Does the model increase the risk of schedule delays as demonstrated by learnings from other megaprojects? Can the model credibly recover delay costs through evidenced efficiencies and be NPV positive? 	Pass / Fail
Financeability (New Test)	<ul style="list-style-type: none"> Does the model support investment grade business risk profile for current and future borrowings and minimise risk of rating downgrade to access cost efficient debt? Does the model support investment grade business risk profile for current and future borrowings and minimise risk of rating downgrade to access cost efficient debt? Does the model support competitive, predictable returns commensurate with risks? Does the model support ordinary course debt financing and minimise impact on existing creditors? Does the model enable clear allocation of risk and responsibility? 	
Deliverability (New Test)	<ul style="list-style-type: none"> Does the model replicate proven success factors for megaprojects? Does the model replicate the 3 key “failure factors” of megaprojects? 	
Service Quality (New Considerations)	<ul style="list-style-type: none"> What do consumers value from future journeys and are willing to pay for? Does the model make the delivery of most important service quality attributes for consumers more or less likely, during delivery and operation of an expanded Heathrow? 	Better or worse than no change
Efficiency (Unchanged to CAA)	<ul style="list-style-type: none"> Can the model provide incentives for efficient cost during delivery? Would the model be expected to have an impact on ongoing net operating costs? 	
Competition (New Considerations)	<ul style="list-style-type: none"> How does the model deliver competition across the value chain, particularly between airlines? Where the model introduces competition, are the expected benefits of this competition greater than the expected cost? 	
Sustainability (New Criteria)	<ul style="list-style-type: none"> Will it improve trust and accountability in relations with local communities? Will it enable ANPS commitments to be efficiently met? 	

Approach to evaluation:

- 3.4. The outline approach to evaluating the long list of models requires revisiting. The lack of weighting between criteria is not cognisant of what this consultation should seek to achieve: a significant reduction in considered models to allow for effective scrutiny of a shortlist of models at the next consultation – with the ambition to have provided clarity to investors and stakeholders by Summer 2026. To do this it has to acknowledge that some criteria cannot be subjective assessment but are “pass” or “fail” based on objective tests that are aligned to consumer interest and Government direction.
- 3.5. Key terms such as “financeability” and “deliverability” are undefined, creating ambiguity and scope for arbitrary interpretation – particularly where the CAA has failed to assure stakeholders how it is being advised on matters that require expertise. This is avoidable, as many of these criteria could be subject to a quantitative, objective test.
- 3.6. It is also important to note the impact of the Government’s announcement on the preferred scheme. The CAA developed CAP3195 in parallel with Government’s appraisal process, and it is understandable that the CAA did not have sufficient time to adjust the consultation document in line with Government announcement. However, given the Government’s announcement on the scheme promoter for expansion – which was explicit on the scheme having been chosen for its ability to most likely meet 2029/2035 deadlines – it is reasonable to update and reflect this. Such an update would provide the most appropriate way to ensure that the CAA’s approach is aligned with clear Government direction and a fair interpretation of its duties through an updated evaluation framework.
- 3.7. An improved approach would have objective “pass/fail” tests for financeability, deliverability and timeliness, explicitly linked to Government directions:

Table 3: Pass or fail criteria

	Consumer Interest	Government Direction	Example Objective Test
Financeability	Efficient financing = lower charge	100% privately financed	Can it secure an A- grade credit rating?
Deliverability	Aligned with best practice = more likely to be on time, on budget	Avoid repetition of recent megaproject failures (implied)	Does the model replicate known “failure modes”?
Timeliness	On time delivery worth around £3bn / year (and rising) in public benefits	DCO by 2029 / Runway by 2035	Does it support Government schedule ambitions?

- 3.8. This approach is linked to CAA duties:
 - The CAA must have regard to the need to secure that Heathrow can finance its licensed activities; for expansion, it should mean 100% private finance raised on the most efficient terms – with evidence²⁶ indicating targeting an A- credit rating being best placed to reduce costs to consumers in the context of H8 setting a relevant reference point for expansion’s financeability. Some models retain access to efficient debt and equity markets, while fragmented or unfamiliar models raise risk, increase the cost of capital, threaten rating headroom, and ultimately flow through to higher consumer charges. Accordingly, financeability should be a hard pass/fail: models that weaken credit quality, break the cost–price link, or require novel, untested cash-flow constructs should be ruled out as inconsistent with the CAA’s financing duty and contrary to consumer interest in efficient charges.

²⁶ An actual credit rating target of A- (BBB+ notional) would be most suitable to deliver Heathrow’s H8 plan in a cost efficient way while providing reasonable headroom to absorb downside scenarios. Please see KPMG, Supporting Document 11.

- The CAA’s principal duty is to further the interests of users, which expansion delivers only if the regulatory model is actually deliverable - i.e., capable of realising more capacity, lower fares via competition, improved resilience and service. The evidence demonstrates that integrated ownership and accountability (single-RAB, evolved governance and incentives) correlate with on-time, on-budget outcomes, while fragmented governance, dispersed veto rights, and mandated contracting replicate the failure modes seen at HS2 and BER – leading to delays, cost escalation, lower asset utilisation and worse passenger experience. Therefore, deliverability should be a threshold criterion: models that embed known failure factors should be excluded as they cannot credibly unlock the consumer benefits that the CAA’s duty prioritises.
- Timeliness is integral to the CAA’s user interest duty and its obligation to promote economy and efficiency, because each year of delay to Heathrow expansion imposes a large, irreversible loss of consumer benefit (estimated at ~£3bn per year, accumulating to £40bn for a ten-year delay). Regulatory models that require primary legislation, new market power determinations, or complex third-party contracting risk 10 years of slippage and an estimated £40bn in foregone consumer benefits - harm that cannot be offset by hypothetical efficiency gains. Consequently, timeliness must be treated as pass/fail: any model that cannot credibly meet 2029/2035 should be ruled out as inconsistent with the CAA’s statutory duties.

3.9. Other criteria must avoid subjectivity and be clearer about:

- What the CAA understands consumers value most: “appropriate service levels at efficient cost” does not capture how consumers trade-off service quality, choice and cost.
- Any assessment is better understood when the criteria is specifically anchored: does this model deliver a better or worse outcome for these criteria relative to no change?

3.10. We comment on how to improve criteria on competition and service quality. We do not comment on cost efficiency. We also propose inclusion of a new criteria for sustainability / local communities. We believe these criteria and the proposed approach are consistent with the CAAs statutory duties.

Timeliness:

3.11. In this section we assert:

- In addition to being stated Government policy, timely delivery is central to the CAA duties, each year of delay beyond 2035 will delay billions in economic value²⁷, connectivity gains, and consumer benefits - none of which can be recovered later. Future consumers benefit enormously from timely delivery.
- Each of the models has a very different time requirement for implementation, and based on comparable examples in other regulated sectors, models introducing third party competition could take up to ten years to implement. Certain models may also lead to the CAA having to carry out a new market power test and resulting market power determination. Additional time required for commercial contracting may drive delivery dates out further. Overall, these delays could result in increases to total costs and losing over £20bn of consumer benefit.
- Even models that would not require an extensive regulatory implementation phase could still lead to delays in planning and construction. Widespread veto rights for HS2 and fragmented delivery for BER have each contributed to delivery delays of up to 10 years for both projects. It is important that the CAA recognises why the most successful megaprojects are those with fast tracked governance and integrated delivery.
- Evaluation criteria should include a pass/fail test for timeliness – discounting all models that cannot meet the Government’s schedule ambitions. At a minimum, the evaluation criteria should consider a proportionality test: if a model cannot credibly recover delay costs through evidenced operational savings and be positive in Net Present Value terms then it must be discounted.

²⁷ The Heathrow Expansion Cost-Benefit Analysis developed by Frontier Economics in 2025 estimates this to be £3bn p.a. and £40bn for a ten-year delay.

Timely Delivery & Consumer Benefits:

- 3.12. It is reasonable to conclude that timely delivery is of elevated consideration given it:
- Is now an explicit Government ambition.
 - Is associated with significant benefits to consumers in fare savings, better service and resilience.
 - Is likely to deliver efficient scheme cost and efficient financing costs – benefits passed onto consumers.
- 3.13. The Secretary of State for Transport was clear in her statement to Parliament on 25th November 2025: *“The Government therefore considers that overall, the HAL scheme provides the greatest likelihood of meeting our ambition for a decision on development consent application within this Parliament. This scheme will now inform the ongoing ANPS review”*. It is reasonable for the CAA to reflect the Government ambition for delivery in its criteria.
- 3.14. In its December 2025 Early Cost Consultation (CAP 3201) the CAA acknowledge that each year of delay to delivery would cost consumers lost benefits: *“Our review of the current evidence, including a Frontier Economics report, shows the potential for net benefits to consumers from capacity expansion being delivered in a timely way...not providing this certainty now could mean HAL slowing down its work on such planning and preparation, leading to delays to both the timetable and the delivery of potential benefits to consumers.”*
- 3.15. This is confirmed by Frontier Economics (2025) that state each year of delay costs consumers £3bn p.a. – reflecting the additional costs passengers pay current airlines at Heathrow in scarcity rents. The same methodology for calculating fare savings was endorsed by the Airports Commission (2015), who also concluded: *“A new Northwest Runway at Heathrow would deliver reduced fares, fewer delays, greater resilience and more daily destinations, relative to no expansion”*.
- 3.16. Timely delivery is widely acknowledged as minimising risks associated with political change – and likely to underpin investor confidence, leading to more efficient financing cost. It is also associated with more efficient costs insofar as costs for projects are driven as much by time as they are delivery of activities – with schedule overruns adding billions to cost.²⁸ This flows to higher financing costs - with a potential 100-150bps cost of debt increase representing schedule and cost overrun risks⁻²⁹ as well as higher overall costs as longer programmes have fixed running costs regardless of the delivery intensity.

Regulatory Implementation of Long Listed Models:

- 3.17. It is reasonable to conclude that:
- Different models will have different implications for timely delivery given differing requirements for primary legislation, regulatory implementation and commercial contracting.
 - Models that take longer to implement have a sunk cost to consumers of the foregone benefits of delay.
- 3.18. To be implemented, a model may require some or all of the below:
- **Change to Primary Legislation.** The CAA has recognised that it does not have the power under the Civil Aviation Act 2012 (CAA12) to *“impose, or force HAL to enter into, particular commercial solutions to promote competition. Furthermore, we do not have the power either to issue a licence to a new market participant under CAA12 (unless we first made a Market Power Determination and such a determination were to indicate that a licence would be appropriate), or to force HAL to divest assets.”*³⁰ The changes to

²⁸ Each additional year of delay increases project costs by an average of ~4.6%, with effects compounding over time (Flyvbjerg et al., 2004. What Causes Cost Overrun in Transport Infrastructure Projects).

²⁹ Santander and Freshfields, Supporting Document 2.

³⁰ CAA, CAP 1610: Economic regulation of capacity expansion at Heathrow: policy update and consultation, December 2017, para 1.11. Similarly, the CAA recognised that *“We confirmed our view that the CAA12 is flexible enough to accommodate a wide range of commercial structures at Heathrow, even if it does not permit the imposition of commercial structures, forced divestment of assets, or the licensing of a new participant without*

legislation needed to enable the CAA to mandate a particular commercial solution involving a third party will therefore result in delay to the process.

- **Market Power Determination.** If a third party operator is introduced at the airport, a new market power assessment would be required. The CAA recognised, in 2018 that “[w]hilst there is an existing MPD in respect of Heathrow, that determination dates from 2014, relates to a single operator and does not consider the new areas to be developed as part of the expansion.”³¹ A new operator would clearly alter the market dynamics necessitating a revised MPD, and it is reasonable to assume that Heathrow would no longer be dominant and it would therefore be necessary to make changes to Heathrow’s regulation.
- **Commercial contracting.** Any third-party delivery and/or operation of an asset will require a period of competitive tendering and complex negotiation between Heathrow and that third-party in order to conclude robust agreements. We anticipate airlines would also require downstream visibility adding further complexity and delay to the process.
- **Licence change.** Even where changes can be implemented via licence modification, regulatory models that involve fundamental changes to the regulatory framework could result in delays far beyond simply the statutory licence modification consultation period where novel or complex regulatory frameworks need to be developed.

3.19. An assessment of the changes each model requires to be implemented is considered in subsequent chapters. Below we assess the time impact of each change, identifying the component time cost of each change and comparing this to case studies where appropriate.

- A legislative change requires the Government to introduce a Bill to parliament, complete passage through Commons and Lords and respective committees, and for that Bill to receive Royal Assent. While technically it could be achieved with one parliamentary session, other case studies have taken numerous years to implement (see case studies below).
- If a market power determination is required this is likely to take many years, as seen with both BAA and the more recent proposals with Manchester Airport Group (MAG).³² The complexity of any review means it is likely to be many years and highly contested – resulting in considerable delay before implementation.
- Licence changes have a statutory consultation and appeal period that are likely to take at least 12 months.³³ Successful appeals would then amend the regulatory framework. Novel or complex changes have the greatest risk of being a) appealed and b) overturned on appeal given the challenge for the CAA to demonstrate it has met its duties and this should be factored in to the evaluation criteria.
- Commercial contracting requires willing counterparties to resolve complex interface and commercial risks. In other sectors where there is far less complexity than the world’s most space constrained airport (with all the complexity of an operational airfield) projects involving regulated commercial contracting have taken up to three years.³⁴

3.20. Where third party competition has been introduced in other UK regulated sectors, this has required extended legislative change over many years and additional time up to the point that a third party is appointed/licensed. The timeliness of introducing such changes is case-dependent but previous examples indicate the significant length of time inevitably involved:

first conducting a market power determination” in CAA, CAP 1658: Economic regulation of capacity expansion at Heathrow: policy update and consultation, April 2018, para 3.3. In CAA, Letter from Paul Smith (Director, Consumers and Markets Group) to Andrew Macmillan, 14 December 2018, page 3, the CAA also said “In summary, we agree that there are limits to our powers under the 2012 Act and we have explained on a number of occasions that the 2012 Act does not allow the CAA to force HAL to divest assets.”

³¹ CAA, Technical information note on the CAA’s approach to dealing with licensing issues raised by potential alternative developers of new capacity at Heathrow Airport, August 2018, page 6.

³² For example, in relation to MAG, it took approximately 5 years from IAG’s request for the CAA to make a MPD in 2019 to the CAA’s decision to not make a MPD in July 2024 (owing to IAG’s withdrawal of its request).

³³ A CMA licence modification appeal alone has a 24 week statutory deadline which can be extended to 32 weeks (section 28 CAA12).

³⁴ This was the case with United Utilities HARP.

- Competitively Appointed Transmission Owner (CATO): CATO is the new regime for introducing competition for new onshore electricity transmission assets. The CATO framework, which required primary legislative change, took approximately 10 years to implement from the point that the regime was initially proposed.³⁵To date, no CATO licences have been granted.
- Onshore Electricity Transmission Owner (OFTO): OFTO is the regime whereby bidders bid in competitive tenders for the right to acquire, maintain and operate offshore electricity transmission assets. The OFTO regime took approximately four years to implement from the initial Government consultations on the regime.³⁶It then took approximately 18 months between Ofgem inviting the first tender and Ofgem granting a licence to the preferred bidder.³⁷
- Specified Infrastructure Projects Regulations (SIPR): The SIPR framework took approximately three years to implement from the point that the powers were conferred to the Secretary of State.³⁸ The only SIPR project to date, Thames Tideway Tunnel (TTT), took over a year between the specification notice being issued for TTT (which required Thames Water to start a competitive procurement process) to the successful infrastructure provider being granted a licence.³⁹

3.21. In the table below we have set out the potential impact of some of the models on overall timetable. These are based on a number of credible assumptions and, therefore, whilst not the only possible outcome of these models they highlight the impact that could arise which would need to be offset by high levels of clearly demonstrated consumer benefit. These timings are inherently difficult to predict with exact accuracy and will depend on factors such as Government priorities, complexity and legal challenges launched.

3.22. For the sake of illustration, the table considers conservative estimates of the expected delays (and indeed a shorter time period than some of the precedents described above) which could result from the legal steps required.

Table 4: potential impact on overall timetable

	CAA Decision	New Leg.	CAA Review/ Amends	Contracting	DCO Sub	DCO Consent	Runway Opening	T5XW Opening
Current Schedule	Q3 2026	N/A	N/A	N/A	Q4 2027	2029	2035	2038
3rd Party models	Q3 2026	+>3 yrs	+ 2 yrs	+ >3 ⁴⁰ yrs	>2035	>2037	>2043	2046
Novel & Complex licence amends	Q3 2026	N/A	+ 1-2 yrs	N/A	2029	2031	2037	2040

³⁵ Initial consultations concerning developing a CATO framework started in 2015 and the legislative framework was put in place in 2025 following the introduction of the Energy Act 2023, The Electricity (Criteria for Relevant Electricity Projects) (Transmission) Regulations 2024 and The Electricity (Early-Model Competitive Tenders for Onshore Transmission Licences) Regulations 2025.

³⁶ Initial consultations concerning the design of a new offshore transmission regulatory regime took place in 2005 and the OFTO regime launched in 2009 following the enactment of the Electricity (Competitive Tenders for Offshore Transmission Licences) Regulations 2009. The OFTO regime fully commenced in 2014 following The Energy Act 2008 (Commencement No. 6) Order 2014 and The Energy Act 2004 (Commencement No. 11) Order 2014.

³⁷ In July 2009 Ofgem published its Pre-Qualification Document that would be used for the first tender round and in February 2011 Ofgem granted a licence in respect of the Robin Rigg project.

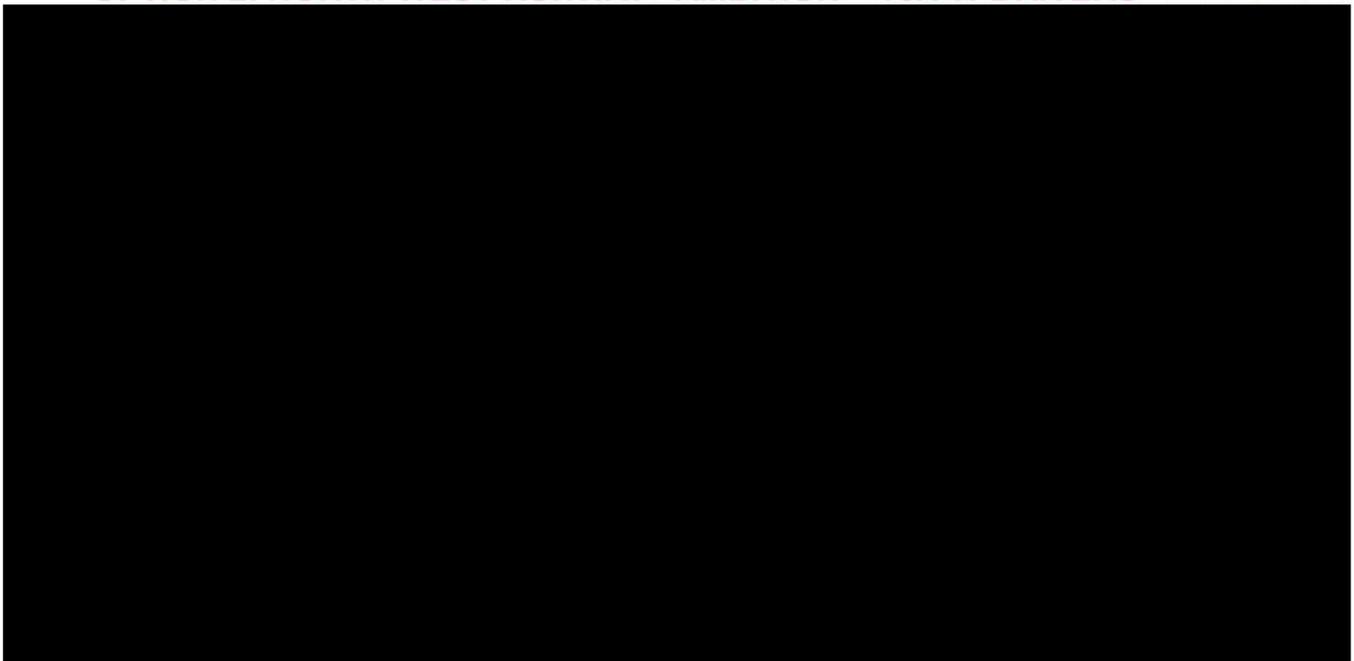
³⁸ The enabling powers were inserted by section 35 of the Flood and Water Management Act 2010 and The Water Industry (Specified Infrastructure Projects) (English Undertakers) Regulations 2013 came into force in 2013.

³⁹ In June 2014 the Specification Notification was issued and in August 2025 Ofwat granted a licence to Bazalgette Tunnel Limited.

⁴⁰ We assume that airlines will want to review the terms of any contracts in detail, given the complexity of having a third party operationally interface at the airport we consider it likely to be a very long process to conclude a contract.

- 3.23. A decision in Summer 2026 to select a model that required these changes would necessarily:
- Delay DCO submission – as Heathrow would halt work to understand the implications of a new model before it could secure an investment case to proceed with a DCO.
 - A delay to DCO submission delays consent, which in turn delays land assembly, groundworks and site preparation;
 - Which in turn delays both runway opening and major terminal capacity release (T5X Phase 1).
- 3.24. This is evident in the schedule below, which outlines dependencies through DCO submission to T5X Phase 1. For avoidance of doubt, any delay to DCO submission delays T5X Phase 1 opening:

Figure 4: DCO dependencies



- 3.25. Our conservative estimate is that a model that required legislative change, regulatory implementation and commercial contracting could result in a delay of 10 years to DCO submission, meaning opening a runway in 2045 and a terminal in 2048. Using the same Frontier Economics (2025) work to establish years of foregone consumer benefits, the estimated cost to consumers of implementing these models is £40bn.
- 3.26. If the cost of implementation can be established, so too therefore can the hurdle rate for consideration for implementation. For illustration, a model that took 10 years to implement at an estimated cost of £40bn to foregone consumer benefits must demonstrate it is likely to exceed that in future benefits (more efficient cost etc.) in Net Present Value terms.

Planning and Delivery Impacts of Long Listed Models:

- 3.27. Models can continue to cause delays by the nature of their operation. Most (91.5%) megaprojects fail insofar as they are delivered either late, over budget, or both. The reasons why have been extensively studied, and – as highlighted in previous chapters – it is important that the CAA outline more comprehensively its view on what lessons it has drawn from the success or failure of other mega projects. It is reasonable to conclude that some models will also impact timely delivery through the governance and oversight it chooses to implement.
- 3.28. Academic literature outlines complex governance as a key “failure mode”, particularly where projects handover veto rights to parties that are either inexperienced or have misaligned incentives. By way of example, the Hybrid Bill that created HS2 Ltd gave veto rights over design to local councils along the route, who neither had the expertise to engage in cost-benefit trade-offs of design choices but crucially had no incentive to consider the system wide benefits as the route traversed rather than stopped in their boundaries. This alone

is considered as a key reason for significant cost and schedule overrun, and also a reason why more successful infrastructure projects (and their equivalent regulators) have prioritised streamlined (Tideway, ASTI) or risk-based (SPEED) governance.

