CAP3195 – CAA Working Paper on Regulatory Models

Response by Heathrow Airport Ltd – Data Annex

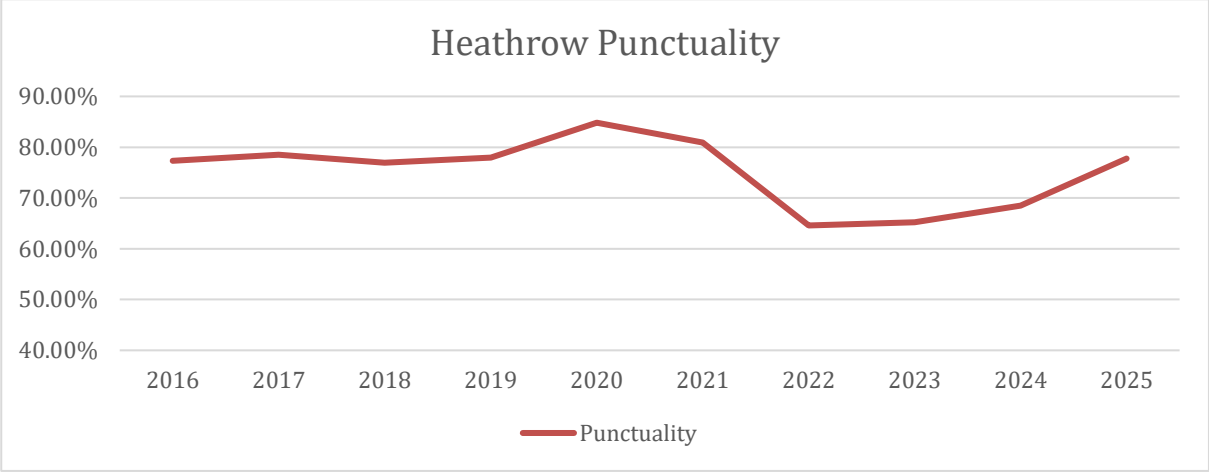
20 January 2026

Contents

I: Data on Service Quality:

Punctuality data

Year	Punctuality
2016	77.31%
2017	78.50%
2018	76.93%
2019	77.93%
2020	84.82%
2021	80.89%
2022	64.59%
2023	65.19%
2024	68.50%
2025	77.77%



II: Passenger experience rating

QSM:

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Mean Score	**4.22**	**4.19**	**4.20**	**4.24**	**4.26**	**4.32**	**4.19**	**4.31**	**4.33**	**4.37**
Excellent	31%	28%	29%	30%	33%	40%	30%	39%	40%	41%
Good	62%	65%	64%	64%	61%	54%	62%	55%	55%	55%
Average	7%	7%	7%	5%	5%	5%	7%	5%	5%	4%
Poor	1%	1%	1%	1%	1%	1%	1%	1%	1%	0%
Ex. Poor CM	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

ASQ:

[redacted]

Net Promoter Score:

CAA Passenger Survey - Passenger Experience Net Promoter Score

CAA Passenger Survey 2016 - September 2025

		2016	2017	2018	2019	COVID	2022	2023	Jan - Dec 2024	Jan - Sep 2025 (Provisional Data)
Heathrow Airport	Detractors (0-6)	16.5%	15.3%	13.7%	9.7%		12.2%	10.1%	10.3%	8.9%
	Passives (7-8)	29.8%	28.3%	28.4%	34.0%		36.6%	37.1%	36.8%	37.1%
	Promoters (9-10)	53.8%	56.4%	57.9%	56.3%		51.2%	52.8%	52.8%	54.0%
	NPS Score	**37.3%**	**41.1%**	**44.2%**	**46.6%**		**39.0%**	**42.7%**	**42.5%**	**45.1%**
Gatwick Airport	Detractors (0-6)	16.4%	12.6%	12.2%	9.4%		9.8%	6.5%	8.1%	8.3%
	Passives (7-8)	31.0%	30.9%	30.4%	38.9%		42.1%	45.9%	46.8%	55.8%
	Promoters (9-10)	52.6%	56.5%	57.4%	51.7%		48.1%	47.6%	45.1%	35.9%
	NPS Score	**36.2%**	**43.9%**	**45.2%**	**42.3%**		**38.3%**	**41.1%**	**37.0%**	**27.5%**
Stansted Airport	Detractors (0-6)	28.2%	24.5%	24.6%	16.2%		12.1%	12.9%	12.5%	12.1%
	Passives (7-8)	29.7%	33.1%	35.3%	40.2%		41.8%	41.6%	41.4%	41.2%
	Promoters (9-10)	42.1%	42.4%	40.1%	43.5%		46.0%	45.5%	46.1%	46.7%
	NPS Score	**13.9%**	**17.9%**	**15.6%**	**27.3%**		**33.