- 3.29. Other “failure modes” that drive schedule delays include where multiple parties are required to either approve procurement choices or make procurement decisions without sufficient expertise or exposure to their implementation/integration:
- At HS2, procurement decisions were made across several gateways across Whitehall, meaning accountabilities were dispersed and contracting models inflexible. The Design and Build packages mandated by those approval bodies were later demonstrated to have locked in early designs that required amendment at great cost and delay.
 - A similar series of events unfolded at Berlin Brandenburg (BER) where procurement choices by non-operators drove choices to dismiss the master planner, which meant no single entity was responsible for integrating the delivery of the various D&B contracts. Key failures missed were fire systems, the reintegration of which took years to put into place.
- 3.30. As the CAA long-list of models consider governance, incentives and oversight of (and even mandating) procurement choices, it is relevant for the CAA to also consider how those models have performed at other projects, and whether they are associated with schedule delay.

Proposed Evaluation Criteria for Timeliness

- 3.31. Government policy is clear that all efforts should be made to deliver a runway by 2035 and has been reiterated since the publication of CAP3195. If any models are not consistent with Government ambitions, then they should be discounted in a simple pass/fail test. Important elements for the CAA to consider:
- The time required to implement the regulatory framework
 - Once implemented, the impact the model could likely have on planning and delivery timelines
- 3.32. If the CAA does not consider Government schedule ambitions to be a determining factor, it should as a minimum consider proportionality in the context of its primary duty:
- How long does the model reasonably take to implement, reflecting on the requirements of primary legislation, regulatory framework and commercial contracting and the nature of the model in promoting timely delivery once in operation?
 - What is the cost to consumers of delay based on foregone fare savings?
 - What are the evidenced efficiency benefits of the model?
 - Is the latter greater than the former?
- 3.33. If the evidenced benefits of the delivering the model do not outweigh the cost of delay in Net Present Value terms, then it is not proportionate to implement the model and be consistent with the CAA primary duties to further the interests of users of air transport.

Proportionality Test and NPV: Illustration

If a model requires time to implement, we need to understand the cost of that time in foregone benefits and weigh it against the perceived benefit of a model in Net Present Value Terms (we assume a Green Book social discount rate of 3.5%). In an illustrative example:

- The disbenefit of the delay occurs in the years before implementation. A 10-year delay costs consumers over £40bn (£20bn in present value) in foregone benefits, aligned to Frontier Economics estimates.
- The benefit of any efficiencies of a model occurs in implementation (i.e. after the 10-year implementation period).

To break even in a cost-benefit sense, one would need to achieve a significant benefit in implementation. For a sense of scale, if the cost saving is in airport service delivery among passengers in the new north-west terminal, a saving on the rough order of £50 per passenger (2024 prices) for 30 years would be needed to achieve a £20bn benefit (present value).

A shorter implementation period – e.g. two years, associated with models requiring novel or complex license change only – would require benefits of £10-15 per passenger to break even.

Note, this analysis considers delay costs only, elsewhere in the document we evidence costs associated with financing and asset utilisation.

Financeability:

3.34. This section notes that:

- The Government have been clear on the need for the project to be privately financed. Some models in the CAA shortlist will very likely make private financing impossible and should be discounted.
- Given the £33bn cost of expansion (and the £15bn cost of the rest of Heathrow’s masterplan), the cost of financing is likely to be a significant cost borne by current and future consumers. It is evident that many of the models will make the access to finance significantly less efficient than today and should be discounted.
- The further consideration of some models beyond this consultation is likely to be chilling to both investment in the current operation and in expansion – harming current and future consumers.

3.35. Drawing on advice from Santander and Freshfields report⁴¹, the pass/fail criteria for financeability should consider:

- Does the model support investment-grade business risk profile to enable current and future borrowings at the most efficient cost?
- Does the model support competitive, predictable returns commensurate with risks?
- Does the model support ordinary course debt financing and minimise impact on existing creditors?
- Does the model enable clear allocation of risk and responsibility?

3.36. Heathrow welcomes that the CAA acknowledge “*supporting cost efficient access to capital markets is critical to ensuring that capacity expansion at Heathrow is successful*”. The Secretary of State has been clearer still that “*the project will be privately financed, including the core scheme and any associated surface access improvements*⁴².”

3.37. Previously the CAA has drawn conclusions about financeability that it needs to reappraise in the context of its model choices. In CAP1876 the CAA outlines:

- Regarding debt financing: “*Our analysis suggests that maintaining a credit rating of at least BBB+ is important to support financeability and investor confidence. We have considered the implications of different gearing levels and the equity risk premium required to attract sufficient equity investment*”

⁴¹ Santander and Freshfields, Supporting Document 2.

⁴² Please see: <https://www.gov.uk/government/speeches/heathrow-expansion-selection-of-a-scheme-for-anps-review-purposes>

- Regarding equity financing: *“We expect that the equity risk premium will need to reflect the additional risks associated with expansion, including planning and construction risks, and may therefore be higher than in previous regulatory periods.”*
- 3.38. Assuming the CAA considerations on debt and equity financing are the same, it requires a careful understanding of what drives those considerations. The key factors are:
- The predictability and fairness of regulation
 - The recoverability of cost and familiarity of the mechanism to do so.
 - The control and allocation of risk.
 - The likelihood of overruns – both time and cost.
 - The treatment of overruns – and if they are incurred by consumers, investors or others.
 - The consumer demand for the project, and its resilience to changes in the economic cycle.
 - The impact of changes on the existing financing platform
- 3.39. The CAA longlist includes models at extremes of each of these factors and it’s therefore reasonable to conclude that the impact of each model on financeability is material:
- It considers models that would give longer term certainty to investors (model 3) or expropriate assets or property for a third party to use against their will (Models 1b, 6 - 8), the further consideration of which undermines confidence in any investment.
 - It considers the RAB model which is widely used (Tideway, Sizewell) and makes the link between cost and price inexorable but also price benchmarking (Model 9a) that breaks the link entirely.
 - It considers governance (Model 1a) and procurement interventions (Models 4 and 5) that could drive delays and cost overruns or limit them by streamlining processes (as at Tideway, ASTI, SPEED etc.)
 - It considers the role of ex ante incentives (Model 2) in how it apportions overrun costs between consumers and investors.
 - It considers models that inflate demand risk (Models 6 – 8) by exposing investment to competition and terminal-level demand fluctuations, and significant novel complexity to interfaces, delivery and financeability.
- 3.40. Santander and Freshfields (Supporting Document 2) substantiate the material differences in outcomes through modelling using relevant market evidence:
- construction risk carries a pricing premium, with a material reduction in cost of debt (c.100–150bps) once assets are operational to reflect the removal of schedule and cost overrun risks. Assets which have a material brownfield element alongside greenfield development have a lower premium.
 - Equity IRRs for “greenfield” investments would be expected to move into “mid-teens and above in contrast with high single-digit to low double digit range for UK airport brownfield asset.
- 3.41. We asked Santander and Freshfields (Supporting Document 2) to design an objective test for financeability of each longlisted model, of which they identify four considerations:
- The first consideration is whether a model supports access to the substantial volume of private debt finance required to deliver expansion at an efficient cost. This includes maintaining an investment-grade business risk profile for existing and future borrowing entities and minimising any risk of credit rating downgrade, as increased credit risk directly elevates the cost of debt. Consistent with wider infrastructure market evidence, the framework also recognises that construction risk attracts a material pricing premium, which only reduces once assets become operational and the associated schedule and cost overrun risks fall away.
 - The second is whether a model can support the significant equity investment required from private capital. This entails ensuring the regulatory approach provides competitive and predictable returns commensurate with the level of risk borne by equity investors. Benchmarking indicates that brownfield airport equity returns typically fall within the high single-digit to low double-digit range under stable conditions. Where material construction or greenfield risk is introduced, equity return requirements increase - often towards the mid-teens or higher - reflecting heightened operational and governance challenges.
 - The third is whether the model ensures the uninterrupted provision of airport operational services without imposing unnecessary financing costs on the existing business. This includes maintaining Heathrow’s

current debt financing arrangements and avoiding undue disruption to existing creditor relationships, including the need for creditor consents.

- Finally, it considers whether a model enables the clear and appropriate allocation of risks, ensuring that accountability and decision-making authority sit with the parties best placed to manage them. Clarity and quantifiability of risk allocation are essential for investors across both debt and equity markets.

3.42. These four elements of the framework are summarised as the following sub-criteria:

- Does the model support investment-grade business risk profile to enable current and future borrowings at the most efficient cost?
- Does the model support competitive, predictable returns commensurate with risks?
- Does the model support ordinary course debt financing and minimise impact on existing creditors?
- Does the model enable clear allocation of risk and responsibility?

3.43. On the basis of these four sub-criteria, each regulatory model is assessed and assigned a “pass” or “fail”. A model passes where its overall impact on the financeability of expansion is positive or neutral; it fails where the effect is negative. This approach provides a transparent and financially grounded basis for comparing regulatory options and determining their suitability for enabling the expansion to proceed efficiently and sustainably.

3.44. As a minimum, it will also be important for the CAA consider a proportionality test, similar to that outlined above for timeliness:

- What is the cost borne by consumers of less efficient financing than today?
- What are the evidenced benefits of this model to consumers?

3.45. If the evidenced benefits of the delivering the model do not outweigh the cost of less efficient financing, then it is not proportionate to implement the model and be consistent with the CAA primary duties.

Proportionality Test and Financing

It is reasonable to conclude a model could have an impact on the cost of debt for Heathrow and for any third party delivering or operating at Heathrow.

- If a third party delivered a terminal (~£12bn of cost) but had a cost of debt 100-150 basis points higher than Heathrow, the additional cost of financing is £70m - £110m p.a. (assuming 60% gearing).
- If Heathrow built the remainder of the masterplan (~21bn of cost + ~£15bn of 2R masterplan) but the fragmentation of the airport raised its cost of capital by ~50 basis points, the additional cost of financing is £180m p.a..

The total passengers over the H9-H12 period is ██████████ meaning passengers bearing approx. £250m-£290m in additional financing cost. For the model to be favourable, it would need to demonstrate it can deliver evidenced benefits of greater than £2.50 per passenger. This does not include assessment of other known disbenefits (delay, inefficiency etc).

Deliverability:

3.46. In this section we note that:

- 91.5% of megaprojects fail: either because they are delayed or overbudget or both. It is essential that the CAA remains mindful of the influence its role and the choices made across these consultations will have on the eventual success or failure of the programme.
- There is significant study into megaproject delivery, and a prevailing consensus as to the common features the best megaprojects have. These are familiar financing structures that link cost and price, integrated

ownership, adaptive governance, and quality assurance. By extension, there is also consensus as to why high-profile projects like HS2 and Berlin Brandenburg failed so badly.

- These features, good and bad, feature prominently across the longlist of models. It is a relevant consideration whether implementation means the model embodies best practice or an outlier in propagating features of projects commonly associated with failure. The latter is sufficiently consequential as to warrant that model to be discounted as part of a simple “pass/fail” test.

Megaprojects are difficult to deliver on-time and on-budget, CAA choices now will shape deliverability significantly

- 3.47. Global megaproject research consistently demonstrates that large-scale infrastructure projects are overwhelmingly prone to failure when measured against cost and schedule benchmarks. Bent Flyvbjerg’s analysis of over 16,000 projects finds that 91.5% fail by budget and time metrics, with average cost overruns of 79% and schedule delays averaging 52%. Only 8.5% meet planned cost and time targets, and just 0.5% achieve cost, time, and benefit objectives together. This pattern is so entrenched that Flyvbjerg coined the “Iron Law of Megaprojects”: *over budget, over time, under benefits, over and over again.*

Heathrow has unique experience in delivering megaprojects on-time and on-budget

As detailed in previous sections of this response, the delivery of Heathrow Terminals 2 and 5 are widely regarded as success stories.

- **Terminal 5** - Academic and institutional literature consistently identifies T5, delivered in 2008 at a cost of approximately £4.3 billion, as a construction cost outlier within the transport sector. This performance was underpinned by a client-led approach to risk retention and systems integration, programme-level contingency management, relational contracting through the bespoke T5 Agreement, and disciplined cost control practices such as earned value management and real-time reporting. Together, these mechanisms reduced supplier risk pricing, minimised duplication of contingencies, limited adversarial behaviours, and enabled early corrective action as cost pressures emerged.
- **Terminal 2** - Terminal 2, completed in 2014 at a cost of approximately £2.5 billion, explicitly built on these lessons and provides further evidence of cost-efficient delivery under conditions of significant technical and interface complexity. Industry and academic sources agree that T2 was delivered on time and within budget, with refinements that enhanced value for money. These included adaptive, learning-based risk management practices that reduced late-stage change and re-work; systematic integration of operational requirements into design decisions, improving whole-life value; and strong whole-programme coordination and testing discipline, which reduced uncertainty at later stages of delivery.

Taken together, the evidence from T5 and T2 demonstrates that cost efficiency in complex airport infrastructure is driven by integrated governance, flexibility and programme-level control, rather than early rigid fixing of costs and scope or fragmentation of accountability.

- 3.48. The Heathrow expansion programme falls squarely into the category of global megaprojects - its scale and complexity make it distinct from routine infrastructure works. Evidence from comparable airport and UK infrastructure projects shows that failure is not inevitable, but outcomes hinge on early structural choices.
- 3.49. Regulatory frameworks that shape ownership, governance, and incentives exert a decisive influence on financeability, timeliness, and quality. The CAA’s consultation is therefore not a procedural exercise: its decisions will determine whether Heathrow’s expansion avoids the systemic failure modes that have plagued projects like HS2 and Berlin Brandenburg. In short, the regulator’s role is pivotal in setting conditions for success rather than perpetuating the iron law.

There is broad consensus on megaproject success factors:

3.50. Academic and practitioner research converge on a set of success factors for megaproject delivery. These are presented in Supporting Document 1. These include:

- **Familiar financing structures that link cost and price:** Models such as the Regulated Asset Base (RAB) provide predictable, long-term revenue and reduce financing risk during construction, lowering cost of capital and enabling delivery continuity. Evidence from Thames Tideway and Sizewell C shows that RAB-based remuneration, combined with strong governance, materially improves financeability compared to models that push excessive risk onto developers (e.g., CfD at Hinkley Point C).
 - Loan spreads for projects with availability-based payment structures are about 28bps lower than demand-based⁴³.
- **Integrated ownership and delivery:** A single accountable entity for design, construction, and commissioning reduces interface risk and avoids late-stage integration failures. Tideway’s SPV model exemplifies this, whereas Berlin Brandenburg’s fragmented design-and-build contracts and JFK’s terminal-by-terminal concessions illustrate how diffusion of accountability drives delay and degraded outcomes.
 - Costs increase by ~33% on average with each additional “owner” added to a megaproject⁴⁴
 - Integrated Project Delivery shows a ~15 pp reduction in project cost overruns compared with Design-Bid-Build (which averages ~20% overruns)⁴⁵
- **Adaptive governance:** Successful projects employ proportionate, risk-based oversight rather than rigid, uniform processes. Network Rail’s Project SPEED demonstrates how stage-gated approvals and fast-track escalation improve pace and reduce rework, while HS2’s reliance on standard public-sector governance - with eight layers of approvals and no acceleration mechanism - created systemic delay and cost escalation.
 - Each additional year of delay increases project costs by an average of ~4.6%, with effects compounding over time⁴⁶
 - A World Bank review of 312 infrastructure works contracts from 2007 to 2019 finds that permit and clearance approvals account for approximately 13% of procurement delays in contracts above US\$100 million⁴⁷
- **Quality assurance and no dispersed veto rights:** Governance that balances cost discipline with delivery momentum prevents veto-driven paralysis. Tideway’s independent committee model achieved this, whereas HS2’s embedded local authority vetoes and BER’s politically subordinated technical decisions repeatedly stalled progress. Each new stakeholder to a megaproject raises total costs on avg by 0.7-1.2%⁴⁸

⁴³ An analysis of ~700 global infrastructure project-finance debt deals from 2006 to 2016, found that availability-based payment structures, where the private party is paid for making the asset available at agreed performance levels rather than for usage or demand, are associated with lower financing costs (Thierie, W., & De Moor, L. 2019. Determinants of bank loan spread in project finance)

⁴⁴ This estimate is based on a regression analysis of over 90 component-year observations across nine components in three UK megaprojects (Heathrow Airport Terminal 2, London 2012 Olympics, Crossrail) tracked annually during implementation (Gil & Fu, 2022. Megaproject Performance, Value Creation, and Value Distribution: An Organizational Governance Perspective).

⁴⁵ Ibrahim, M. W., & Hanna, A. S. 2019. Quantitative comparison of project performance between project delivery systems; Lovallo, D., Cristofaro, M., & Flyvbjerg, B. 2023. Governing large projects: A three-stage process to get it right.

⁴⁶ Flyvbjerg, B., Skamris Holm, M. K., & Buhl, S. L. 2004. What causes cost overrun in transport infrastructure projects?

⁴⁷ World Bank. (2024). Drivers of delays in procurement of infrastructure projects.

⁴⁸ This estimate is based on a regression analysis of over 90 component-year observations across nine components in three UK megaprojects (Heathrow Airport Terminal 2, London 2012 Olympics, Crossrail) tracked

3.51. These themes are recognisable in the direction UK Government and regulation has moved in recent years:

Figure 5: UK regulatory changes

Synthesis of UK regulatory changes

<p>1 Reducing system fragmentation</p> <p>Major reforms have responded to fragmentation by re-centralising planning, decision-making, and accountability (Williams Review, GBR, HS2 reset)</p>	<p>2 Simplifying delivery accountability</p> <p>UK regulation anchoring delivery to a clearly accountable entity or sponsor (Tideway Infrastructure Provider, GBR system integrator, HS2 post-Stewart governance changes)</p>	<p>3 Supporting financing for timely mobilisation</p> <p>UK regulators prioritising early financeability to unlock fast delivery (Tideway project licence, nuclear RAB, ASTI early funding decisions)</p>	<p>4 Streamlining approvals and assurance</p> <p>Some reforms have sought to reduce layered approvals and excessive process burden that delay delivery (Crossrail lessons, HS2 reset, ASTI accelerated approvals, planning reform)</p>	<p>5 Treating timeliness as consumer interest</p> <p>Government and regulators framing delay and uncertainty as economic and consumer harms, prioritising speed and certainty (ASTI, Planning & Infrastructure Act, 10-Year Infra Strategy)</p>
<p>Relation to the CAA's long list of regulatory models</p>				
<p>CAA regulatory models explore potential structural separation and asset-level competition, risking increased interfaces within a tightly integrated hub system:</p> <ul style="list-style-type: none"> 1b Separation of HAL's system planning function from its operational function 6 Third party builds and owns assets 7 Direct competition for airport operation services 8 Transfer of ownership 	<p>Proposed models risk diffusing accountability across HAL, third-party asset owners, airlines and regulators, complicating end-to-end delivery responsibility:</p> <ul style="list-style-type: none"> 5 Contract for delivery and operation (management contract / DBO variants) 6 Third-party ownership 7b Wholesale supplier model 8 Transfer of ownership 	<p>Proposed models emphasise tight ex-ante cost controls and conditional recovery, potentially delaying mobilisation and increasing development risk:</p> <ul style="list-style-type: none"> 1a Depending on changes to capex governance requirements 4 CAA oversight of procurement (including mandated Design & Build) 9 New frameworks for setting airport charges 	<p>Proposed models could retain or add multiple approval interfaces and oversight layers, risking slower decision-making for a time-critical programme:</p> <ul style="list-style-type: none"> 1a Depending on changes to capex governance requirements 4 CAA oversight of procurement (including mandated Design & Build) 	<p>Some proposed models prioritise affordability and cost control, with less explicit recognition of delay risk and foregone capacity as consumer detriment:</p> <ul style="list-style-type: none"> 1a Depending on changes to capex governance requirements (e.g. if onerous) 6 Where competition is emphasised over speed 7 Price benchmarking / LRIC-based charging frameworks

Where sectors have persistently underperformed, regulators have moved toward tighter, more granular performance targets and oversight to restore credibility

For example, the Cunliffe Review of the water sector recommended stronger performance requirements and company-specific supervisory function following sustained delivery and environmental failures

Source: Independent Water Commission (2025), Final Report, chaired by Sir Jon Cunliffe

The CAA longlist of models contains successful and unsuccessful models:

3.52. The CAA's long-list of potential regulatory models spans design choices that megaproject literature identifies as either enabling success or amplifying failure risk. These choices are not neutral: they shape ownership, governance, and incentives – the three structural levers most strongly correlated with financeability, timeliness, and quality.

3.53. These patterns matter because they are not incidental: they are structural consequences of regulatory design. If implementation choices replicate failure modes, the CAA risks institutionalising conditions that megaproject research shows to be determinative of poor outcomes.

3.54. Given the scale and consumer impact of Heathrow expansion, models associated with the failure modes warrant exclusion under a pass/fail test. There are three clear "failure" modes that the long list of models should be evaluated for:

- **Fragmented ownership and delivery** - as seen at Berlin Brandenburg - dilutes accountability, increases interface risk, and drives late-stage integration failures.
- **Rigid governance and dispersed veto rights** – as at HS2, where governance was not streamlined and veto rights dispersed to non-expert and misaligned stakeholders, leading to loss of control of schedule and cost.
- **Mandated design-and-build contracting without adaptive oversight** - observed at BER and HS2 - has been associated with scope immaturity, rework, and cost escalation.

3.55. The CAA evaluation should identify if a model has "failure mode" characteristics and dismiss it if it does.

annually during implementation (Gil & Fu. 2022. Megaproject Performance, Value Creation, and Value Distribution: An Organizational Governance Perspective).

Deliverability Criteria – Illustrative Application

Megaproject literature and successful case studies point to the need for quality assurance and avoiding dispersal of veto rights.

- A model could consider the need for independent technical assurance reporting directly to users of the future infrastructure. This is consistent with best practice (as at Tideway)
- Another model could empower users of the future infrastructure with a veto over investment decisions – meaning Heathrow loses control of cost and schedule. This is consistent with failure modes (as at HS2) that led to significant increases in cost, delays to schedule and reduction of scope.

It reasonable for the CAA to discount the second model.

Competition:

3.56. In this section we set out that:

- Case studies (JFK, LAX) show fragmenting airport services leads to inefficiencies - lower asset utilisation, higher costs, and worse passenger experience - despite nominal “competition” in service provision.
- The same case studies show how incumbent airlines – when given greater control of capacity release through ownership or veto rights through multi-operator airports – are likely to limit capacity release to new entrants, leading to less competition and choice for passengers.
- A key question for CAA’s evaluation is whether fragmentation in airport services leads to (a) more competition among airlines and/or (b) whether the benefits of this fragmentation outweighs known cost.

Inefficiencies:

3.57. It is well-evidenced that multi-operator airports consistently score lower on Airport Service Quality (ASQ) metrics, including overall service quality, end-to-end journeys, wayfinding and the gate/lounge experience.

3.58. In addition, case studies of multi-operator airports – highlighted in Mott MacDonald’s report (Supporting Document 15) - demonstrate that introducing competition in airport services has not delivered the intended efficiency benefits either. Instead, these models have resulted in structural inefficiencies across several dimensions (outlined in full in chapter 4):

- Asset utilisation is significantly lower in multi-operator environments compared to single-operator hubs.
- The need for larger terminals and aprons to accommodate separate operators for equivalent throughput drives up capital expenditure.
- Financing costs are higher as demand risk is more concentrated and therefore volatile, and the allocation of risks is more complex.
- Operating costs increase because duplication of services and governance complexity prevent economies of scale that integrated models achieve.

3.59. On the basis that prevailing evidence indicates competition in airport services leads to *lower* asset utilisation, *higher* costs, and *diminished* passenger experience - outcomes that undermine the very objectives such competition seeks to achieve – it is therefore unreasonable for the CAA to measure competition as an end or assume its implementation in airport services will necessarily lead to greater efficiencies, better service or consumer benefit. Indeed, case evidence indicates it is more likely to result in consumers paying more to receive a worse outcome.

UK Rail Privatisation: a case of fragmentation

The case for UK rail reform emerged most starkly from the May 2018 timetable crisis, which exposed yet again the structural weaknesses of a highly fragmented franchising system introduced in the 1990s. The failure was not confined to operational planning, but reflected the separation of responsibilities across infrastructure management, train operators, timetabling and government oversight. Multiple public and private bodies held partial control, yet no single organisation was accountable for end-to-end performance. Subsequent inquiries concluded that this fragmentation diluted ownership of risk, hindered system-wide decision-making and left passengers bearing the consequences when coordination broke down.

In response, the Department for Transport initiated a series of reviews which concluded that the franchising model had become overly complex and poorly aligned to passenger outcomes. Merely incremental reform would be insufficient, and a more integrated structure was required to provide a “directing mind” for the railway — capable of aligning infrastructure, services, timetables and investment decisions within a coherent system.

The Railways Bill, introduced to Parliament in November 2025, establishes Great British Railways (GBR) as a single, publicly owned body bringing track and train together. The Bill is explicitly designed to address fragmentation by consolidating accountability for performance, cost and long-term planning within one organisation. Through integration, the reform aims to improve reliability, simplify fares and ticketing, strengthen passenger representation and restore confidence that the rail system operates as a joined-up national network, rather than a collection of disconnected contracts.

Competition across the value chain:

- 3.60. Case studies of multi-operator airports such as JFK and LAX illustrate that granting incumbent airlines greater control over terminal capacity - whether through ownership, gate leases or veto rights over capital - tends to restrict access for new entrants, thereby reducing competition and passenger choice. This dynamic arises because terminal operators in these fragmented models often depend on a small number of dominant carriers for financial viability. As a result, incumbents have both the leverage and the rational incentive to limit capacity release to protect their market share and margins, even when broader consumer interests would favour increased connectivity.
- 3.61. Unlike integrated hub models, where a single operator can allocate slots and facilities to maximise network growth, fragmented arrangements allow dominant airlines to influence or block new entrants. As highlighted in Mott MacDonald’s report (Supporting Document 15), examples in the US market where incumbents have closed off growth to other carriers. While the US regulatory and airport ownership landscape differs from the UK, the underlying economic principle - that incumbents benefit from scarcity - is consistent across markets:⁴⁹
- **Ciliberto & Williams (2010):** Empirical analysis shows that dominant U.S. airlines use long-term exclusive and preferential gate leases to restrict competitor access, creating a hub fare premium and demonstrating that gate control is a central driver of market power, especially where gate scarcity enables incumbents to entrench dominance and elevate prices.
 - **FAA (1999) – Airport Business Practices & Airline Competition:** The FAA finds that long-term exclusive gate leases and Majority-in-Interest (MII) clauses enable incumbents to block terminal expansion and limit reasonable access for new entrants, reinforcing structural barriers to competition even when runway capacity is ample.
 - **JetBlue at JFK & LaGuardia:** JetBlue’s early growth was constrained by exclusive gate control at both airports, forcing delays in route expansion and ultimately requiring costly investment in new terminal infrastructure at JFK (Terminal 5), while at LGA its access was blocked entirely by entrenched long-term leases held by dominant carriers.

⁴⁹ Mott MacDonald, Supporting Document 15.

- **Dallas Love Field (DAL):** DAL became so structurally closed to new entrants that DOJ intervention was required during the American–US Airways merger to force divestiture of two gates to Virgin America to restore a minimal level of competition.
- **Airport Gate Competition Act (U.S. legislative reviews):** Legislative scrutiny revealed that dominant carriers often retain exclusive-use gates even when under-utilised, preventing LCC entry at most major airports and prompting proposals to increase common-use gates and curb incumbents’ ability to monopolise terminal facilities.

3.62. The primary rationale for new capacity is to enable airlines to offer more choice to passengers – whether that is to new destinations or competition among airlines on routes . Regulatory models that embed veto rights for incumbent airlines or fragment accountability risk entrenching existing market structures, limiting access or growth for competitors and preserving scarcity rents. Such outcomes would undermine the consumer benefits that expansion is intended to deliver - greater choice, lower fares, and improved connectivity.

3.63. The prevailing evidence demonstrates that fragmentation of airport services consequently limits competitive dynamics elsewhere in the value chain, constraining consumer choice and the connectivity benefits that expansion should deliver. It is therefore key for the CAA to take into account the impact any model can have on the whole value chain – especially among airlines where competition will drive the greatest fare and affordability benefits – and not exclusively with regards to competition for airport services.

Evaluation Criteria

3.64. The appropriate evaluation criteria are:

- How does this model enable or not enable competition across the whole value chain (including between airlines) relative to no change?
- Are the benefits derived from fragmenting airport services greater or less than the known costs?

Inclusion of consumer willingness to pay as a service outcome:

3.65. The CAA’s key statutory general duty states that it must carry out its functions in a way that it considers will further the interests of users (i.e., consumers), which means regulatory decisions should reflect what passengers value most. Evidence from Heathrow’s H8 willingness-to-pay (WTP) research demonstrates that passengers consistently prioritise predictable journeys and reliability over marginal reductions in airport charges, indicating that service quality is a higher-value outcome for consumers.

3.66. A WTP-based approach offers a more robust and adaptive framework. Unlike static definitions of “appropriate” service levels, WTP captures evolving priorities such as sustainability, accessibility, and resilience, ensuring that investment decisions remain aligned with consumer expectations. Linking service levels to WTP also enables proportional investment, avoiding over-engineering features passengers will not pay for and under-investing in those they value. For example, if multi-operator airport models deliver marginal capital efficiencies but result in less predictable journeys, consumer research shows that reliability is consistently valued more highly than small cost reductions.

3.67. Other regulated sectors, including water and energy, increasingly adopt outcome-based frameworks tied to consumer valuation rather than prescriptive standards, improving legitimacy and efficiency. This approach is defensible under the principles of good regulation set out in the Magenta Book and Green Book, which emphasise evidence-led decision-making and proportionality.

3.68. Accordingly, it is important that the CAA:

- define what consumers value from future journeys and are willing to pay for,
- assess whether each regulatory model makes these outcomes more or less likely - both during delivery and in operation.

Meeting the conditions of the ANPS:

- 3.69. Expansion is justified only if it delivers net benefits – more capacity, better service, and reduced congestion - while meeting sustainability obligations.
- 3.70. Operating next to a major urban conurbation amplifies impacts on noise, air quality, and traffic. It is evident that some regulatory models can better coordinate mitigation strategies across expansion projects, avoiding gaps in accountability.
- 3.71. The Airports National Policy Statement (ANPS) sets binding conditions on noise, air quality, carbon emissions, and community mitigation. It is evident that different regulatory models have a bearing on whether Heathrow can efficiently deliver these commitments.
- 3.72. Local communities, airlines, and Government expect Heathrow to manage externalities proactively and outside of what is required by the ANPS - through initiatives like sustainably linked bonds, sustainable travel zones and surface access improvements. It is evident that some models could undermine trust and delivery of these commitments.
- 3.73. Therefore, it is important that the CAA consider:
- *Will this regulatory model enable ANPS commitments to be more efficiently met than no change?*

4. HEATHROW'S PROPOSED MODEL:

Heathrow's preferred regulatory model is a **single-RAB framework that ensures financeability, stability, and alignment with CAA duties**, while **supporting timely delivery**.

The RAB model has a **proven track record of mobilising private investment**, delivering major projects like Terminals 5 and 2 on time and within budget. It offers **flexibility, strong governance, and cost efficiency, with benchmarking showing Heathrow's capital costs are competitive globally**. The model minimizes airport charge increases, reduces Government financial exposure, and provides predictability for investors—critical for Heathrow's £33bn expansion.

Heathrow proposes **evolving the RAB model with targeted enhancements** in governance, incentives, long-term commitments, procurement oversight, and selective outsourcing to meet expansion challenges – and learning key lessons from other megaprojects.

Building on strong foundations – RAB-based model:

- 4.1. In this chapter we consider the following CAA question regarding the long-list of models:
 - *Do you agree with our description of the regulatory models we have identified, and do you have initial views on the advantages and disadvantages of these models?*
- 4.2. We present analysis of each model and how it performs against the criteria outlined in the previous section. Before we do, we present our preferred model:
 - It is consistent with the submission made to Government in response to its 2025 consultation.
 - It has been developed further, constructively considering how workable CAP3195 models can be harnessed.
- 4.3. Heathrow's preferred regulatory approach is an evolved single-RAB framework that preserves an A minus credit rating and provides predictable, risk-adjusted returns throughout the expansion programme. This model maintains a clear link between efficient costs and price, stabilising cashflows and supporting timely delivery of consumer benefits, while aligning with the CAA's statutory general duties to further the interests of users (i.e., consumers) and to have regard to the need to ensure the financeability of HAL's operations.
- 4.4. The RAB based model at Heathrow has resulted in billions of pounds worth of investment that has transformed the airport and its service proposition to passengers and airlines. Since 2006, it has supported more than £15 billion of capital investment financed entirely from private sources. Major projects such as Terminal 5, delivered on time and within budget, and the Terminal 2 programme, part of a £11 billion capital plan in the 2010s, demonstrate the ability of the model to mobilise capital and deliver efficiently in a live operational environment.⁵⁰
- 4.5. It is also flexible enough to react and respond to changing objectives and priorities from the CAA and is also the model of choice for ongoing and future UK infrastructure investment. The model has ensured capital efficiency through strong regulatory oversight, airline involvement in governance and tailored incentive mechanisms. Independent benchmarking shows that Heathrow's capital costs are in line with or below comparable global hub airports once site-specific constraints are accounted for⁵¹.
- 4.6. The RAB model provides value for money by minimising increases in airport charges. Overall costs of expansion are kept lower through Heathrow's track record, which includes:
 - Access to Heathrow's established financing platform
 - Access to Heathrow's efficient cost of debt
 - Coordination with ongoing H8 investment plans

⁵⁰ Please see HEATHROW FUNDING LIMITED base prospectus: [Base Document](#)

⁵¹ See Section 2 above, as well as Supporting Document 12.

- Phased support through Heathrow’s balance sheet
 - Established shareholder oversight and accountability
 - Alignment of complex and integrated delivery and operational programmes
- 4.7. The RAB model is a market-led approach that minimises exposure of the Government balance sheet and reduces the likelihood of needing financial support. A single RAB model offers stability and predictability for investors, aligning with existing regulatory frameworks and minimizing financing risk – critical for a £33bn programme with high costs before recovery.
- 4.8. It is also the framework of choice for current and future infrastructure projects in the UK. For example, the Sizewell C nuclear project adopted a RAB model after CfD proved incompatible with megaproject delivery (with Hinkley). RAB reduced financing risk, lowered cost of capital, and improved investability for large sunk assets - critical for Heathrow’s expansion scale. It is also likely to be utilised for future small modular reactor nuclear projects.
- “Under the RAB model, construction risk is shared between consumers, investors and the Government, rather than being borne solely by the developer...The RAB model can reduce the cost of capital by allowing investors to start receiving revenue during construction, while maintaining incentives to deliver efficiently” - UK Government, Nuclear RAB Consultation: Government Response (2022).
 - The use of the RAB for Sizewell C is considered to have made a significant saving to consumers: “The investment deal builds on lessons learnt from the construction of Hinkley Point C to provide a funding model that spreads the around £38 billion cost of constructing Sizewell C between consumers, taxpayers and private investors. This represents a saving of around 20% compared with Hinkley Point C and demonstrates the value of building a virtual replica project” - UK Parliament Written Statement (22 July 2025).
- 4.9. Meeting the Government’s timeline ambitions of securing Development Consent Order (DCO) approval by 2029 and delivering a new runway by 2035—requires a model that can realistically support rapid progress. Of the options available, only the Regulated Asset Base (RAB) model offers this capability. Alternatives that involve legislative change or structural fragmentation would introduce years of delay, making them incompatible with the schedule and increasing the cost to consumers.
- 4.10. Despite claims by Heathrow Reimagined, there is no evidence of “gold plating.” There is no demonstrated pattern of over specification in Heathrow’s programme, and material investments are scrutinised and approved by airlines at the investment decision, providing direct user challenge on scope and cost. When charges and underlying cost drivers are normalised for Heathrow’s operating conditions, independent benchmarking indicates charges are broadly in line with peers, which is not consistent with systematic over building. Heathrow’s delivery record is frequently cited as evidence that disciplined delivery can and does coexist with a RAB, noting that the T2 and T5 developments were completed on time and on budget. More generally, a RAB combined with quality governance and assurance aligns prices with efficient costs, stabilises construction period cash flows and lowers financeability risk, thereby supporting timely delivery of consumer benefits.
- 4.11. It is notable that in its July 2025 submission to Government, Heathrow West Limited – promoted by The Arora Group, founding members of Heathrow Reimagined – concluded that a RAB model was the only credible way to finance expansion: *“The single till RAB framework provides an investable and familiar revenue model”*

Evolving the RAB-based model – Heathrow’s proposed approach:

- 4.12. However, the RAB model must evolve to meet the challenge of expansion. This is a case of evolution rather than revolution, and must include targeted enhancements to capital governance, incentives, commitment length and procurement oversight drawn from Models 1a, 2, 3, 4a, 5a and 5b.
- 4.13. This approach enables delivery of the advantages of other models within the CAA's long-list alongside the stability and predictability of the RAB-based model:

- **Capital governance (Model 1a).** Heathrow supports high quality, risk-based capital governance calibrated to an integrated megaproject that meaningfully consults customers and consumers on design. In practice, this means: treating expansion explicitly as a megaproject; applying risk-based governance templates to different scopes (consents, property, BAU aviation infrastructure, novel expansion infrastructure); involving airlines through joint assurance where consultation improves proposals; strengthening external technical and cost assurance where consultation is not appropriate; and keeping approvals predictable and fast through decision SLAs and rapid escalation. These changes retain single-point accountability and protect schedule while improving transparency and cost discipline.
- **Calibrated incentives (Model 2).** Heathrow proposes moving from blanket project-level incentives to a smart mix of programme, tranche and project tools that evolve with design maturity and risk certainty. Core principles include: progressive baselining and staging; sharing rates calibrated to forecast certainty; focus on high-level outputs that drive consumer benefits rather than granular DOs; proportionate reopeners and ex post reviews for first-of-a-kind elements; and pairing incentives with accelerated regulatory pathways so determinations keep pace with delivery.
- **Multi-period commitments (Model 3).** Heathrow welcomes a longer-term (15 or 20 year) framework for expansion-relevant elements via licence to lower the cost of capital (while reflecting the risk premium associated with expansion) and strengthen credit ratings by reducing the frequency of wholesale resets as well as give more certainty to our supply chain to exploit cost efficiencies in delivery and greater price certainty to our customers to plan their own investments efficiently. Commitments should be paired with normal resets to the key building blocks (opex, revenue, volume), disciplined reopeners (trigger-based, with tight thresholds and timelines), support smooth charge profiling across construction and ramp-up within the single RAB, and interface cleanly with Models 1a and 2 to avoid perpetuating the wrong governance or incentives over a longer horizon. Regular, standardised reporting against long-term outputs with quality assurance would enable the CAA to discharge its duties without micro re-determinations between control points.
- **Transparent procurement (Model 4a).** Heathrow supports transparent, quality oversight of procurement that preserves HAL as the procuring client and avoids mandating contracting models. Constructive features include clear scope and materiality thresholds, routes for escalation, and assurance that avoids duplication. This strengthens competitive tension and value for money without introducing new veto points or fragmenting delivery responsibility. As Heathrow continues to develop and build out its procurement strategy approach, engagement and consultation with the CAA and airline stakeholders, is our clear intention.
- **Targeted outsourcing where separable (Model 5a).** Heathrow will explore criteria-led outsourcing of separable, non-core services where this improves consumer outcomes without compromising safety, resilience or timeliness. Contract design should preserve predictable cashflows through clear performance regimes, remedies, risk allocation and step-in rights. Heathrow does not support mandated outsourcing of core assets (such as entire terminals), which would fragment accountability, deliverability and harm financeability.
- **Targeted third party delivery in non-core projects (Model 5b).** Heathrow does not support mandatory third-party design/build/operate arrangements for core expansion elements given financeability risks and time for implementation. However, Heathrow could explore the proportionate use of third party delivery models - including an Alternative Property Model and on-RAB joint ventures for genuinely separable, off-critical-path projects - subject to screening criteria (separability, resilience/compliance, timeliness, market test, passenger outcomes) and safeguards (clear performance regimes, remedies, risk allocation and step-in rights). This could harnesses potential benefits without undermining system integration or investment-grade credit quality.

How consumers benefit from Heathrow’s proposed model:

- 4.14. Under Heathrow’s single-RAB model, consumers can expect timely delivery of capacity and service improvements, because the framework preserves A minus financeability and links efficient costs to predictable remuneration - stabilising cashflows and enabling delivery to the Government timetable. This approach aligns directly with the CAA’s statutory duties to further the interests of users and have regard to the need to ensure the financeability of HAL’s operations
- 4.15. Consumers will also benefit from lower whole-life costs - both through efficient financing and disciplined assurance. Multi-period commitments (Model 3) reduce perceived risk and the cost of capital, while calibrated incentives (Model 2) focus on high-level outputs and include downside protections that keep construction-period cashflows stable.
- 4.16. Service quality improves because governance and procurement oversight are proportionate to a live, integrated megaproject. Risk-based capital governance (Model 1a) retains single-point accountability, accelerates decisions and strengthens independent technical/cost assurance where it adds most value; proportionate procurement oversight (Model 4a) heightens transparency and competitive tension without introducing new veto points or mandating contracting forms that could fragment delivery and lead to delay.
- 4.17. Where appropriate, consumers could also see targeted value-for-money gains from separable, non-core outsourcing (Model 5a) and DBO-style arrangements (Model 5b) on off-critical-path projects – where each is subject to clear screening criteria and contractual safeguards to ensure this enhances consumer outcomes. This harnesses competition without compromising financeability or system integration, keeping the airport’s core operation unified and efficient.

5. REVIEW OF LONG LIST OF MODELS:

Our review of the models listed by the CAA shows that **risks in delivery and cost efficiency are exacerbated by issues such as extensive veto rights, legislative change or licence modifications, mandating contracting structures.**

Moreover, **third party ownership, delivery and operation of critical assets drive the opposite efficiency outcomes and service quality behaviours** that the CAA are seeking to resolve in their review.

Summary of Model Performance:

5.1. Heathrow proposes that the following models are brought forward for future consultation:

Figure 6: Heathrow assessment of proposed models for future consultation

	Pass	Fail	Better than no change	Neutral	Worse than no change	Unknown or Inapplicable	
	Time (Pass/Fail)	Finance (Pass/Fail)	Deliverability (Pass/Fail)	Service Quality	Efficiency	Overall Competition	Sustainability & Communities
N/A Single RAB	Pass	Pass	Pass	Neutral	Worse than no change	Worse than no change	Worse than no change
1a Changes to Governance	Pass/Fail	Pass	Pass/Fail	Better than no change	Better than no change/Fail	Worse than no change	Worse than no change
2 Capital incentives	Pass	Pass	Pass	Neutral	Better than no change	Worse than no change	Unknown or Inapplicable
3 Longer Periods	Pass	Pass	Pass	Better than no change	Better than no change	Worse than no change	Better than no change
4a Procurement oversight	Pass/Fail	Pass	Pass/Fail	Neutral	Worse than no change	Worse than no change	Unknown or Inapplicable
5a Management Contract	Pass/Fail	Pass	Pass	Neutral	Worse than no change	Worse than no change	Unknown or Inapplicable
5b Design, Build, Operate	Pass/Fail	Pass/Fail	Pass/Fail	Better than no change	Worse than no change	Worse than no change	Worse than no change

NB: Split cells indicate that some models have significant downsides that need to be carefully considered before implementation and that Heathrow has clear view on what is workable and what is not.

5.2. Heathrow proposes the following models be discontinued from further consideration:

Figure 7: Heathrow assessment of proposed models discontinued from further consideration

	Timeliness (Pass/Fail)	Financeability (Pass/Fail)	Deliverability (Pass/Fail)	Service Quality	Efficiency	Overall Competition	Sustainability & Communities
1b Separating Planning & Ops	Fail	Fail	Fail	Fail	Fail	Fail	Pass
4b Mandate D&B Contracts	Fail	Pass	Fail	Pass	Fail	Pass	Pass
6 3rd P. Build, HAL operate	Fail	Fail	Fail	Fail	Fail	Pass	Fail
7a Wholesale Supplier	Fail	Fail	Fail	Fail	Fail	Fail	Fail
7b Direct Competition	Fail	Fail	Fail	Fail	Fail	Fail	Fail
8 Transfer Existing Assets	Fail	Fail	Fail	Fail	Fail	Fail	Fail
9a Price Benchmarking	Fail	Fail	Pass	Grey	Grey	Grey	Grey
9b LRIC	Fail	Fail	Pass	Grey	Grey	Grey	Grey
9c “Lighter Touch”	Fail	Fail	Pass	Grey	Grey	Grey	Grey

**if used for non-core, non-critical, less capital intensive assets only*

Model 1a – Shortlist:

The consumer perspective: A well calibrated capital governance regime should support efficiency, transparency, and consumer voice and value. The risk-based capital governance retains single-point accountability, accelerates decisions and strengthens independent technical/cost assurance where it adds most value.

- 5.3. CAP3195 outlines: "There may be opportunities to strengthen the governance framework and level of scrutiny applied to programmes and projects... [including] expanding the remit of the Independent Funds Surveyor... clarifying the information HAL must provide at each stage... and developing efficient escalation/enforcement procedures."
- 5.4. CAP3195 does not outline industry case studies but does give a limited assessment of the performance of the existing capital governance framework. Heathrow believes the following to be of relevance when considering Model 1a (see also Heathrow's review of Megaprojects, Supporting Document 1):
- Ofgem's Accelerated Strategic Transmission Investment (ASTI): Dedicated fast-track oversight with time-bound decisions, bringing approval forward by >2 years versus standard processes.
 - Network Rail—Project SPEED: Risk-based staging and design-maturity gating to avoid early lock-in and rework, thought to deliver a 50% reduction in delivery time.
 - Thames Tideway Tunnel: Clear roles, independent assurance, and ring-fenced governance supported predictable delivery and limited delay.
 - Berlin Brandenburg (BER): Dispersed approvals, excessive process and weak escalation drove major delays and cost escalation.
 - HS2: Dispersed veto rights among local councils led to loss of control of cost and schedule. Stewart review identified
 - Madrid T4 – an integrated development but without sufficient oversight of cost estimate maturity, leading to a 35% overrun, and a misjudgement in time required to assemble land and secure environmental approvals led to a two year delay.
 - Chicago – an 8-year gap between planned and actual delivery of Phase 2, with airline Majority-in-Interest approval identified as a critical constraint to timely delivery.
 - Frankfurt Terminal 3 Programme. The successful delivery of Terminal 3 demonstrates that a light-handed regulatory approach focused on oversight and monitoring can help enable delivery on time and within budget.⁵²
 - Western Sydney Airport. The (likely) successful delivery on time and within budget demonstrates that a light-handed regulatory approach can be beneficial for the progress and development of a mega-project. This is partially due to the reduced complexity and delays resulting from managing regulatory frameworks and processes, allowing WSA Co to focus on delivery and operational readiness.⁵³
- 5.5. Heathrow believes changes to the current capital governance regime *are* necessary and *should* support efficiency, transparency, and consumer voice and value. However, if poorly calibrated, these changes risk making the Heathrow Expansion programme unworkable. Therefore, changes to the capital governance regime should be brought forward for further consultation in the next stage of the CAA's process.
- 5.6. The Heathrow Expansion programme differs fundamentally from BAU capital delivery and as such requires a bespoke approach to capital governance and incentive design. Expansion's scale, risk and integration differ significantly from any BAU project. Furthermore, it is a tightly interlinked schedule that delivers the vast majority of its benefits at runway opening and subsequent terminal capacity release. Delays to any component project therefore risk the delivery of the majority of consumer benefits. Governance or incentive structures that slow decision-making, fragment accountability, or introduce additional approval layers would jeopardise consumer outcomes and conflict with the CAA's statutory duties
- 5.7. Problems in HS2 highlight the risks of not recognising the unique features and complexity of mega projects. The 2025 Stewart Review is clear: "*A bespoke approach is required to deliver a programme of the size and*

⁵² Jacobs, Supporting Document 14.

⁵³ Jacobs, Supporting Document 14.

complexity of HS2.⁵⁴ The review notes that despite the unprecedented scale and complexity of the programme, delivery, governance structures have followed a relatively standard approach. It should have been recognised that a different approach was needed.

- 5.8. Similarly, rigid or fragmented governance does not improve efficiency in megaprojects; it increases uncertainty and delay. Evidence from other large infrastructure programmes, including HS2 and Berlin Brandenburg Airport (BER), demonstrates that dispersed decision rights, excessive stakeholder vetoes, and governance fragmentation are major drivers of cost escalation and schedule overruns. Frankfurt Terminal 3 and Western Sydney Airport, instead, show that more light-handed approaches can help enable successful delivery of mega projects.⁵⁵
- 5.9. As the primary users of Heathrow’s current and future infrastructure, airlines must play a significant role in shaping expansion design and as efficient costs are recovered through the RAB, they reasonably expect a high level of assurance. Quality consultation can ensure that design and delivery decisions reflect practical realities such as aircraft turnaround, baggage systems, and terminal flows, which directly influence punctuality and service quality. Airlines also provide insight into future fleet mix, route strategies, and passenger demand, enabling infrastructure to be sized and configured efficiently.
- 5.10. While airlines provide valuable operational insight and often improve design and efficiency, there are limits to the effectiveness of consensus-based governance in a megaproject setting, particularly when incentives diverge. This is evident in experience of current capital governance:
- *Narrow focus on own commercial interests.* Heathrow was legally required to deliver the Next Generation Security Checkpoint programme by 1 June 2024, a requirement reviewed and fully allowed by the CAA in H7. Despite progressing through established governance from summer 2022, airlines withheld endorsement beyond the December 2022 deadline required to maintain programme certainty. Engagement on the Terminal 3 Central Search Area alone involved over four months and more than 270 hours of meetings, with objections often focused on short-term commercial impacts rather than the legal mandate to comply or passenger benefit from new screening processes. Heathrow repeatedly escalated concerns to the CAA that delays were risking statutory non-compliance. Ultimately, Heathrow proceeded at risk to avoid breach of legal obligations. For clarity, we do not intend to imply bad faith, but this is evidence of a lack of understanding of the significance of compliance and/or where governance rights are misallocated to those who do not bear the consequences of the risk.
 - *Disproportionate governance of low value capital projects.* In some cases, extensive review processes for smaller-scale projects (< £0.5m) have added time and complexity without a reasonable consideration of the cost of delay/review relative to potential benefit. There is a need to align on proportionality thresholds so that review effort is focused where it creates the greatest value. Examples include:
 - Rail Access Controls (fire safety asset replacement), delayed by two months; IFS confirmed costs were reasonable.
 - Direct Access IT replacement (resilience project following Microsoft withdrawal of support), delayed by two months for IFS assurance that confirmed competitive pricing.
 - Colleague welfare facilities, delayed by detailed challenge on minor specification items.
 - *Engagement beyond technical remit.* Some projects involve highly technical elements where specialist expertise is required. In these cases, streamlined assurance processes or the use of independent technical review are better placed to provide assurance than airline community review. The current governance process prolongs early-gateway time – including for routine maintenance or non-aeronautical commercial initiatives – for no material improvement to the projects or quality assurance to airlines:
 - Terminal 5 Digital Advertising Towers: replacement of seven end-of-life assets delayed for months due to airline challenge on cost detail and commercial prioritisation.
 - Lifts, escalators and passenger conveyance: delays driven by assurance of minor component costs.

⁵⁴ Stewart Review Major Transport Projects Governance and Assurance Review: The HS2 Experience, June 2025.

⁵⁵ Jacobs, Supporting Document 14.

- *Unable to reach a cross-community view.* Moreover, given the diversity of airline business models — long-haul, short-haul, alliance-based, point-to-point — it is unsurprising that they cannot always form unified positions. Given highly diverse airline business models, governance should be designed to function effectively without requiring unanimity:
 - H8 Business Plan: Heathrow undertook a third round of CE to identify areas of alignment and priority across the Business Plan proposals. Despite extensive sharing of information - including the Business Plan, 20 business cases, and supporting materials - airlines did not complete the prioritisation exercise they had committed to. Instead, issues were deferred to the Airline Business Plan (ABP), submitted directly to the CAA.
 - Pre 2020 Heathrow Expansion Programme (HEP): diverse views as to whether capacity should be phased in the west first (T5X) or the east (T2A Extension). It is not possible to conclude a uniform “airline view” exists at sub-programme level and explicitly seeking it will necessarily lead to delays.

5.11. Given the current capacity-constrained environment supporting their yields, airlines naturally take a close interest in how changes could affect their networks. A well-designed regulatory model must recognise these structural incentives and balance them with future consumer interests, who value greater choice and lower fares through timely capacity release and new entry. There is evidence where those structural incentives have played out in practice:

- At the formation of HEP, differing views emerged on how best to incorporate new entrant perspectives.
- Long-standing evidence from US airports shows how incumbents’ control of facilities can constrain opportunities for new entrants - a well-documented structural effect in the US market.

5.12. The role of veto rights for carriers can also be observed at Chicago O’Hare, Phase 2 of the O’Hare Modernization Program was completed in 2021 approximately eight years later than originally scheduled (2013), with airline Majority-In-Interest approval identified by the FAA as a potential constraint on Phase 2 financing and timing: *“Majority-In-Interest rights allow dominant carriers to delay—or cancel—Phase 2 projects... Phase 2 approval from the Majority-In-Interest airlines is contingent on the support of either United or American, the dominant carriers at O’Hare”*⁵⁶

5.13. Outside of the aviation context, HS2 demonstrates the risks of dispersed approvals, unclear governance and stakeholder misalignment in large, interdependent programmes. Successive National Audit Office reports highlight how early budgets, planning consents and governance arrangements contributed to cost growth and delays, prompting calls for a comprehensive “reset” with clearer objectives, firmer control of risks and realistic schedules. The NAO’s analysis links earlier failures to governance complexity—precisely the conditions that can arise when veto rights are shared among parties whose incentives are not aligned to system level outcomes.

5.14. Finally, fragmenting governance or introducing multiple controlling minds would undermine accountability for safety, operational resilience, and system integration. Expansion requires close integration across planning, design, delivery and operations. Validation, certification and signoff processes must be streamlined and fit for purpose. By adopting a narrow, project-by-project view of delivery defined by inflexible DOs, applying the H7 framework to expansion risks forcing artificial fragmentation of programmes that should be managed holistically. Historical experience demonstrates the dangers of this approach. The Great Western Electrification Programme (Network Rail) suffered major cost and schedule failures due to poor programme and system integration⁵⁷, while BER experienced a nine-year delay and three-to-fourfold cost escalation following fragmented design-and-build contracts with no clear system integrator.

5.15. To address these risks while improving assurance and transparency, Heathrow proposes the following changes to Model 1a:

- Explicitly treat expansion as a megaproject, not BAU (as is consistent across best practice seen at ASTI, SPEED and Tideway as well as noted by the Stewart Review of HS2)

⁵⁶ Federal Aviation Administration (2005) Chicago’s O’Hare Modernization Program.

⁵⁷ National Audit Office (NAO), Modernising the Great Western railway, November 2016.

- Apply risk-based governance templates to different work scopes (Consent, Property, BAU aviation infrastructure, novel expansion infrastructure);
- Involve airlines and consumers through joint assurance and transparency in areas where there is significant benefit from consultation, including but not limited to terminal and airfield design.
- Strengthen external technical and cost assurance via a collaborative panel for areas where there is limited benefit through consultation (e.g. earthworks);
- Keep approvals predictable and fast to protect schedule, including strict adherence to decision timelines through sufficient resourcing from all parties, transparent, quality information to support decisions and rapid escalation to resolve roadblocks and move on.

Thames Tideway and Independent Technical Assurance

Tideway Tunnel's Independent Technical Assessor (ITA), provided by Mott MacDonald under a £12.3M contract from 2015–2031, acted as an impartial "watchdog" reviewing project progress, costs, risks, and delivery milestones for the £4.2bn super-sewer to prevent overruns. It reported to a Liaison Committee comprising the Secretary of State, Thames Water, Bazalgette Tunnel Ltd (IP), and Ofwat, delivering quarterly scheduled assessments plus ad-hoc advice on disputes or variations.

The Cunliffe review (Independent Water Commission review of the water sector) commended its use:

"There are key lessons to be learnt from the use of an Independent Technical Assessor during the construction of the Thames Tideway Tunnel. This was a successful approach to supervising the delivery of infrastructure, and the assessor was able to objectively and independently review and assess the ongoing project performance and delivery, primarily in relation to project costs and schedule"

Table 5: Assessment of Model 1a

	Criteria	Assessment
Pass or Fail	Timeliness	<ul style="list-style-type: none"> • DCO by 2029; runway by 2035: Conditional pass (with acceleration). • Lack of legislative change, MPD and/or complex commercial contracting required: Pass. • Association with schedule delays elsewhere: Conditional pass. • Ability to recover delay costs and remain NPV-positive: Conditional pass
	Financeability	<ul style="list-style-type: none"> • Supports investment-grade debt, minimizes risk of rating downgrade to access cost efficient debt? Positive. • Promotes private equity with competitive, predictable returns: Positive. • Compatibility with existing financing and minimal impact on creditors: Neutral. • Facilitates clear allocation of risk and responsibility: Neutral.
	Deliverability	<ul style="list-style-type: none"> • Replicates proven success factors for megaprojects: Conditional pass. • Avoids the three failure factors: Conditional pass. BER/HS2 evidence shows these patterns must be prevented by bounded rights and rapid escalation.
	Service quality	<i>Equal or worse than today. Governance that accelerates critical decisions while delivering to future users needs can optimise service quality. Governance that disperses veto rights to misaligned or non-expert parties can drive the wrong choices and/or limit future choice.</i>
	Efficiency	<i>Quality oversight and assurance from independent experts and, where beneficial, airlines can lead to more efficient costs.</i>
	Competition	<i>Designed poorly can constrain airline competition by empowering incumbent airlines with veto rights that can be used to constrain capacity and therefore new entrant growth.</i>
	Sustainability	<i>n/a</i>

Model 1b – Discount:

The consumer perspective: Lessons from mega projects suggest dispersed veto rights harm system-wide interests. Providing significant rights to stakeholders with non-aligned incentives is likely to delay expansion, which would be contrary to current and future consumers' priorities for greater connectivity and choice.

- 5.16. CAP3195 outlines model 1b, which it acknowledges is a “more significant intervention” that would separate the function of determining which programmes and projects must be undertaken and when (‘system planning’) from the functions of constructing, financing and operating those assets. It notes this separation could range from functional separation within HAL to vesting the planning function in a separate legal entity, potentially with user ownership. As an illustrative precedent, CAP3195 cites the UK energy sector’s National Energy System Operator (NESO).
- 5.17. CAP3195 also references Heathrow Reimagined’s proposal for a Capital Investment Committee and its alignment with Model 1b. The committee would include airlines and stakeholders in scoping, budgeting, and tendering major projects, with the CAA chairing and enforcing expenditure limits.
- 5.18. Additional case evidence Heathrow considers relevant (see also Heathrow’s review of Megaprojects, Supporting Document 1):
- **Berlin Brandenburg (BER):** fragmented delivery and late stage integration produced ~9year delay and 3–4× cost escalation – a canonical example of the failure modes associated with unclear system integration.
 - **New York JFK (multi-owner terminals):** persistent integration challenges and uneven passenger experience relative to integrated hubs.
 - **HS2:** dispersed approvals and stakeholder vetoes (central and local) drove schedule slippage and cost growth, ultimately prompting a programme “reset”.
- 5.19. Heathrow does not support Model 1b, either in the NESO example, or a Capital Investment Committee or equivalent proposed by Heathrow Reimagined. Concerns that are relevant to either type of model:
- The rationale for Model 1b rests on addressing perceived conflicts of interest in investment planning. However, Heathrow operates in a competitive environment where airlines already exert strong countervailing power (every investment requires approval), and where regulatory oversight already ensures transparency and proportionality. There is no evidence of systemic failures in planning under the current integrated model.
 - System operator models are designed for monopoly networks with natural separation between planning and operations, such as energy transmission. Airports, by contrast, are highly integrated systems where planning decisions are inseparable from operational realities - covering safety, security, airfield capacity, and passenger flows. Indeed, the flow of information from operations to planners as part of a single entity enables innovation to take place that would otherwise be unrealised. Fragmenting these functions would undermine accountability for system-level performance and resilience, particularly during irregular operations, and would introduce complexity where the only precedent in global aviation is Berlin Brandenburg.
 - It is unclear it would be privately financeable, Santander and Freshfields (Supporting Document 2) conclude it increases governance complexity, weakens HAL’s control and introduces execution and interface risks that could cause delays and it is expected to undermine lender and investor confidence. Santander and Freshfields (Supporting Document 2) also speculate that this model could lead to a delay in RAB recognition and that even a delay to recognising “a small portion of annual capex can erode HAL’s cashflow buffer; if 14% of 2030 capex is not recognised in-year, excess cashflow is fully eroded - reducing rating and financial headroom”.
 - Given the delivery/operating arm is exposed to reputational, demand and capital risk from operating the airport and delivering the capital plan, but has no control over the planning of those investments, which are instead made by an external body (NESO) or by a combination of CAA and Incumbent Airlines (Capital Investment Committee). As outlined in model 1a above, Heathrow had to proceed without airline approval with H7 Next Generation Security investments to meet its safety and security obligations. Model 1b, in either form, leaves Heathrow exposed to risks without recourse to remedy if the System Operator fails to plan effectively.

- Finally, establishing a separate planning entity would require significant regulatory and legal intervention, including licence modifications and, in the stronger form, primary legislation. The CAA has acknowledged that creating an independent system operator in the energy sector involved new legislation and a six-year lead time before becoming operational. Even a lighter form of separation would still be novel and complex and require extensive consultation and structural reorganisation, introducing delays measured in years rather than months. Such timelines are incompatible with Government milestones for Heathrow’s expansion and would delay the delivery of benefits to consumers.

5.20. Instead of solving for an inherent conflict of interests, as is the case with the NESO, even a lighter touch model that did not create a separate legal entity but conferred significant rights to incumbent airlines is likely to create new a conflict of interests and have significant consequences for future consumers. This would represent an even more extreme version of what is warned of in response to model 1a, with incumbent airlines interests likely misaligned with the interests of future consumers.

5.21. Moreover, the distribution of veto rights to those that are inexpert (as airlines surely could be on the nature of much of expansion investment) repeats the errors of HS2, where local councils rationally pursued private interests – minimising impact to bypassed communities – at expense of system-wide interests (more capacity, timely delivery, efficient cost). As above, it is not entirely clear where accountability for safety, security and service would sit if Heathrow is exposed to the operational and delivery risks of non-compliance but does not have full control over the planning of the investments required to mitigate those risks.

Table 6: Assessment of Model 1b

	Criteria	Assessment
Pass or Fail	Timeliness	<ul style="list-style-type: none"> DCO by 2029; runway by 2035? Fail. Establishing a separate planning entity carries a multi-year lead-in; this is incompatible with the required timetable. Lack of legislative change, MPD and/or complex commercial contracting required: Fail. Stronger separation to a new legal entity may require legislation; even functional separation adds material complexity and licence change. Associated with schedule delays at other megaprojects? Fail. BER and HS2 demonstrate correlation between fragmented governance and major delays. Credible recovery of delay costs? Unlikely. With compounding delay costs and benefits realised at runway opening, recovery through efficiencies is improbable.
	Financeability	<ul style="list-style-type: none"> Supports investment-grade debt, minimizes risk of rating downgrade to access cost efficient debt? Negative. Promotes private equity with competitive, predictable returns? Negative. Compatibility with existing financing, minimal impact on creditors? Negative. Clear allocation of risk and responsibility? Negative.
	Deliverability	<ul style="list-style-type: none"> Replicates proven success factors for megaprojects? Fail. Model 1b undermines single-point accountability and accelerated decision-making; evidence from BER and HS2 links fragmentation to rework and delay. Replicates the three failure factors? Fail. Separation risks fragmentation and governance paralysis, consistent with the patterns observed at BER and HS2.
	Service quality	<i>Equal or worse than today. Governance that accelerates critical decisions while delivering to future users needs can optimise service quality. Governance that disperses veto rights to misaligned or non-expert parties can drive the wrong choices and/or limit future choice.</i>
	Efficiency	<i>Quality oversight and assurance from independent experts and, where beneficial, airlines can lead to more efficient costs.</i>
	Competition	<i>Potential to constrain airline competition by empowering incumbent airlines to constrain capacity and therefore new entrant growth.</i>
	Sustainability	<i>n/a</i>

Model 2 – Shortlist:

The consumer perspective: A bespoke capital incentive regime for expansion that provides sufficient flexibility to manage its unique complexity and risk profile can promote consumer interest through incentivising efficient delivery (by supporting cost discipline and reducing lock-in and rework) while preserving timely delivery (by replacing some assurance) and investment-grade financeability (keeping financing costs efficient).

- 5.22. CAP3195 says: “This regulatory model would be focussed on amending the current system of capital incentives such that it could reflect the characteristics of specific projects and programmes... Options could include a differentiated set of incentives... [and] limiting HAL’s exposure to extreme cost overruns that may undermine its access to debt and equity finance.”
- 5.23. CAP3195 frames Model 2 as a calibration of ex-ante incentives - varying sharing rates by risk/forecast certainty and introducing mechanisms to cap extreme overruns to protect financeability. The emphasis is on staged agreement of allowances where solutions are novel, and reopeners for risks outside HAL’s control. It does not consider a specific case study but the below are ones that Heathrow considers relevant (see also Heathrow’s review of Megaprojects, Supporting Document 1):
- Thames Tideway Tunnel: Bespoke incentives within a ring-fenced RAB, independent assurance and downside protections contributed to timelier delivery and investability in a ~£4bn programme.
 - Ofgem’s ASTI: Accelerated oversight and early funding decisions reduced approval by >2 years, illustrating how targeted incentive design paired with faster determinations improves timeliness and cash-flow predictability.
 - Network Rail - Project SPEED: Risk-based staging and maturity gates avoided early lock-in and rework; complements Model 2’s staged baselines for uncertain scopes.
 - Salerno Airport expansion: a recent, privately financed airport development. Assets under construction were remunerated at the WACC. If work on an asset stalled and no progress was recorded in the Work in Progress, its remuneration was suspended unless the delay was due to factors beyond the operator’s control.⁵⁸
 - Western Sydney Airport construction: this airport was constructed on budget and ahead of schedule, even though there were no capex incentive mechanisms in place; the owner (the Commonwealth Government) bore full financial risk. It is useful to consider that there is no simple relationship between the strength of incentives and project success.⁵⁹
- 5.24. A reasonable analysis of how to implement Model 2 should begin with the limitations of the current regime – which is characterised by project-level approvals and Delivery Obligations (DOs) – and an acceptance it is incompatible with a programme of Expansion’s scale and complexity.
- 5.25. As highlighted above in this response, CAP3195 confirms the CAA’s earlier H7 conclusion that ex ante capex incentives, designed on a project-by-project basis, are not practicable for major capital programmes. While such incentives were appropriate for the bounded risks of the H7 capital portfolio, capacity expansion involves materially greater uncertainty and risk and was explicitly identified by the CAA as outside the scope of projects suitable for ex ante incentives.
- 5.26. Expansion projects are inherently uncertain and unpredictable, particularly in a live operational airport environment. Risks arise from procurement, labour shortages, regulatory change, technology–infrastructure interfaces, security requirements, contractor performance, and force majeure events. These are compounded by the need to maintain full airport operations for approximately 70,000 staff on a highly constrained site with extensive night working.
- 5.27. As set out in the Amey report previously submitted to the CAA alongside the H8 Business Plan⁶⁰, managing this complexity requires governance frameworks that support timely decision-making and flexibility to adapt

⁵⁸ Oxera, Supporting Document 3.

⁵⁹ Oxera, Supporting Document 3.

⁶⁰ Amey, Supporting Document 4.

as risks crystallise. The Jacobs review of capital governance⁶¹ confirms the importance of flexibility to allow for changes to the framework during different project phases.

5.28. However, the H7 framework materially limits this flexibility by:

- Fixing outputs at G3 through DOs, restricting Heathrow’s ability to pursue safer, lower-risk or better-value solutions as delivery progresses.
- Limiting post-G3 adaptability, preventing lessons learned in early delivery from informing later stages.
- Applying uniform treatment across projects, irrespective of complexity, constraining tailored approaches to contracting, contingency and risk allocation.
- Prioritising ex-ante specification over adaptive delivery, contrary to established best practice.
- Narrowing focus on customer and user benefits through rigid compliance with predefined deliverables.
- Reinforcing these constraints through externally mandated timetables that limit the extent to which risk can be resolved before construction begins.

5.29. These conclusions are reinforced by KPMG’s independent review (also submitted alongside the H8 Business Plan)⁶², which found that achieving confident G3 costings for large, complex projects requires disproportionate time and cost and may inadvertently slow delivery. KPMG highlight the existing framework does not have clear guidance for projects with significant interfaces and note that early firm pricing risks inaccuracy, rework, and excessive change control. They recommend considering deferring firm pricing and output fixation until sufficient detail is available to support flexible, informed decision-making.

5.30. For additional context, the Flyvbjerg database of major projects lists airport projects as having a mean overspend of 39%, with 43 projects having overspends in excess of 50%. In comparison, water projects have mean cost overspends of 20%; rail 39% and aerospace 60%, according to Flyvbjerg & Gardner⁶³. This indicates that airports (such as Heathrow), like other comparable sectors, do not have an equivalent value of under-spend and over-spend against budget.

5.31. Indeed, the National Audit Office’s report on HS2’s Euston Station project⁶⁴ refers to one major cause of failure as being HS2 fixing the price at too early a point before all the risks and uncertainties were fully understood and mitigated. The report states: "While it was necessary to look again at the design and costs of the station in 2020, the budget for Euston station was fixed too early and too low for what was intended to be achieved".

5.32. Airlines have recognised that DO criteria and weightings require careful adjustment for first-of-a-kind projects with heightened uncertainty. The Delivery Obligation Handbook, agreed jointly with airlines, explicitly singles out the approach for setting up criteria and weightings for ‘*Projects where Heathrow has no experience of delivering the asset type in a live operation or where an increased level of uncertainty or risk is involved.*’ - conditions that will characterise much of the expansion programme. So, by extension, it might be appropriate for areas of expertise, repeatability and control (such as terminal and airfield development) could be subject to incentives, but other investments (such as groundworks and diversions) are subject to ex post review and ongoing technical and cost assurance.

5.33. The Santander and Freshfields report (Supporting Document 2) view is that, given the non-repeatability of expansion scope, early lock-in of incentives would limit Heathrow’s access to efficient funding. It is welcome that CAP3195 acknowledges this. Heathrow’s view is that the incentives regime should move from blanket, project-level incentives to a smart mix of programme, tranche, and project-level tools that evolve with design maturity and risk certainty – protecting consumers through efficient delivery while preserving timely, investment-grade financeability.

5.34. Heathrow believes an iteration of Model 2 based on the below principles:

⁶¹ Jacobs, Supporting Document 14.

⁶² KPMG, Supporting Document 7.

⁶³ Flyvbjerg, B., & Gardner, D. 2023. How Big Things Get Done: The Surprising Factors Behind Every Successful Project, from Home Renovations to Space Exploration.

⁶⁴ Available at: [High Speed Two: Euston - NAO report](#)

- **Progressive baselining and staging.** Set incentive targets progressively as designs mature and risks are better evidenced; use option development phases before binding commitments for novel/uncertain scopes (SPEED analogue).
- **Calibrated sharing rates by risk/forecast certainty.** Apply higher sharing where forecasts are robust and lower/staged exposure where uncertainty is high; avoid uniform incentives that create perverse behaviours.
- **Explore downside protections for extreme outcomes.** Santander and Freshfields (Supporting Document 2) state: “Where such risks are not clearly capped or backstopped within the regulatory framework, this would be reflected in higher required returns on equity”. The next consultation should consider the appropriateness of caps/step-downs to protect ratings and market access, consistent with Tideway and nuclear RAB precedent.
- **Focus on high-level outputs that drive consumer benefits.** Emphasise outputs linked to runway opening, capacity release, resilience and service rather than granular DOs that can lock in immature scope and slow delivery.
- **Proportionate reopeners and ex-post review where appropriate.** Allow reopeners for exogenous risks and use ex-post cost reviews for first-of-a-kind elements to avoid early lock-in and rework; link to independent assurance to maintain discipline.
- **Pair incentives with accelerated regulatory pathways.** Combine Model 2 with ASTI-style fast-track determinations for critical-path scopes to preserve timeliness and avoid mismatch between incentives setting an expectation that governance then prevents Heathrow from efficiently meeting.
- **Avoid failure modes.** Uniform project-level DOs and early fixed baselines for high-uncertainty scopes were apparent in HS2. Asymmetric incentives that load downside risk onto HAL or overly complex constructs undermine predictability for lenders and investors.

5.35. Model 2, iterated as above, would enable the CAA to further the interests of users of air transport and have regard to the need to ensure the financeability of HAL’s operations: it improves cost discipline, reduces lock in and rework, could support an A- credit rating and access to cost efficient equity through defined downside protections and progressive staging.

Table 7: Assessment of Model 2

	Criteria	Assessment
Pass or Fail	Timeliness	<ul style="list-style-type: none"> • DCO by 2029; runway by 2035? Pass • Lack of legislative change, MPD and/or complex commercial contracting required: Pass • Associated with schedule delays at other megaprojects? Pass • Credible recovery of delay costs? Pass
	Financeability	<ul style="list-style-type: none"> • Supports investment-grade debt, minimizes risk of rating downgrade to access cost efficient debt? Positive. • Promotes private equity with competitive, predictable returns? Positive. • Compatibility with existing financing, minimal impact on creditors? Positive • Clear allocation of risk and responsibility? Positive.
	Deliverability	<ul style="list-style-type: none"> • Replicates proven success factors for megaprojects? Pass • Replicates the three failure factors? Pass
	Service quality	<i>Neutral</i>
	Efficiency	<i>Well calibrated incentives should drive decisions and behaviours that drive efficient cost.</i>
	Competition	<i>Designed poorly can constrain airline competition by empowering incumbent airlines with veto rights that can be used to constrain capacity and therefore new entrant growth.</i>
	Sustainability	<i>Neutral</i>

Model 3 – Shortlist:

The consumer perspective: Multi-period commitments provide a clearer forward view for airlines, a more investable and financeable framework for Heathrow, and ultimately a more reliable, higher-quality experience for consumers. By reducing perceived risk and the cost of capital, longer commitments contribute to lower aeronautical charges.

- 5.36. CAP3195 outlines: "This regulatory model aligns to HAL's proposal for a multi-period commitment in respect of certain elements of the price control... There are two broad means by which we could commit to a longer-term framework... a formal lengthening of the HAL price control through the licence... and a published policy statement without a formal lengthening of the price control through the licence."
- 5.37. CAP3195 notes that longer price controls can reduce perceived risk and cites equity analyst reaction to extended control lengths as illustrative of how duration can lower the cost of capital – while also recognising the counter-risk of increased forecasting error that must be managed. Heathrow considers the below case studies to also be relevant in considering model 3 (see also Heathrow's review of Megaprojects, Supporting Document 1):
- Thames Tideway Tunnel (SIPR/RAB): Long-dated, stable regulatory commitments with defined reopeners supported investment-grade financing and predictable delivery.
 - UK Nuclear (Sizewell C RAB vs Hinkley CfD): Moving to a multi-period, RAB-style framework with construction-period revenue improved financeability for a high-capex, long-horizon project, while retaining mechanisms to adjust for uncertainty.
 - Ofgem's ASTI (electricity transmission): Although an acceleration tool rather than a pricing horizon change, ASTI shows that regulatory commitments made earlier and for longer can de-risk delivery paths, complementing longer control periods for major programmes.
 - Dublin Airport North Runway. Long-term certainty through determinations on project scope and cost, and development triggers several years in advance of the trigger being met. The airport, airlines, investors, and other stakeholders had long-term visibility and certainty in the level of expenditure that was expected to be incurred, and when it would be incurred.
 - Chicago O'Hare Modernization Program. The 15-year duration of this agreement provides a degree of long-term certainty to all participants while leaving opportunity for a new agreement to be negotiated following completion of the project and the early years of operations.
- 5.38. Heathrow welcomes further consideration of Model 3 in future consultation rounds. A credible multi-period commitment to cost of capital and the capital framework can lower the cost of capital⁶⁵ and strengthen credit ratings by reducing the frequency of wholesale resets and by giving investors greater visibility over remuneration through the peak construction years - consistent with CAP3195's rationale and wider UK precedent.
- 5.39. Santander and Freshfields (Supporting Document 2) confirm this view: "increased long-term regulatory certainty over returns and cost recovery can enhance financeability by reducing regulatory risk and the associated risk premium on long-dated debt and equity - supporting a lower all-in cost of capital"... Greater regulatory certainty reduces execution and regulatory risk which rating agencies will view positively"
- 5.40. Critically, duration must be paired with disciplined reopeners to manage forecasting error in the event that costs, revenues or passenger volumes rise or fall versus forecasts. If implemented appropriately, Model 3 should make financing costs more efficient, with consumers benefiting from lower costs.
- 5.41. Longer-term regulatory periods provide airline customers with materially greater price certainty, enabling them to plan fleet, network and product investments with a clarity that quinquennial resets cannot deliver. A

⁶⁵ A multi-period commitment lowers WACC by reducing regulatory risk and improving visibility of remuneration through peak build years. Examples include positive equity-analyst reaction to longer control periods at CDG (up to ~10 years) and the Tideway case, where long-dated commitments with defined reopeners supported investment-grade financing while preserving consumer safeguards.

more stable and predictable charge profile reduces the volatility that airlines currently need to hedge against, lowering risk premia and supporting more efficient long-term decision-making. In turn, this strengthens the business case for airlines to invest earlier and with greater confidence in improved passenger products, operational resilience and network growth. By smoothing charges across construction and ramp-up, and aligning incentives with delivery over a multi-year horizon, a longer control period also reduces the stop-start effects that raise costs for both Heathrow and its airline partners.

- 5.42. Theoretically, longer regulatory periods provide the certainty required to underpin effective engagement with the supply chain. Visibility over a multi-year horizon enables contractors and strategic partners to plan capacity, secure resources, and commit to delivery models that optimise cost and performance. This stability strengthens Heathrow's ability to leverage its commercial position - through competitive tension, framework agreements, and market shaping - to achieve efficient pricing and reduce risk premiums.
- 5.43. In practice, longer-term commitments allow suppliers to invest in capability and innovation with confidence, supporting economies of scale and continuity across design, construction, and operation. By contrast, short regulatory cycles introduce uncertainty that fragments procurement strategies and inflates costs through compressed timelines and risk pricing. A framework that offers durable commitments therefore aligns with best practice in other regulated sectors, and – all else being equal – should equate to lower whole life cost for delivering Expansion and operating Heathrow.
- 5.44. We recognise there is significant detail to work through, and we expect a future consultation to address design choices, scope, and safeguards in full. Our emerging view to inform further detailed development includes:
- **Form of commitment.** Heathrow prefer a formal lengthening of the price control to 15-20 years, rather than relying solely on a policy statement, to give investors legally robust certainty while preserving the CAA's statutory discretion through clearly defined reopeners.
 - **Reopener discipline and uncertainty mechanisms.** Retain five-yearly resets to key building blocks (operating costs, revenue and passenger volumes) but provide long-term certainty for cost of capital and the capital framework. Specify trigger-based reopeners with tight materiality thresholds and timelines.
 - **Charge profiling and inter-generational fairness.** Use the longer horizon to profile charges smoothly across construction and ramp-up, within the single RAB, preserving affordability while maintaining an A minus credit rating.
 - **Information, monitoring and transparency.** Commit to periodic, standardised reporting against long-term outputs (capacity release, resilience, service) with proportionate independent assurance, so that the CAA can discharge its duties while avoiding micro-re-determinations between formal control points.

Table 8: Assessment of Model 3

Criteria		Assessment
Pass or Fail	Timeliness	<ul style="list-style-type: none"> • DCO by 2029; runway by 2035? Pass • Lack of legislative change, MPD and/or complex commercial contracting required: Pass • Associated with schedule delays at other megaprojects? Pass • Credible recovery of delay costs? Pass
	Financeability	<ul style="list-style-type: none"> • Supports investment-grade debt, minimizes risk of rating downgrade to access cost efficient debt? Positive. • Promotes private equity with competitive, predictable returns? Positive. • Compatibility with existing financing, minimal impact on creditors? Neutral. • Clear allocation of risk and responsibility? Neutral
	Deliverability	<ul style="list-style-type: none"> • Replicates proven success factors for megaprojects? Pass • Replicates the three failure factors? Pass
	Service quality	<i>Greater certainty should equate to more effective service targets/incentives that allow investments to be made over time (rather than marginal gains year on year).</i>
	Efficiency	<i>Lower financing costs and better ability to reduce risk premiums in supply chain through lower cost.</i>
	Competition	<i>Greater certainty allows supply chain to invest in capacity and capability, meaning more competition</i>
	Sustainability	<i>Longer term certainty of regulation should allow for long term investment in managing Heathrow’s externalities</i>

Model 4a – Shortlist:

The consumer perspective: Heathrow’s emerging approach for procurement oversight focuses on assuring competitive tension and value for money without displacing delivery accountability or delaying delivery. This supports the CAA’s statutory duties to further consumers’ interests and ensure financeability.

- 5.45. CAP3195 outlines: "Under this model, HAL retains primary responsibility for its approach to procurement, but we would exercise oversight... We would review HAL’s procurement strategy, monitor major tenders, and provide observations or require justification where we considered that competition had not been used effectively."
- 5.46. CAP3195 frames Model 4a as proportionate regulatory oversight that keeps HAL as the procuring client, with the CAA focusing on transparency, use of competition, and targeted challenge on major tenders - rather than mandating specific contracting forms. The emphasis is on assurance of competitive tension and value for money without replacing delivery accountability. CAP 3195 does not offer industry case studies, Heathrow believe the below are relevant (see also Heathrow’s review of Megaprojects, Supporting Document 1):
- Thames Tideway Tunnel: Clear roles and independent technical/cost assurance combined with strong single-point accountability – showing how enhanced assurance can coexist with timely delivery.
 - Ofgem’s ASTI: Governance model introduced earlier, time-bound regulatory determinations on critical procurements - illustrating that oversight calibrated to pace can reduce delay risk.
 - Network Rail—Project SPEED: Risk-based gating and proportional evidence requirements improved outcomes, a useful analogue for focusing procurement oversight on material risks.
 - Ofgem’s Sizewell C: favoured the use of experienced contractors (from Hinkley Point), over a public tendering procedure, to benefit from their skills and experience. A technical advisor will provide independent scrutiny of costs.
 - Frankfurt T3 expansion: This example is particularly useful as an airport development that was privately financed. Regulatory oversight of procurement was relatively light touch. Fraport was required to publicly tender contracts over a certain value threshold. The programme was centrally monitored and planned through a Fraport subsidiary. The project has been delivered to cost (opening delayed due to the pandemic).⁶⁶
- 5.47. Heathrow is open to exploring Model 4a. High quality oversight of procurement can strengthen transparency and confidence in outcomes whilst preserving the single controlling mind needed for an integrated hub. Done well, it supports the CAA’s statutory general duties to further the interests of users and to have regard to the need to ensure the financeability of HAL’s operations by maintaining competitive tension, reducing information asymmetry and focusing assurance on the decisions that matter most to consumers. We recognise that detailed design choices (scope, thresholds, evidence requirements, timelines) will need to be worked through in a future consultation.
- 5.48. Quality oversight is both feasible and desirable when implemented proportionately and aligned with best practice. Heathrow will submit its emerging Expansion procurement strategy to the CAA once it is complete, for consideration and discussion. At present, we can share our emerging principles:
- Firstly, Heathrow’s procurement strategy already incorporates robust assurance mechanisms, including Procurement Approval Meetings (PAM), independent audits, and CAA oversight. These measures ensure compliance while enabling faster decision-making for mega-programmes, demonstrating that transparency and efficiency can coexist.
 - Secondly, Heathrow is implementing a tech-enabled accreditation system (“Ecosystem Live”) to pre-assess suppliers on sustainability, cyber posture, and compliance. This innovation targets the reduction of tender timelines from 14 months to as little as 2–5 months, supporting assurance without delay and reinforcing Heathrow’s commitment to efficiency, resilience and while growing opportunities for competition. Heathrow will transparently share the preassessment results and approach with airlines and the CAA to enable assurance to happen alongside preassessment.

⁶⁶ Oxera, Supporting Document 3.

- Thirdly, Heathrow’s procurement approach is designed to balance competition and agility. It allows rapid reintroduction of competition if pricing or performance is suboptimal, ensuring that transparency does not come at the expense of adaptability or market responsiveness. As outlined above, Heathrow can share transparently the approach to reintroducing competition or not, and how it has preserved competitive tension when structuring competitions.
- Fourthly, Heathrow’s 13 guiding principles for packaging - including interface minimisation, modular repeatability, and outcome-based design - reduce risk and improve predictability. These principles support enhanced assurance while maintaining timelines, ensuring that governance reforms do not introduce inefficiency. These principles also include independent assurance jointly commissioned by HAL and airlines, avoiding duplication and ensuring confidence while keeping approvals predictable and fast.

5.49. Constructive iteration to Model 4a that Heathrow would support are:

- **Clear scope and materiality thresholds:** Limit CAA oversight to defined categories (e.g., major, complex or market-tight packages) and set proportionate evidence lists so oversight is focused on outcomes rather than volume of paperwork. This is important financeability point as well as for deliverability and timeliness, as Santander and Freshfields (Supporting Document 2) conclude: “If the model were to materially constrain or override HAL’s decision-making for procurement, this model would negatively affect financeability and risk higher financing costs for the same reasons as model 1b”.
- **Mitigation:** Introduce plans and agreements which include clear mitigation measures that resolve issues fast, building on Heathrow’s own market studies and findings.
- **Assurance that adds value and avoids duplication:** Use jointly commissioned independent cost/technical assurance (where material) and accept shared evidence across processes to avoid repeated challenge on the same points.
- **Facilitates use of experienced contractors:** Sizewell C used suppliers from Hinkley Point C to leverage efficiencies of experience, and combined this with regulatory oversight
- **Interfaces with Models 1a and 2:** Ensure procurement oversight under Model 4a complements Model 1a (capital governance) and Model 2 (calibrated incentives) without creating new veto points that slow critical-path approvals or undermine the pursuit of projects where Heathrow is already incentivised.

5.50. Heathrow’s improved Model 4a is a practical enhancement: stronger transparency and assurance without fragmenting delivery responsibility. Heathrow supports shortlisting Model 4a, with detailed design to be developed in the next consultation so that oversight improves consumer outcomes (efficient cost, better service quality) while enabling HAL to finance and deliver expansion effectively, without the cost and complexity of fragmented accountabilities for procuring contracts.

Table 9: Assessment of Model 4a

Criteria		Assessment
Pass or Fail	Timeliness	<ul style="list-style-type: none"> • DCO by 2029; runway by 2035? Conditional pass if process is appropriately streamlined • Lack of legislative change, MPD and/or complex commercial contracting required: Pass • Associated with schedule delays at other megaprojects? Conditional pass (see HS2 reference above) • Credible recovery of delay costs? Pass
	Financeability	<ul style="list-style-type: none"> • Supports investment-grade debt, minimizes risk of rating downgrade to access cost efficient debt • Promotes private equity with competitive, predictable returns? Neutral • Compatibility with existing financing, minimal impact on creditors? Neutral • Clear allocation of risk and responsibility? Neutral
	Deliverability	<ul style="list-style-type: none"> • Replicates proven success factors for megaprojects? Pass • Replicates the three failure factors? Conditional pass if it does not create additional veto points or layers of governance (repeating HS2 procurement failures)
	Service quality	<i>Neutral</i>
	Efficiency	<i>Neutral if it allows Heathrow to flexibly engage market to maximise value</i>
	Competition	<i>Neutral if it does not crowd out competition in supply chain by adding additional layers to approvals / supply chain entry</i>
	Sustainability	<i>Neutral</i>

Model 4b – Discount:

The consumer perspective: Lessons from mega projects show that mandating contracting risks reducing flexibility, increase integration risk, and slow decisions. There is also significant uncertainty around impacts on project financing. As a result, mandated procurement approaches risk significant harm to consumers, potentially increasing the costs of expansion.

- 5.51. CAP3195 says: "Under this model, the regulator would go beyond oversight and specify, or require justification for not using, particular procurement and contracting approaches for material packages (for example, mandating design-and-build for certain scopes). The intention would be to strengthen competitive tension and cost control, while retaining HAL's delivery responsibility."
- 5.52. CAP3195 highlights examples, including at Heathrow, where Design & Build contracts have been used but does not highlight examples where a regulator has mandated their use. Oxera noted that "it is challenging to identify projects where procurement decisions have been mandated by a regulator or external governance body as described by the CAA under Model 4b."⁶⁷ Additional case studies Heathrow considers relevant to Model 4b include (see also Heathrow's review of Megaprojects, Supporting Document 1):
- Berlin Brandenburg (BER): Heavy reliance on multiple design-and-build contracts without a single end-to-end systems integrator contributed to late-stage integration failures, repeated re-baselining, and multi-year delay. Initial financing was a combination of state grants/loans and state-guaranteed capital-market loans; cost overruns necessitated repeated state aid applications.⁶⁸
 - HS2: Letting large D&B packages before design maturity locked in risk and reduced agility to manage uncertainty, which the NAO has associated with cost escalation and delays.
 - Ofwat: Ofwat mandatory use of DPC is an example of mandated procurement intervention by a regulator. Of the three projects mandated in PR19, two have failed, while the contract for HARP aqueduct has only recently been awarded.⁶⁹
 - Madrid-Barajas T4: tendered through EU public procurement, with competition in the design and build of assets. This is a useful example of the value of D&B contracts in isolation, because the regulatory regime did not include specific capex incentive mechanisms. The project was around 48% over budget.⁷⁰
 - Dublin Airport T2 extension: conducted a competition for D&B, and the Irish Government had periodic verifications of project specifications and costs. The project was 20% over budget and opened a year late.⁷¹
- 5.53. Moreover, Heathrow does not believe that T2 and T5 represent D&B contracts in a way that the CAA intend – they are examples of using D&B for some elements of scope that were appropriate at the time, while retaining an integrated delivery model. They are world class terminals, widely acknowledged as being delivered on time and on budget, because they leverage a wide range of appropriate procurement models flexibly.
- 5.54. While Heathrow believes design and build contracts *do* have a role in expansion procurement, it is unreasonable for the regulator to *mandate* their use. Mandating contracting forms (e.g., compulsory design-and-build for specified scopes) would reduce flexibility, increase integration risk, and slow decisions - particularly harmful for a megaproject where different scope requires flexibility in procurement approach and likely to increase cost rather than make them more efficient.
- 5.55. While intended to promote competitive procurement, this approach is unsuitable for Heathrow's expansion programme and inconsistent with best practice for megaproject delivery:
- There is limited precedent for regulators acting as co-procurers on major infrastructure programmes. Introducing such a role risk slowing decision-making and adding layers of bureaucracy rather than improving efficiency. Regulatory involvement should remain proportionate, setting the right incentives and providing assurance of outcomes, not mandating contracting structures.

⁶⁷ Oxera, Supporting Document 3.

⁶⁸ Oxera, Supporting Document 3

⁶⁹ See at: [Latest updates](#)

⁷⁰ Oxera, Supporting Document 3

⁷¹ Oxera, Supporting Document 3.

- Heathrow’s emerging expansion procurement strategy is designed to enable competition where required, and deliver greater agility through updated supplier selection, modular packaging, and outcome-based design principles. Mandating a single contracting model removes flexibility to tailor procurement to project complexity and market conditions, undermining these principles and reducing Heathrow’s ability to respond dynamically to risk and market capacity.
- Inappropriate use of D&B is also associated with mixed efficiency outcomes, increased claims and renegotiation on complex scope, and quality trade-offs or post-completion remediation where scope is incompletely defined upfront. These risks include slower procurement, constrained contractor innovation, and higher rework - all contrary to the objectives of timely and cost-efficient delivery. Indeed, integrated Project Delivery shows a ~15 pp reduction in project cost overruns compared with Design–Bid–Build (which averages ~20% overruns)⁷²
- Santander and Freshfields (Supporting Document 2) outline that “Mandated procurement formats deliver no improvement in cost of capital and may worsen delivery by constraining HAL’s decision-making... . if the model were to materially constrain or override HAL’s decision-making for procurement, this model would negatively affect financeability and risk higher financing costs for the same reasons as model 1b”.
- Design-and-Build contracts create rigid boundaries between design and delivery. For an integrated programme like Heathrow Expansion – where every subproject is interdependent and contributes to one critical milestone (runway opening) – such rigidity amplifies interface risk. Our analysis (see Supporting Document 1) of megaproject failure modes shows that early lock-in of delivery models reduces adaptive capability and increases the likelihood of delay and cost escalation. Mandating D&B is a form of early lock-in that contradicts best practice for complex programmes:
 - Berlin Brandenburg (BER): Delivery was organised through multiple D&B contracts with no single entity accountable for end-to-end integration. This structure supported parallel construction but amplified interface risk, leading to late-stage integration failures, repeated re-baselining, and a nine-year delay with cost escalation of three to four times the original budget.
 - HS2: Large D&B civils packages were let before design maturity, embedding scope and interface risk. The result was significant cost overruns and delays, compounded by governance complexity and lack of acceleration mechanisms. These examples demonstrate that mandating D&B without flexibility or capability to manage integration undermines efficiency and predictability.

5.56. Finally, model 4b would likely require licence modifications to introduce novel and complex new processes. As outlined above, this is highly likely to require a long period of licence change that has no guarantee of being confirmed.

⁷² Ibrahim, M. W., & Hanna, A. S. 2019. Quantitative comparison of project performance between project delivery systems; Lovallo, D., Cristofaro, M., & Flyvbjerg, B. 2023. Governing large projects: A three-stage process to get it right.

Table 10: Assessment of Model 4b

Criteria		Assessment
Pass or Fail	Timeliness	<ul style="list-style-type: none"> • DCO by 2029; runway by 2035? Fail • Lack of legislative change, MPD and/or complex commercial contracting required: Depends on the design and complexity • Associated with schedule delays at other megaprojects? Fail • Credible recovery of delay costs? Fail
	Financeability	<ul style="list-style-type: none"> • Supports investment-grade debt, minimizes risk of rating downgrade to access cost efficient debt? Neutral. • Promotes private equity with competitive, predictable returns? Neutral • Compatibility with existing financing, minimal impact on creditors? Neutral • Clear allocation of risk and responsibility? Neutral
	Deliverability	<ul style="list-style-type: none"> • Replicates proven success factors for megaprojects? Fail • Replicates the three failure factors? Fail
Service quality	<i>Neutral</i>	
Efficiency	<i>D&B contracting typically averages ~20% overruns</i>	
Competition	<i>Neutral</i>	
Sustainability	<i>Neutral</i>	

Model 5a – Shortlist:

The consumer perspective: Targeted non-mandated outsourcing of discrete, operational services that are not on the critical path to expansion could have the potential to deliver better outcomes for consumers through cost-efficiency and innovation. This should not come at the expense of resilience or compliance.

- 5.57. CAP3195 says: “Under this model, the regulator would explore increased use of competition for operational services at Heathrow - through targeted outsourcing - to promote efficiency and value for money, while HAL remains responsible for safe, reliable operations and overall delivery.”
- 5.58. CAP3195 draws on examples in the rail sector: “There are UK rail franchises that are based on operation-only models... London Overground and the Elizabeth line operate on concession agreements with operators, with Transport for London retaining all revenue risk... successful bidders remunerated a fixed fee, adjusted for performance incentives and penalties against defined service performance agreements.”
- 5.59. It is important to note that the largest recent UK rail schemes using related models to Model 5a have all faced substantial challenges not only with capex overruns but also with service delivery:⁷³
- High Speed 1: evaluated to have a benefit-cost ratio less than 1. The poor value for money is in large part due to the service provider failing to deliver the expected passenger volumes: “international passenger numbers using HS1 are lower than forecast at the time the construction of the Channel Tunnel Rail Link was approved. There remains substantial unused capacity on HS1 and so potential for a future expansion of the international service offer to lead to further economic benefits.”⁷⁴
 - Crossrail / London Elizabeth Line: the original operating company, MTR Corporation, struggled with low reliability, and lost the franchise in 2025.⁷⁵
 - London Overground: along with the Elizabeth Line, this franchise has had a low rate of ‘Good Service’ status.⁷⁶
- 5.60. Heathrow is open to exploring Model 5a in principle where targeted outsourcing of separable, non-core operational services can deliver better outcomes for consumers. However, Model 5a should not become a vehicle for prescriptive mandates on what must be outsourced or to whom, nor should it fragment system accountability or create new approval layers that slow decisions.
- 5.61. The current regulatory regime provides strong incentives for Heathrow to contract assets and services externally where this improves efficiency or service outcomes. If outsourcing delivers savings or higher commercial revenue, Heathrow can outperform its operating expenditure and revenue forecasts, earning a higher return under the price control. Similarly, where outsourcing improves service quality, Heathrow avoids rebates or earns bonuses through the Measures, Targets and Incentives scheme. These mechanisms ensure that Heathrow is commercially motivated to pursue competitive procurement without regulatory compulsion.
- 5.62. Heathrow already tenders a range of services to third parties, including car parks, passenger assistance, and Heathrow Express. This demonstrates openness to outsourcing where it is operationally appropriate and value-adding. In some cases, Heathrow has also engaged in joint procurement with airlines, reflecting a collaborative approach where shared interests exist. Examples include:
- Heathrow’s Baggage Strategic Partnership - Vanderlande
 - Heathrow Passengers Requiring support - ABM
 - Baggage Operations - DHL

⁷³ Oxera, Supporting Document 3.

⁷⁴ Steer, Second Evaluation of High Speed 1, 2023. Available at: [HS1 second evaluation](#)

⁷⁵ Please see: [Elizabeth line 'below average' in UK train reliability league table | The Standard](#)

⁷⁶ Please see: [Just how reliable is London's Elizabeth Line? - CityMonitor](#)

- 5.63. Heathrow’s expansion procurement strategy (see model 4a above) will further enable competitive procurement without external intervention. The strategy emphasises flexibility and competitive tension, allowing rapid reintroduction of competition if pricing or performance is suboptimal. It also incorporates Ecosystem Live, a tech-enabled accreditation system being developed to reduce tender timelines from 14 months to 2–5 months, supporting efficiency without prescriptive mandates from regulators.
- 5.64. For the avoidance of doubt, we have no intention of tendering out core assets - such as entire terminals – this would create risks equivalent to those identified for Models 7, and 8 (see below). These include fragmentation of accountability, increased integration risk, and governance complexity, all of which threaten timely delivery and consumer benefits.
- 5.65. A mandated version of Model 5a - under which the regulator compels Heathrow to outsource specified operational services - would weaken financeability by introducing legal and regulatory complexity, fragmented accountability, and higher execution risk, all of which investors price into a higher cost of capital. Implementing compulsion would likely require primary legislation and licence modifications to define outsourced functions, allocate safety and resilience obligations, and set dispute mechanisms; in many cases it would also necessitate a Market Power Determination and potentially a new licence for third party operators, creating multiyear uncertainty before funding can be committed.
- 5.66. This uncertainty, together with the interface risks created by splitting responsibilities, would reduce cash flow predictability and put downward pressure on credit quality. In practical terms, the consequence is a likely increase in risk premia on debt and greater equity return requirements, raising whole life financing costs for consumers compared with a criteria led, voluntary approach that preserves a single controlling mind and predictable cash flows.
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- 5.67. At its best, Model 5a can be a targeted, criteria-led tool to introduce or extend competition for separable services where it improves consumer outcomes and maintains integrated accountability. Heathrow proposes that the next CAA consultation sets out: (i) the screening criteria and information requirements; (ii) assurance expectations that avoid duplication; (iii) how 5a will interface with Models 1a/2; and (iv) safeguards for resilience, safety and financeability. This calibrated approach advances the CAA’s statutory objectives while avoiding the risks of prescription and fragmentation. Potential improvements could include:
- **Clear screening criteria for potential outsourcing:** Apply Model 5a only where projects/services are separable from core, safety-critical operations, do not compromise resilience or compliance, align with Government timelines, and show robust market interest with a positive cost-benefit case.
 - **Scope discipline:** Focus on discrete, repeatable or commercially standardised services rather than core integrated airport operations where fragmentation would raise interface risk and dilute accountability.
 - **No prescriptive mandates:** Avoid turning 5a into a de facto 4b. Regulatory-mandated outsourcing decisions or contracting forms are not proportionate or effective. Instead, as is the case with model 4b, the CAA should focus on providing the right incentives and monitoring and assuring outcomes. This includes providing transparent justifications of do-versus-buy choices against the screening criteria and consumer outcomes.
 - **Interfaces with Models 1a and 2:** Ensure Model 5a is consistent with Model 1a (capital governance) and Model 2 (calibrated incentives). Outsourcing decisions must not create new veto points or conflict with programme-level incentives linked to capacity release, service and resilience.
 - **Financeability and contract design:** Structure outsourced arrangements to preserve predictable cash-flows and bankability - through clear performance regimes, remedies, and hand-back/step-in rights that safeguard system integration and on-time delivery.

Table 11: Assessment of Model 5a

Criteria		Assessment
Pass or Fail	Timeliness	<ul style="list-style-type: none"> • DCO by 2029; runway by 2035? Conditional if not mandated. • Lack of legislative change, MPD and/or complex commercial contracting required: Conditional if not mandated • Associated with schedule delays at other megaprojects? Pass • Credible recovery of delay costs? Conditional if not mandated
	Financeability	<ul style="list-style-type: none"> • Supports investment-grade debt, minimizes risk of rating downgrade to access cost efficient debt? Neutral. • Promotes private equity with competitive, predictable returns? Neutral • Compatibility with existing financing, minimal impact on creditors? Neutral • Clear allocation of risk and responsibility? Neutral
	Deliverability	<ul style="list-style-type: none"> • Replicates proven success factors for megaprojects? Pass • Replicates the three failure factors? Pass
	Service quality	<i>Outsourcing remains a credible way to procure services passengers value but can lead to fragmentation.</i>
	Efficiency	<i>Outsourcing remains a credible way to achieve efficient cost for services</i>
	Competition	<i>Neutral unless approvals or mandating stifle Heathrow’s procurement strategy</i>
	Sustainability	<i>Neutral</i>

Model 5b – Shortlist:

The consumer perspective: An enhanced Model 5b can improve consumer outcomes by harnessing competition where it adds value, while retaining the integration needed to deliver safely, efficiently and on time.

- 5.68. CAP3195 says: “A competitively procured partner would be responsible for designing, building, and operating a new asset, on HAL’s behalf and within a contractual structure... The benefit of doing so is that the contractor would have a greater incentive to ensure that the design and build was fit for purpose, since it would then be exposed to the operational risk associated with providing services under the management contract.”
- 5.69. CAP3195 frames Model 5b as an option where the regulator could encourage or mandate competitive delivery frameworks akin to DBO/DPC models, transferring responsibility for design, construction and operation of certain assets to third parties under long-term contractual arrangements.
- 5.70. CAP3195 references precedents in other regulated sectors, such as Ofwat’s Direct Procurement for Customers (DPC) and Ofgem’s Competitively Appointed Transmission Owner (CATO) regime, where competitive tendering for large infrastructure projects was introduced to improve cost efficiency and risk allocation.
- 5.71. Heathrow believes there is additional information on HARP Aqueduct that CAP3195 omits from the consultation text, including the fact there has been a 5-year gap between designation (December 2021) to delivery (yet to begin). It also omits to reference two other PR19 projects that Ofwat designated for DPC but failed.
- 5.72. Importantly, the Independent Water Commission’s review of the water sector (the Cunliffe Review) identified three key concerns with the DPC model:⁷⁷
- **Administrative burden and cost** associated with implementing and managing DPC arrangements;
 - **Need for government support**, including potential involvement of customers or taxpayers where certain risks cannot be efficiently borne by the market; and
 - **Increased risk of fragmentation**, arising from greater complexity and a higher number of participants involved in asset delivery and operation.
- 5.73. Collectively, these concerns - raised by water companies and other authorities cited by the Independent Water Commission - indicate that **mandating** such an approach would be inconsistent with the need for timely and efficient privately financed expansion. As such, it would run counter to the CAA’s primary statutory duty.
- 5.74. It is also relevant to consider the energy sector (CATO) as another precedent involving the introduction of third-party competition in onshore electricity transmission. As stated in paragraph [4.18] above, the CATO framework took approximately 10 years to design and implement from the initial government consultations on the regime. To put the CATO framework in place required the Energy Act 2023, the Electricity (Criteria for Relevant Electricity Projects) (Transmission) Regulations 2024 and the Electricity (Early-Model Competitive Tenders for Onshore Transmission Licences) Regulations 2025.⁷⁸ No CATO licences have yet been issued - underscoring the legislative and operational complexity of introducing new competitive frameworks.
- 5.75. Therefore, Heathrow does not support mandatory application of Model 5b. As noted in paragraph [4.14] above, the CAA has recognised that it does not have the power under the CAA12 to “impose, or force HAL to enter into, particular commercial solutions to promote competition” nor does it have the power “to force HAL to divest assets”. The CAA has also previously acknowledged that it cannot licence a new market participant without first carrying out an MPD.

⁷⁷ Independent Water Commission Final Report, 21 July 2025.

⁷⁸ Ofgem, [Onshore early competition in electricity transmission – Stakeholder update December 2025](#), December 2025. This stated, “Earlier this year, the onshore competition Tender Regulations came into force which, together with the Criteria Regulations and the Energy Act 2023, means that the legislative framework to allow for onshore competition is now in place.”

- 5.76. While a 2018 Technical Information Note explored whether licence modifications could facilitate third-party involvement, – Heathrow has consistently maintained that the CAA12 does not confer powers to compel HAL to accommodate an alternative operator via mandatory access or imposed commercial arrangements. As explained above at paragraph [4.16], the CAA itself has accepted that any move to force divestment is beyond the scope of CAA12.
- 5.77. Accordingly, mandating 5b would likely require primary legislation, extensive licence modifications, and - where a separate operator is envisaged - new MPDs and potential licensing of that entity, introducing years of design and implementation work inconsistent with expansion timelines and disproportionate to any benefit.
- 5.78. Moreover, while competitive delivery frameworks can add value in certain sectors, they are unsuitable for the core elements of Heathrow’s expansion programme. Specific concerns include:
- **Integration risk:** Expansion requires tight coordination across planning, design, delivery and operations. Splitting accountability for design/build/operate undermines system integration and resilience, repeating failure modes seen at BER. In their review of infrastructure projects, Oxera did not identify any examples in followed Model 5b where the asset completed via D&B was then not operated by the pre-existing operator.⁷⁹ This was done to ensure efficiency and coordination.
 - **Financeability:** Santander and Freshfields (Supporting Document 2) found that using this model to deliver core, expansion assets will likely result in a higher all-in cost of capital as it would involve a standalone greenfield asset driving a higher cost of debt and higher equity IRR requirement which could be only offset by unrealistic capex savings and without meaningful transfer of risks from to a 3rd party.
 - **Consumer outcomes:** Delay and cost escalation from structural fragmentation would outweigh any theoretical efficiency gains, eroding value for passengers through higher charges and deferred capacity release.

⁷⁹ Oxera, Supporting Document 3.

Model 5b and Financing Core Assets

Independent financeability analysis by Freshfields & Santander indicates that funding core, complex airport assets under a third-party DPC-style arrangement prices construction-phase debt at a premium of ~100–150 bps relative to RAB-funded brownfield debt because of schedule and cost-overflow risk. That premium alone raises the cost of debt payable over a long construction horizon and, once recovered, puts upward pressure on airport charges. In parallel, equity required for such greenfield-risked assets typically targets mid-teens IRRs (or higher), materially above the high single-digit to low double-digit returns associated with regulated brownfield airports - again lifting all-in cost of capital borne by consumers.

The same analysis concludes that, for core assets, lenders and rating agencies are unlikely to view Model 5b as achieving a substantive transfer of risk away from HAL. The same analysis concludes that, for core assets, lenders and investors are unlikely to view Model 5b as achieving a substantive transfer of risk away from Heathrow. Heathrow remains exposed to overall delay and delivery risk, while its control over critical path scope is diminished until any contractual step-in rights are exercised.

If Model 5b involved a DPC partner of a core, operationally important asset with excessive leverage, Heathrow's performance may be destabilised as it may need to backstop the construction and operation. Agencies may treat payments as debt-like & counterparty leverage as on HAL's balance sheet which, if material, may detrimentally impact HAL's credit profile. As DPC costs are likely to be broadly fixed, these could reduce headroom during stress periods.

Because Model 5b replaces RAB-accrual during construction with fixed, debt-like availability obligations, rating agencies are likely to look through to the underlying risk and treat those obligations as debt-like exposures for HAL, especially for integrated, mission-critical assets. That treatment reduces headroom in credit metrics, increases perceived business-risk profile, and heightens refinancing and liquidity risk during peak capex years - factors that increase HAL's cost of debt and may threaten investment-grade rating thresholds.

5.79. However, Heathrow is open to exploring an iteration of Model 5b which has:

- **Wider definition:** Heathrow's Alternative Property Model (proposed in its H8 Business Plan) and on-RAB joint ventures (like that being explored for redeveloping the cargo area) deliver DPC-like benefits - efficiency, risk control, consumer value – while better preserving integrated system accountability.
- **Screening criteria for applicability (see below):** Apply DBO-style models only where projects are off the critical path, separable from core operations, and meet a positive cost-benefit case.
- **Safeguards for resilience and financeability:** Any third-party arrangements should include clear performance regimes, remedies to maintain predictable cash flows and protect investment-grade credit quality.

5.80. While Model 5b should not be shortlisted in its mandatory form, a proportionate approach offers a pragmatic path to harness competitive benefits without undermining financeability or consumer interests. Heathrow has actively considered where consumers could benefit from DBO-style models, including the below screening criteria that should be developed in future consultations:

- **Separability:** The project is separable from core, safety-critical airport operations.
- **Resilience & Compliance:** It does not compromise operational resilience or regulatory compliance obligations.
- **Timeliness:** It aligns with Government milestones (DCO phase and runway delivery by 2035).
- **Market Test:** There is demonstrable market interest and a positive cost-benefit case under realistic competitive conditions.
- **Passenger Outcomes:** It maintains customer experience and mitigates reputational risk through robust assurance.

5.81. Supporting Document 12 includes Heathrow’s preliminary view of how major projects could perform under different DBO-style arrangements based on these screening criteria. This is a preliminary suitability assessment and based on current limited information. We expect to develop these in our expansion business planning and would expect the CAA to allow for that consideration to take place then pre-empt it through imposition of versions of Model 5b in Summer 2026.

H8 Proposed Alternative Property Model

CAP3195 could also usefully highlight how DBO arrangements can smooth aeronautical charges while preserving the benefits of integrated delivery.

Heathrow’s Alternative Property Model, developed during H8 discussions, provides an illustration. Under this model, a subsidiary Heathrow business (“Heathrow Propco”) bears demand and construction risk - exposing it to competitive market forces - when developing and operating a limited set of property assets (outside the critical path for expansion) without recovering those capital costs through the RAB.

The single till continues to receive income reflecting the underlying land value of these developments, allowing revenues to grow without increasing the regulated asset base. This approach lowers near-term charges while delivering new products and services and a higher-quality built environment for consumers.

By way of illustration, information previously shared with the CAA indicates a hypothetical £3bn investment delivered through this model rather than on RAB would reduce the peak H10 charge by ~£1.

Table 12: Assessment of Model 5b

Criteria		Assessment
Pass or Fail	Timeliness	<ul style="list-style-type: none"> • DCO by 2029; runway by 2035? Conditional pass, if not mandated. • Lack of legislative change, MPD and/or complex commercial contracting required:? Conditional pass, if not mandated • Associated with schedule delays at other megaprojects? Pass • Credible recovery of delay costs? Conditional pass, if not mandated
	Financeability	<ul style="list-style-type: none"> • Supports investment-grade debt, minimizes risk of rating downgrade to access cost efficient debt? Negative. • Promotes private equity with competitive, predictable returns? Negative • Compatibility with existing financing, minimal impact on creditors? Negative • Clear allocation of risk and responsibility? Negative
	Deliverability	<ul style="list-style-type: none"> • Replicates proven success factors for megaprojects? Conditional pass, suitability varies depending on type of project (Supporting Document 12). • Replicates the three failure factors? Pass
	Service quality	<i>Positive for non-critical areas of the airport</i>
	Efficiency	<i>Positive for non-critical areas of the airport</i>
	Competition	<i>Positive.</i>
	Sustainability	<i>Neutral if there is strong obligations for operators to maintain consistent standards and clear accountabilities</i>

Model 6 – Discount:

The consumer perspective: A mandatory third-party delivery model for Heathrow would increase fragmentation, delay and cost, to the detriment of passengers. Any notional efficiency gains would be outweighed by higher charges and deferred capacity - the need for primary legislation, licence changes and complex contracting would add years of delay - alongside growing risks to operational integration that will affect service quality.

- 5.82. CAP3195 says “Under this model, a third party designs, finances, and builds a new asset, but transfers it to HAL upon completion. HAL becomes the long-term owner and operator, with the asset entering HAL’s RAB... An important question under this model is how the price that HAL pays the third party for the assets (and is then added to HAL’s RAB) would be determined... [either] a price determined before construction... or a price determined after construction...”
- 5.83. CAP3195 does not reference an industry case study and Heathrow has not identified one. However, Heathrow believes Berlin Brandenburg (BER) is relevant as an example where fragmented delivery and absence of a single accountable integrator led to late-stage failures, repeated re-baselining, and multi-year delay - illustrating the risks of delivery separation in highly integrated systems.
- 5.84. Heathrow does not support Model 6. Delay and cost escalation from structural fragmentation would outweigh any theoretical efficiency gains, eroding value for passengers through higher charges and deferred capacity release. It should therefore be discounted.
- 5.85. While competitive delivery can add value in certain sectors, mandating third-party build and transfer for Heathrow’s expansion would introduce fragmentation, interface risk and multi-year delays, conflicting with Government milestones and the CAA’s statutory general duties to further the interests of users (i.e., consumers) and have regard to the need to ensure the financeability of HAL’s operations. Key concerns include:
- **Timeliness:** Implementing Model 6 would require primary legislation, licence modifications, and complex commercial contracting - adding years of lead time before delivery can begin.
 - **Integration:** Expansion is a single, highly interdependent programme. Splitting accountability for design/build from long-term operation undermines system integration and resilience, repeating failure modes seen at BER.
 - **Service Quality:** Heathrow’s proposition as a hub airport would be diminished if a third party did not adequately design and integrate the terminal into the airport, resulting in longer connection times and more unpredictable journeys.
 - **Efficiency:** it is unclear how third-party build-transfer will result in more efficient cost. Risks in delivery do not disappear, the financial consequences of risk are reallocated – either to the contractor (reflected in price) or to the operator (reflected in price to consumers).
 - **Financeability:** Santander and Freshfields (Supporting Document 2) found this model will drive a higher cost of capital during construction and increase schedule and liquidity risks for HAL prior to or at the point of the asset transfer, leading to higher charges unless the approach could identify ~30% of capex savings: *“Achieving a mid- to high-teens IRR would require HAL to repurchase ~£19bn of assets over five years, implying a 25–40% premium, translating to a £3.45 increase to peak airport charges; approximately a 30% capex saving would be required to offset this”*
- 5.86. Model 6 creates an interface between the builder and the ultimate operator, which increases coordination risk and uncertainty over transfer terms:
- Evidence from JFK shows that fragmented delivery responsibilities lead to residual defects and constrained performance at handover.
 - HS2 demonstrates that early contractual lock-in without mature design amplifies rework and cost overruns.

- Oxera found this model has been implemented explicitly to reduce delivery risk, for example to ensure that a constructor with adequate experience would lead the programme.⁸⁰ In the context of expansion, Model 6 would increase delivery risk, negating the entire purpose of the model.
- 5.87. For the same reasons as why mandating the involvement of a third party under Model 5b would fall outside the powers under the CAA12, Model 6 would similarly require legislative changes and extensive licence modifications, introducing years of design and implementation work inconsistent with expansion timelines and disproportionate to any benefit.
- 5.88. Commercial contracting in other regulated sectors demonstrates why mandating such arrangements for Heathrow would be disproportionate and impractical. For example, Ofwat's HARP aqueduct project, delivered under a Direct Procurement for Customers (DPC) model, took approximately 3 years just to progress from tender launch to the preferred bidder being awarded the contract - despite being a greenfield scheme with relatively simple interfaces compared to an operational airport.⁸¹
- 5.89. By contrast, Heathrow's expansion involves a highly constrained site, continuous operations for 70,000 staff, and interdependent programmes where benefits crystallise only at runway opening. A commercial contract for Heathrow would need to cover significantly more extensive interface risks, including airfield safety, security compliance, resilience during irregular operations, and integration across terminals, baggage systems, and airside infrastructure. These complexities multiply negotiation and assurance requirements, making contracting timelines far longer and riskier than those observed in sectors with simpler delivery environments.
- 5.90. Ongoing maintenance and latent defects must be considered explicitly in any commercial contract: beyond construction warranties, a space constrained, live airport requires clear regimes for defect identification and rectification, performance assurance during operations, and system integration responsibilities that persist after handover. Absent such clarity, risk proliferates across interfaces - mechanical, electrical, IT, safety, and security - each of which can affect resilience and passenger service in ways that a greenfield utility project rarely encounters.
- 5.91. The consequences of failing to manage these post completion obligations are well documented: at Berlin Brandenburg (BER), fragmented delivery and the absence of a single accountable systems integrator led to late stage failures and repeated re baselining, culminating in multi-year delay - an outcome emblematic of contracts that do not align maintenance, defect liabilities and whole system readiness under a single controlling mind.
- 5.92. Managing these risks inevitably drives additional cost, regardless of where accountability sits. If the contractor assumes integration, safety, and resilience risks under a Build-Transfer model, those exposures will be priced into bids through higher contingencies and risk premia. Conversely, if the operator retains these risks, they will materialise as cost overruns or mitigation spend, ultimately passed through to consumers under the RAB. Either way, the complexity of Heathrow's expansion - interdependent programmes, live operations, and safety-critical interfaces - means risk cannot be eliminated, only reallocated.
- 5.93. Evidence from major projects suggests that fragmentation amplifies these costs rather than reducing them: integrated delivery models achieved cost overruns of ~10%, compared with Design-Bid-Build averages of ~20% and multi-contractor megaprojects like Berlin Brandenburg, which escalated by 300-400% and suffered nine years of delay. This underscores that mandating separation or prescriptive contracting does not inherently improve efficiency; it often introduces duplication, interface risk, and governance paralysis that raise whole-life costs for consumers.
- 5.94. Lastly, introducing multiple delivery bodies into a live, space-constrained airport environment would significantly increase complexity and cost. Each entity would require its own logistics infrastructure - such

⁸⁰ Oxera, Supporting Document 3.

⁸¹ Please see at: [Latest updates; Equitix consortium awarded c.£3bn contract for landmark HARP infrastructure project - Equitix](#)

as consolidation centres, rail heads etc - duplicating assets that could otherwise be shared under an integrated model.

5.95. Fragmentation also limits the ability to flexibly balance construction demand through bottlenecks such as control posts and to optimise scarce operating windows, including night-time access. These constraints would drive higher delivery costs and amplify negative externalities for local communities, including increased traffic and environmental impacts from dispersed logistics operations. Moreover, splitting accountability for safety and security across multiple parties introduces systemic risk, requiring extensive contractual provisions and assurance mechanisms to resolve responsibilities - processes that are inherently time-consuming and prone to delay. In contrast, a single controlling mind can coordinate resources, minimise duplication, and maintain clear accountability, reducing cost and safeguarding resilience.

Table 13: Assessment of Model 6

Criteria		Assessment
Pass or Fail	Timeliness	<ul style="list-style-type: none"> • DCO by 2029; runway by 2035? Fail as it requires legislation • Lack of legislative change, MPD and/or complex commercial contracting required: Fail • Associated with schedule delays at other megaprojects? Pass • Credible recovery of delay costs? Fail
	Financeability	<ul style="list-style-type: none"> • Supports investment-grade debt, minimizes risk of rating downgrade to access cost efficient debt? Negative • Promotes private equity with competitive, predictable returns? Negative • Compatibility with existing financing, minimal impact on creditors? Negative • Clear allocation of risk and responsibility? Negative
	Deliverability	<ul style="list-style-type: none"> • Replicates proven success factors for megaprojects? Fail • Replicates the three failure factors? Fail
Service quality	<i>Negative as integration risk can fragment product</i>	
Efficiency	<i>Negative as integration risk can fragment product</i>	
Competition	<i>Neutral</i>	
Sustainability	<i>Higher impact from duplicative delivery/logistics strategies.</i>	

Models 7 and 8 – Discount:

The consumer perspective: These models share a common feature: fragmented accountability across multiple operators within a complex hub airport. International evidence shows that fragmentation systematically increases costs (both financing and capital), delays capacity delivery (foregoing significant consumer benefit), and worsens service quality.

5.96. We consider models 7(a and b) and 8 together as we have similar concerns. CAP 3195 says:

- Model 7a — third party owns and operates, acting as an upstream supplier to HAL: “Under this model variant, the third party would operate the asset, and recover its required revenues through a charge to HAL ... appointed through a competitive process ... with the successful bidder chosen based on the lowest bid charge.”
- Model 7b — third party provides airport operation services in direct competition with HAL: “The third party would directly provide services to and recover its required revenues from users ... compete directly with HAL’s provision of services ... HAL would be required to develop and price a wholesale product ... with non-discrimination obligations.”
- Model 8 — transfer ownership and operation of an existing asset to a third party: “HAL would be required to transfer ownership and operation of an existing asset to a third party ... the scope of the third party’s activities would be operation and maintenance of the asset only.”

5.97. CAP3195 uses the following case studies:

- Model 7a (upstream supplier): CAP3195 draws on Ofgem’s Competitively Appointed Transmission Owner (CATO) regime as the closest analogue, in which a third party finances, builds and operates infrastructure as an upstream service within a regulated network. Notably, CATO required primary legislation and nearly a decade of policy development, with no CATO licences issued by end-2025, illustrating substantial lead-time, legal change and implementation complexity before any consumer benefit could plausibly arise.
- Model 7b (direct competition): CAP3195 points to JFK International Airport as an airport campus with independent terminal operators ‘competing’ for airlines and passengers; the model implies HAL would have to offer wholesale airport services priced and monitored under a regulatory framework to enable this competition.
- Model 8 (transfer of existing assets): CAP3195 references no direct airport precedent and emphasises that the model would require robust arrangements for hand-over quality and liability for defects, recognising that integration with the rest of the airport’s systems is a critical challenge.

5.98. Oxera could not identify any relevant infrastructure that has implemented Model 7a. With respect to Model 7b, in addition to JFK Terminal One, the only partially relevant projects Oxera could identify were LaGuardia Terminal C and Munich T2 satellite, both of which have asset operators under (partial) airline ownership.⁸²

5.99. Oxera identified one project under Model 8: Hornsea One OFTO construction.⁸³ In this case, the purpose of the model was to facilitate an experienced contractor in designing and constructing the wind farm while bearing construction risk.

5.100. In this chapter we present significant new evidence with regards to New York JFK (“JFK”) and Los Angeles International (“LAX”). This evidence is unequivocal: introducing multiple operators into an integrated hub airport increases cost, delays delivery and worsens service. We see the same pattern whether the fragmentation is by ownership, procurement mandate, or terminal-level competition. Critically, there is no demonstrable consumer benefit relative to the single-operator model but plenty of significant, evidenced cost.

⁸² Oxera, Supporting Document 3.

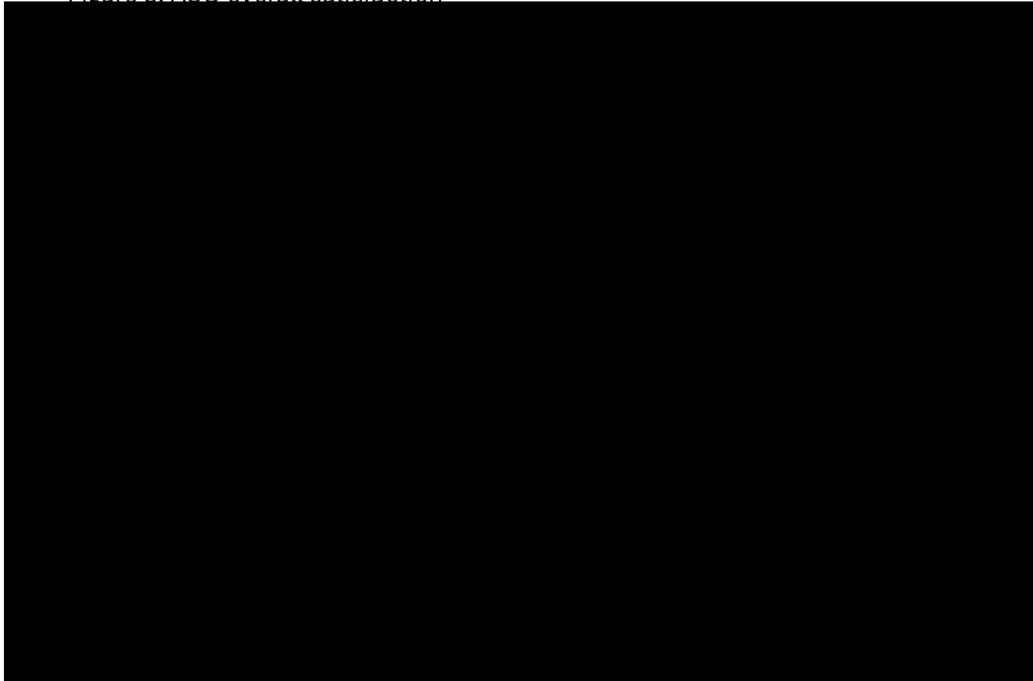
⁸³ Oxera, Supporting Document 3.

Consumer Outcomes:

5.101.



Figure 8: ASO overall satisfaction



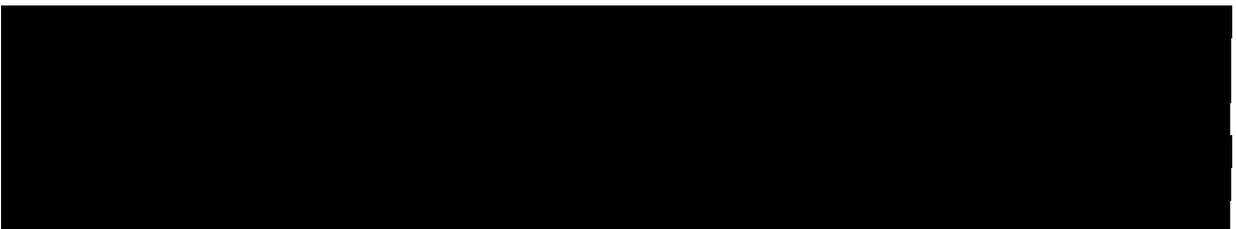
5.102.



5.103.



5.104.

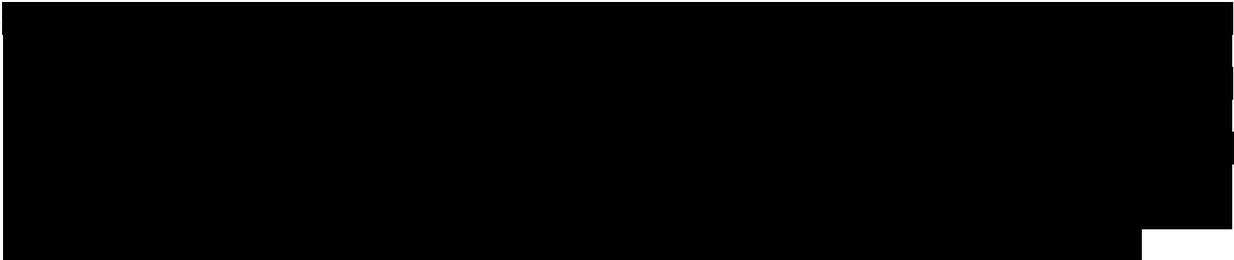


⁸⁴ Mott MacDonald, Supporting Document 15.

⁸⁵ Mott MacDonald, Supporting Document 15.



5.105.



- 5.106. During crises and severe weather, multi operator interfaces slow coordinated response. Disruptions demand rapid, cross terminal coordination: dynamic stand re assignment, shared resources for queue management, baggage rerouting, and consistent passenger information across channels. Multi operator campuses require contractual escalation and cross entity permissions to move people, aircraft and teams between assets; these interfaces consume time and add ambiguity over who decides and who bears risk, which reduces the speed and coherence of the response.
- 5.107. In January 2018, JFK was hit by storm Grayson, delivering hurricane-force winds, heavy snowfall and icy temperatures and plunged the busiest airport in the New York City metropolitan area into a three-day crisis. An independent investigation, led by former US Department of Transportation Secretary Ray LaHood concluded that during Grayson, operations at JFK were “severely and disproportionately impacted by the storm as compared to other airports in the Northeast Corridor.”⁸⁶ The top recommendation was the need for strong command and control centre that would enable the Port Authority to take over control of any area of the airport in the case of operational failure.
- 5.108. Indeed, separating ownership and operation of the terminals would go against the recommendations from the Begg Report.⁸⁷ Following the 2010 snow incident at Heathrow, the Begg Report’s recommendation was unequivocal, Heathrow needed a unified command structure. Heathrow has evolved and developed the centralised Airport Operations Centre (APOC) as a single decision-making hub, replacing fragmented crisis cells.
- 5.109. Resilience hinges on interoperable assets; carved out ownership reduces flexibility. Under Model 8, transferring an existing terminal or system to a third party creates enduring boundaries: separate warranties, latent defect liabilities, and limited step in rights. In a severe weather event, Heathrow may need to re allocate capacity quickly (e.g., move flights, repurpose security lanes, share baggage belts or PRM resources). Contractual and technical boundaries restrict interoperability, complicate risk allocation, and slow mutual aid between terminals - precisely when passengers need unified action.
- 5.110. None of this aligns with the CAA’s duties to further the interests of users or to ensure HAL can finance and deliver a timely, resilient expansion; the single operator model remains better placed to uphold campus wide standards in both steady state and crisis.

Competition:

- 5.111. Models 7 and 8 change incentives and control over terminal capacity in ways that reduce effective competition between airlines. They typically rely on long-term anchor-tenant agreements and exclusive or

⁸⁶ See references to final report of the independent investigation at: [Will JFK's new storm plan be enough to prevent future failures?](#) and [Winter chaos: will JFK's new storm plan be enough to prevent future failures? - Airport Industry Review | Issue 36 | October 2018](#)

⁸⁷. Report of the Heathrow Winter Resilience Enquiry: https://www.icax.co.uk/pdf/BeggReport220311_BAA.pdf

preferential access to facilities to secure financing and revenue, which entrenches incumbent carriers and creates structural barriers to new entrants.

- 5.112. At multi-operator airports, airline-led or privately financed terminals prioritise the needs of their own tenants. Experience at JFK and LAX: Mott MacDonald, Supporting Document 15, shows that fragmented ownership produces commercially rational behaviour by terminal operators: they favour large tenants who provide predictable traffic and revenue, offer bespoke pricing, and resist features that would aid competitors.
- 5.113. Fragmentation also reduces the flexibility needed for dynamic allocation of gates and stands. Under Models 7 and 8, physical and contractual boundaries limit HAL's ability to reassign capacity quickly to support new routes or entrants. By contrast, Heathrow's single-operator model optimises gate use across the campus and achieves 30% more passengers-per-gate than JFK/LAX⁸⁸, indicating more efficient utilisation of scarce assets and greater scope to accommodate competition when slots become available. Normalising for aircraft size, Heathrow's gate efficiency in terms of the number of passenger air transport movements (PATMS) per gate, is still the highest of the three airports. Relative to Heathrow, JFK and LAX handle 13% and 10% fewer PATMs per gate, respectively⁸⁹.
- 5.114. Finally, multi-operator charging regimes tend to be opaque and inconsistent, with terminal-level negotiations and discounts for incumbents. This lack of transparency raises entry costs and makes equal-footing competition difficult.
- 5.115. Combined with lower system-wide utilisation and the inability to orchestrate airport-wide optimisation, Models 7 and 8 are likely to deliver fewer choices, weaker competitive pressure on fares, and entrench incumbent positions than an integrated, single-operator framework.

Efficiency:

- 5.116. Models 7 and 8 introduce fragmented accountability and interfaces that systematically lower asset utilisation, duplicate overheads, and increase integration and financing costs. The evidence base for multi-operator airports and mega-project case studies indicates that these models add cost without improving outcomes, whereas a single controlling mind enables airport-wide optimisation at lower whole-life cost
- 5.117. Firstly, asset utilisation is significantly lower in multi-operator environments compared to single-operator hubs. Mott Macdonald (Supporting Document 15) estimate that fixed assets – stands, terminals, aprons – are utilised less effectively at JFK and LAX than at Heathrow, as per below. These model-driven effects mean more assets (and footprint) are required for the same throughput—raising capex and opex compared with an integrated model.
- LAX & JFK are less efficient than LHR and require greater peak hour capacity to serve the same level of demand. This means that, relative to LHR, JFK is approximately 11% less efficient and LAX is 29% less efficient in terms of traffic distribution.⁹⁰
 - Heathrow's average passengers-per-gate is almost 30% higher than JFK and LAX⁹¹, which reflects the efficiency of managing gate capacity as an airport-wide common-use facilities under the control of a single airport managing body.
 - Heathrow's gate efficiency, based on the number of passenger air transport movements (PATM) per gate, is also the highest of the three airports. Relative to Heathrow, JFK and LAX handle 13% and 10% fewer flights per gate, respectively.⁹²
- 5.118. Secondly, multi-operator airports duplicate functions and have increased governance overhead. Multiple owners/operators necessitate duplicate control rooms, management teams, IT/data integrations and

⁸⁸ Mott MacDonald, Supporting Document 15.

⁸⁹ Mott MacDonald, Supporting Document 15.

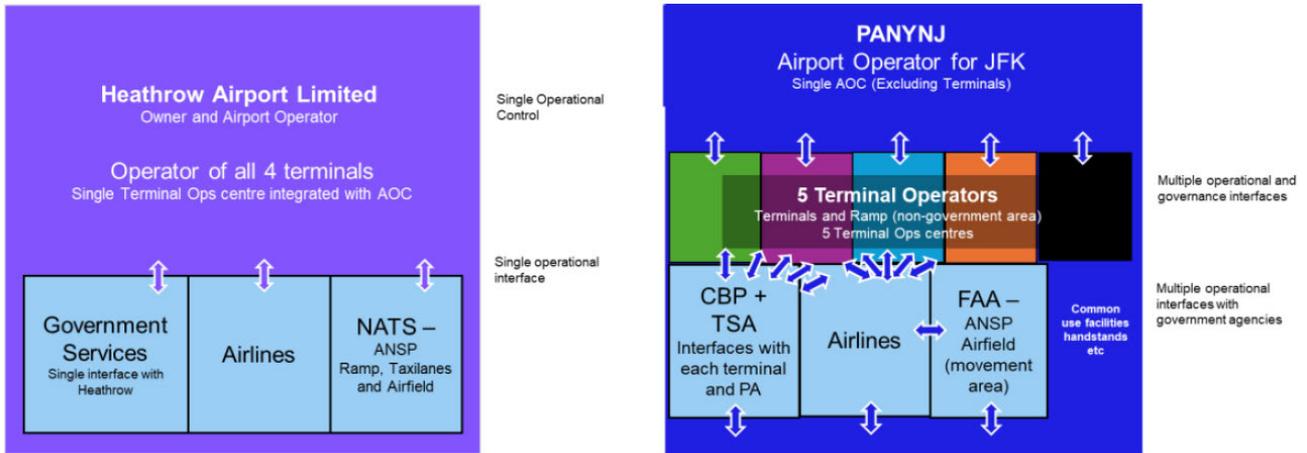
⁹⁰ Mott MacDonald, Supporting Document 15.

⁹¹ Mott MacDonald, Supporting Document 15.

⁹² Mott MacDonald, Supporting Document 15.

assurance processes, plus contractual coordination mechanisms. At multi-operator airports, such as JFK and LAX, each terminal operator will have their own interfaces with airlines, government services as well as a range of service suppliers. Not only are there multiple operation centres, one for each terminal, but many more interfaces as shown in Figure XX,⁹³ all of which will require resourcing and generate costs that will need to be passed onto the consumer. Heathrow has one operational control centre for running the entire airport which is inherently more efficient and lower cost.

Figure 9: Comparison of operational interfaces



5.119. This is supported by experience in rail, where the Williams–Shapps Plan for Rail estimated that simplifying and integrating the rail system — explicitly to end historic fragmentation — could unlock efficiency savings of around £1.5bn per year within five years: “Under single national leadership, our railways will be more agile: able to react quicker, spot opportunities, make common-sense choices, and use the kind of operational flexibilities normal in most organisations... A simpler, more integrated structure will cut duplication, increase Great British Railways’ purchasing power and economies of scale”.⁹⁴

Financing:

5.120. Fragmenting ownership and operation concentrates demand risk within individual terminals or assets rather than spreading it across the airport system. Third-party operators typically rely on long-term anchor tenants to secure financing, which creates exposure to the fortunes of a few airlines. If those carriers reduce schedules or exit, the terminal’s revenue base erodes sharply, increasing volatility in cashflows.

⁹³ Mott MacDonald, Supporting Document 15.

⁹⁴ Williams-Shapps Plan for Rail, 2021: [Great British Railways: Williams-Shapps plan for rail - GOV.UK](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/92427/gbr-plan-for-rail-2021.pdf)

British Airways acquisition of BMI from Lufthansa (2012) and the potential implications for Heathrow Terminal 2

Heathrow Terminal 2 (T2) was designed and constructed (2009-14) to serve the Star Alliance airlines, Aer Lingus and Virgin/Delta (see timeline Heathrow Terminal 2 (T2) was designed and constructed (2009-14) to serve the Star Alliance airlines, Aer Lingus (see timeline below). At the time, BMI was the largest airline due to move into the new T2.

However, in 2012 BMI was in financial difficulty and it was taken over by BA. The former BMI flights consolidated into BA's operation in T5 and T3. As a result, midway through the construction of T2, the terminal lost its largest airline. If Heathrow was a multi-operator airport, and T2 had been independently developed by a third party, then this would have impacted on the project revenues and financing. With HAL as a single operator, the change was absorbed.

Heathrow Terminal 2 Timelines

2008 - T5 opens, BA vacate some of T1 and all of T4 and various other airlines move

2009 - All airlines vacate T2 and the terminal is demolished to build the new T2 for the Star Alliance airlines (+ Aer Lingus)

- Star alliance airlines were operating in T1/T3 while new T2 was built
- Once new T2 opened, T3 became a Oneworld/BA overspill terminal (+Virgin/Delta)

2012 - BMI was in financial difficulty and was taken over by BA. Former BMI flights consolidated into BA operation in T5/T3

2014 – The new T2 opens

What the timeline above shows is that, midway through the construction of T2, the terminal lost its largest airline. If Heathrow was a multi-operator terminal, and T2 had been independently developed by the airline, then this would have impacted on the project revenues and financing. With HAL as a single operator, the change was able to be absorbed.

- 5.121. Even where traffic remains stable at airport level, variability between terminals—driven by airline strategies, alliance shifts or competitive dynamics - introduces uncertainty that will result in higher all in cost of capital. By contrast, Heathrow's single-operator model pools demand across all terminals, smoothing variability and supporting predictable cashflows that underpin investment-grade financing.
- 5.122. Financing risk under multi operator models is evidenced by JFK's New Terminal One (NTO) and translates into material cost for consumers. Fitch Ratings flagged that NTO's bonds concentrate revenue risk at a single terminal and face competition from other JFK terminals, highlighting the volatility introduced by intra airport competition: "Under a constrained capacity environment, NTO will have a strong market position targeting JFK's international operations but will face competition from other JFK terminals."⁹⁵
- 5.123. Fragmentation under Models 7 and 8 introduces novel risk profiles that lenders and rating agencies are unfamiliar with. When ownership and operation are split, HAL still bears system-level obligations (safety, resilience, integration) but loses control over planning and delivery of assets. This misalignment increases perceived risk, which translates into:
- Higher debt margins and equity return requirements for both HAL .
 - Greater uncertainty in cash flows, making it harder to maintain an investment-grade rating.
- 5.124. The risks of importing this model to Heathrow is highlighted by Santander and Freshfields, (Supporting Document 2) who conclude the introduction of competition in airport services would substantially undermine financeability by increasing both the all-in cost of capital and the risk of materially higher airport charges.

⁹⁵ Mott Macdonald, Supporting Document 15.

- 5.125. Santander and Freshfields (Supporting Document 2) conclude multiple ownership would destabilise Heathrow’s cashflows by weakening the single-till revenue structure that underpins its current investment-grade credit profile, leading lenders to view the shift as a structural increase in business risk. This would raise borrowing costs for both Heathrow and any third-party operator, further amplified by the need for third parties to secure significant upfront committed funding to achieve investment-grade financing, bringing forward their funding costs. The resulting deterioration in revenue predictability, coupled with heightened demand risk, would weaken HAL’s market position and increase the rating thresholds required to maintain current credit grades, necessitating higher charges to avoid a downgrade.
- 5.126. Santander and Freshfields (Supporting Document 2) also outline that competition for airport services would also materially increase revenue and margin volatility, reducing the predictability of returns for equity investors. Downside risk would be largely uncapped due to competitive pressure, while upside potential would remain restricted by regulation and market dynamics - making the investment proposition significantly less attractive and pushing required equity returns higher. These pressures would erode HAL’s credit quality and compromise its ability to refinance existing brownfield assets. Although some construction and operational responsibilities may be shifted to third parties, Heathrow would ultimately face increased delay and delivery risks due to reduced control over core assets.
- 5.127. Santander and Freshfields (Supporting Document 2) estimated that lower credit ratings would raise both debt and equity costs, requiring an estimated minimum uplift of 50bps to HAL’s WACC - equivalent to around a £1.50 increase in airport charges - with further increases of up to £5.60 required if rating thresholds rise to reflect the weakened business risk profile. Their view is that direct competition structurally weakens HAL’s business risk profile, requiring at least a £1.50 increase in charges which could rise to £5.60 to maintain investment-grade ratings under tested scenarios.
- 5.128. Santander and Freshfields (Supporting Document 2) also comment that the introduction of these models “undermine the predictability and stability of Heathrow as a regulated asset, increasing IRR requirements and financeability risk”.

Model 7a and non-core, non-critical assets

Santander and Freshfields (Supporting Document 2) indicate that Model 7a could be used for discrete, non-core and less capital intensive assets where a third party could bid at competitive rates and responsibilities are clearly defined between owners: “As per model 5b, third party suppliers may be able to deliver discrete, non-core and less capital-intensive assets at competitive rates (if, among other things, it can attract debt and equity funding on competitive terms relative to HAL & responsibilities clearly defined between owners)”

However, the deployment of the Upstream Supplier is different to Design, Build and Operate models in the complexity of establishing a framework (CATO has taken ten years, with a license yet to be issued) and contracting to establish third-party ownership of an asset and how those rights interact with Heathrow’s existing property rights.

On the basis that 5b can achieve the same outcomes as 7a for non-core, non-critical projects but with less complexity, Heathrow intends to consider application of model 5b only when considering options for third party delivery in its future business plan.

Deliverability:

- 5.129. Models 7 and 8 compare poorly against deliverability literature and best practice for megaprojects. Established success factors emphasise single-point accountability, accelerated decision-making and integrated governance (e.g., Tideway, ASTI, Project SPEED). By contrast, Models 7 and 8 fragment accountability across multiple controlling minds, introduce contractual interfaces and create dependency on third-party decisions - conditions historically correlated with delay and cost escalation.
- 5.130. The three recurrent failure factors identified across large programmes are replicated in Models 7 and 8. Evidence from Berlin Brandenburg (BER) and HS2 shows that fragmented delivery structures and dispersed

approvals drove nine years of delay and 3–4× cost escalation at BER, and governance complexity at HS2 prompted a programme reset - precisely the risks Heathrow would face under Models 7 and 8.

5.131. Integrated system delivery is a cornerstone of megaproject success. NAO reviews of HS2 and Great Western Electrification⁹⁶ highlight how fragmented integration and early contractual lock-in without mature design amplify rework and delay. Models 7 and 8 institutionalise these risks by carving out ownership and operation of assets that must interoperate seamlessly for safety, resilience and passenger service. Best practice calls for holistic programme management and adaptive governance; Models 7 and 8 are the antithesis - creating enduring boundaries, warranties and latent-defect liabilities that complicate validation, certification and day-one readiness.

Sustainability and Local Communities:

5.132. Fragmented delivery and operation would materially weaken Heathrow’s ability to engage effectively with local communities and manage externalities. Under a multi-operator model, accountability for issues such as noise mitigation, air quality, and surface access becomes diffuse, creating uncertainty over who is responsible for compliance and stakeholder engagement. Communities adjacent to Heathrow expect clear lines of responsibility for commitments under the Airports National Policy Statement (ANPS), including noise reduction, sustainable travel zones, and air quality measures. Fragmentation introduces ambiguity, making it harder to provide assurance and undermining trust in the delivery process.

5.133. The same dynamic applies to the management of externalities during construction. If Heathrow loses control of critical assets such as terminals, landside roads, and the logistics strategy, coordination of mitigation measures becomes significantly more complex. Multiple delivery bodies operating within a constrained footprint would struggle to optimise traffic flows, manage construction emissions, and minimise disruption to local roads. This increases the likelihood of duplicative logistics infrastructure - such as separate consolidation centres - and reduces the ability to flexibly balance demand through bottlenecks like control posts or to make best use of limited operating hours. The result is higher delivery costs, greater environmental impact, and reputational risk.

5.134. Moreover, fragmented accountability for safety and security introduces systemic risk. In a live operational environment, clarity over who holds responsibility for compliance is critical. Splitting these obligations across multiple parties would necessitate extensive contractual provisions and assurance mechanisms to resolve liabilities—processes that are inherently time-consuming and prone to dispute. This complexity not only delays delivery but also risks inefficient demonstration of compliance with ANPS mitigation requirements, as evidence and reporting become fragmented across entities. By contrast, a single controlling mind ensures coherent engagement, integrated mitigation strategies, and streamlined assurance - conditions essential for timely, efficient, and socially responsible delivery of expansion.

Timeliness:

5.135. Models 7 and 8 cannot be implemented under the current statutory framework. These models introduce mandatory third-party involvement in the design, construction, ownership, or operation of Heathrow assets - arrangements that fall outside the powers conferred on the CAA by the CAA12.

5.136. As noted in paragraph [4.16] above, the CAA has recognised that it does not have the power under the CAA12 to “*impose, or force HAL to enter into, particular commercial solutions to promote competition*” nor does it have the power “*to force HAL to divest assets*”.

5.137. Comparable frameworks in other regulated sectors - such as Ofgem’s Competitively Appointed Transmission Owner (CATO) regime and Ofwat’s Specified Infrastructure Projects Regulations (SIPR) - required primary legislation and took approximately between three and ten years to implement.

⁹⁶ Please see: [High Speed Two: Euston - NAO report](#); [Evaluation of the Great Western Route Modernisation - GOV.UK](#)

- 5.138. Moreover, before licensing any new operator, the CAA would need to conduct a market power test under section 6 of CAA12 and make a market power determination under section 7 of the CAA12 if the test was fulfilled. The CAA recognised in 2018 that “*whilst there is an existing MPD in respect of Heathrow, that determination dates from 2014, relates to a single operator and does not consider the new areas to be developed as part of the expansion.*”⁹⁷ Additionally, the CAA has specifically recognised that it may need to carry out a MPD in respect of regulatory models 7a and 7b.⁹⁸ A new MPD would be required to assess whether an alternative operator possesses significant market power and to determine appropriate licence conditions. HAL’s own MPD may also need to be revisited to reflect the change in circumstances and involvement of a third party. This process would add further complexity and time to implementation.
- 5.139. It is reasonable to conclude, as we did in Chapter 3, that it Models 7 or 8 would take a decade to implement, and therefore cost consumers an estimated £40bn in foregone benefit.

Models 7 and 8 are disproportionate and should be discounted:

- 5.140. The CAA’s statutory general duties include furthering the interests of users of air transport services (i.e., consumers), needing to have regard to ensuring that each licence holder’s operations are financeable and the CAA must also carry out its regulatory activities in a way which is transparent, accountable, proportionate and consistent
- 5.141. The three evidenced costs to implementing models 6, 7 and 8 are:
- The fixed cost of a 10-year delay, worth an estimated £40bn in lost consumer benefit.
 - The annual cost of higher financing, worth £250m-£290m a year and ~£8bn over asset life⁹⁹.
 - The inefficiency of fixed assets, where a 11-29% inefficiency¹⁰⁰ means a lower throughput for the same asset cost – meaning the same capital costs are shared by fewer passengers.
- 5.142. It would only be proportionate to consider these models if the evidenced benefits of delivery and operation of these models were significantly greater than £50bn. It is evidenced above there is no reason to believe fragmented models will improve service outcomes, competition, efficiency or sustainability are likely to improved relative to the current models. Even if the CAA could conclude differently and identify those benefits it is impossible to outweigh the evidenced costs:
- If there were competition of terminals, the delivery of T5X would likely be considered. T5X, including T5XW, T5XN, all aprons and landside areas, is forecast to cost £12bn. Even if the third party delivered it for free, the cost from delay alone outweighs the benefits (£40bn vs £12bn), without considering the impact of financing and inefficiency.
 - T5X will process 40 million passenger per year. Assuming it is fully built out and full from the beginning¹⁰¹ and the cost of operating per passenger is the same as today, over its asset life it will cost ~£15bn to operate. Even if the third party built the terminal for free and operated the terminal for free, the £27bn savings would not cover the cost of delay (let alone inefficiencies and higher financing).

⁹⁷ CAA, [Technical information note on the CAA’s approach to dealing with licensing issues raised by potential alternative developers of new capacity at Heathrow Airport](#), August 2018, page 6.

⁹⁸ CAA, CAP 3195 Working paper on regulatory models, December 2025. Regarding model 7a the CAA said “*Consideration would need to be given to the period over which the bid charges would apply. Where these are for a limited term, consideration would need to be given regarding what would happen once this term expires. It may be necessary for us to carry out a market power determination at this stage. Where this revealed that the third party possessed significant market power, we may need to intervene to limit the charges that the third party could subsequently levy.*”, para 4.76. Regarding model 7b, the CAA said “*Further, we may need to carry out market power determinations to ascertain the extent of competition between the third party and HAL*”, para 4.82.

⁹⁹ It is reasonable to assume 30 years as asset life of a new terminal

¹⁰⁰ Mott Macdonald, Supporting Document 15.

¹⁰¹ Unlikely but a relevant abstraction for purposes of this analysis.

5.143. If pursued, Models 7a/7b and 8 would deliver worse service, higher fares/charges, higher whole life costs, and later delivery of benefits for future consumers – with no demonstrated consumer benefit that would offset those detriments. That is not compatible with proportionate regulation or the CAA’s statutory general duties to further the interests of users nor to have regard to the need to ensure the financeability of HAL and any other licence holder’s operations.

Table 14: Assessment of Models 7 and 8

Criteria		Assessment
Pass or Fail	Timeliness	<ul style="list-style-type: none"> • DCO by 2029; runway by 2035? Fail • Legislative change, MPD or complex contracting required? Fail • Associated with schedule delays at other megaprojects? Fail • Credible recovery of delay costs? Fail
	Financeability	<ul style="list-style-type: none"> • Supports investment-grade debt, minimizes risk of rating downgrade to access cost efficient debt? Negative • Promotes private equity with competitive, predictable returns? Negative • Compatibility with existing financing, minimal impact on creditors? Negative • Clear allocation of risk and responsibility? Negative
	Deliverability	<ul style="list-style-type: none"> • Replicates proven success factors for megaprojects? Fail • Replicates the three failure factors? Fail
	Service quality	<i>Negative, fragmented and worse service apparent at all case studies (JFK, LAX) relative to Heathrow.</i>
	Efficiency	<i>Negative, 11%-29% inefficient use of fixed assets, assuming 50bps higher WACC = higher financing costs.</i>
	Competition	<i>Negative, terminal operators more reliant on larger carriers, who use influence or ownership to crowd out new entrants – leading to higher fares for passengers..</i>
	Sustainability	<i>Negative, fragments accountability to the local community and management of externalities (road access, airside pollution etc).</i>

Model 9 – Discount:

The consumer perspective: The models considered under Model 9 share a common feature: they weaken or break the link between efficiently incurred costs and allowed prices, leading to higher financing costs borne by consumers or non-delivery of expansion.

5.144. We consider all three models together given our concerns are similar. We also limit our considerations to financeability given these models pertain to remuneration options only.

5.145. CAP 3195 says:

- Model 9a – Price benchmarking: "An alternative means of setting maximum allowed charges for the airport as a whole is to do so with reference to the charges levied by comparable airports globally." CAP3195 cautions that charges may not be directly related to efficient costs, risking returns above or below the cost of capital, which is incompatible with the CAA's statutory general duties to further the interests of consumers and have regard to the need to ensure the financeability of HAL's operations. It also notes that at Changi, benchmarking is not mechanistic and public funding exists if efficient costs cannot be recovered—features not present in the UK regime.
- Model 9b – Long-Run Incremental Cost (LRIC): "Under the LRIC approach, charges are set by reference to the forward-looking cost associated with providing an additional increment of output." CAP3195 summarises historic competition-authority concerns: airports' lumpy capex, difficulties in defining the increment, and forecast reliability make LRIC a poor proxy, and moving from a RAB approach introduces consistency challenges.
- Model 9c – Lighter-touch regulation (commitments): A framework with less detailed price controls relying more on market discipline; CAP3195 signals that applying this at Heathrow would require major licence modification and re-examination of Heathrow's market power (MPD).

5.146. All of these models break the link between cost and price. On the basis that an efficient company operating in a competitive environment should be expected to recover its efficiently incurred cost (and a return) – and that regulation is intended to replicate those outcomes – these models do not appear to support the CAA's duties.

Model 9a — Price benchmarking:

5.147. Heathrow does not support price benchmarking as the primary method for setting maximum charges. By breaking the link between efficient cost and price, benchmarking undermines cash-flow certainty and fails financeability test set above.

5.148. Santander and Freshfields (Supporting Document 2) conclude that adopting comparator-based charges would introduce significant financial and regulatory risks for Heathrow. Such an approach could cap prices and erode financial headroom, as benchmarked charges may not enable the recovery of efficient costs or a fair return on capital. Because returns would depend on external comparator outcomes rather than Heathrow's own cost base, they could fluctuate materially above or below Heathrow's cost of capital, undermining investor confidence and discouraging private equity participation.

5.149. The model is also inconsistent with the RAB, creating substantial cashflow uncertainty and altering the credit exposure of existing lenders, with a high likelihood of weakening covenant headroom. Under this structure, Heathrow would retain cost risk while being exposed to revenue risk driven by benchmarks outside its control. A reduction in charges to levels aligned with peers would materially weaken debt metrics below investment-grade thresholds, increasing the cost of debt and significantly reducing investor returns. As a result, large-scale expansion would likely become unfinanceable without substantial government financial support or guarantees.

5.150. Evidently, model 9a should be discounted as it would "negatively impact financeability of expansion as HAL's revenues could fall significantly below its cost of capital, creating uncertainty as to whether HAL can

generate sufficient cashflow to service its debt and finance expansion without material government financial support to address shortfalls”¹⁰²

Model 9b — LRIC:

- 5.151. Heathrow does not support LRIC for airport charges. LRIC breaks cost-price linkage by construing an “increment” that is not meaningful for airports’ lumpy, interdependent capex, thereby failing the financeability tests.
- 5.152. LRIC presents significant financeability challenges. Revenues generated in the early years would be insufficient to service the level of debt required during the construction phase, heightening liquidity pressures because benefits from additional capacity materialise only after construction is complete.
- 5.153. LRIC also introduces material downgrade risk and would weaken HAL’s business risk profile in the absence of government support or explicit revenue guarantees. Furthermore, investors would face substantial under-recovery risk if demand or utilisation falls short of expectations, deterring investment at an efficient cost.
- 5.154. This approach is inconsistent the RAB framework and would create significant cashflow uncertainty, altering the credit exposure of existing lenders and reducing headroom under financial covenant tests. Under this structure, Heathrow retains cost risk while revenue risk is driven by forecast demand and utilisation, potentially leading to significant under-recovery and further undermining financeability.
- 5.155. Model 9b should be discounted because it “would negatively impact financeability of expansion without material government financial support and conflicts with the HAL’s existing RAB-based business-as-usual financing, making a transition unworkable in practice”¹⁰³

Model 9c — Lighter-touch commitments:

- 5.156. A shift to “lighter-touch” regulation is expected to have a negative impact on financeability in practice. While Heathrow’s relative market position may support pricing and cashflow resilience, reduced regulatory certainty is likely to weaken lender and investor confidence, increasing cost of funding and undermining HAL’s current ratings and business-as-usual financing.
- 5.157. Santander and Freshfields (Supporting Document 2) also conclude that “Rating agencies may view tariff flexibility positively, but removing regulatory protections with respect to a large expansion programme relative to the existing framework is likely to increase perceived business risk and place downward pressure on ratings compared with the current regulatory framework, absent evidence that cash flows can be sustained”.
- 5.158. However, as attractive as that could be for expansion, the evaluation criteria above are informative:
- Moreover, this approach necessarily requires a Market Power Determination as well as novel and complex license changes. This will also take significant time, particularly as we assess it is unlikely there will be consensus among airports and customers that this approach is appropriate.
 - This material delay will lead to forgone benefits that cannot entirely be justified by the hypothetical benefits associated with the most positive versions of this model.
 - Financing expansion privately is already complex, and there is no precedent we have observed that finances the scale of expansion through a model that does not explicitly link price and cost as the RAB model does. There is no current case for change.

¹⁰² Santander and Freshfields, Supporting Document 2.

¹⁰³ Santander and Freshfields, Supporting Document 2.

6. CONCLUSION:

- 6.1. **Expansion is only deliverable with an integrated, single RAB model.** Integrated ownership and streamlined governance are proven success factors in Heathrow’s own megaprojects (T2, T5) and across infrastructure case studies. Fragmented models consistently lead to delay, cost escalation, and poorer consumer outcomes.
- 6.2. **Timeliness must be a pass/fail test.** Every year of delay costs future consumers £3bn, and a 10-year delay results in an estimated £40bn of lost benefit. Models requiring legislation, market power determinations or complex contracting simply cannot meet the Government’s 2029/2035 milestones.
- 6.3. **Targeting an A minus credit rating is fundamental to keep debt costs efficient for a £33bn privately financed project.** Government requires expansion to be **100% privately financed**. Only a stable, familiar RAB framework can raise capital efficiently. Fragmented or novel models materially increase the all in cost of capital and risk rating downgrades.
- 6.4. **Heathrow already performs strongly on service quality.** CAA’s own QSM and NPS data show Heathrow delivering record satisfaction (96% Good/Excellent), industry leading punctuality, and strong security performance.
- 6.5. **There is no evidence of material inefficiency in Heathrow’s capex delivery.** Independent reviews consistently find no material inefficiency, and recognise Heathrow’s unique constraints. Benchmarking shows capex delivery to be very competitive. T2 and T5 remain international examples of efficient megaproject delivery.
- 6.6. **Fragmentation of ownership or operation worsens service, increases cost, and reduces airline competition.** Evidence from JFK, LAX and UK rail shows lower asset utilisation, duplicated systems, interface failures, and restricted access for new entrants - undermining consumer benefit and competition.
- 6.7. **Incumbent airline incentives are not necessarily wholly aligned with future consumer interests for new capacity.** Incumbent airlines benefit from scarcity; they earn outsized margins and have a rational incentive to delay capacity increases. Consumer benefit comes from more competition - something only timely expansion can unlock.
- 6.8. **Only a refined RAB model can meet all CAA duties.** The evolved RAB model offers stability, predictable remuneration, strong governance, and the lowest cost of capital for consumers.
- 6.9. **Heathrow supports meaningful regulatory evolution.** Heathrow backs targeted enhancements: Risk based governance (1a), Smart incentives (2), Long term commitments (3), Transparent procurement (4a) and selective non-core third party delivery (5a/5b).
- 6.10. **The CAA should now decisively remove unworkable models that cannot be delivered on time or at all.** Models requiring legislative change, forced fragmentation, or new operators cannot support the Government timeline, cannot be privately financed, and repeat known megaproject failure modes. Continuing to consider them chills investment and delays expansion.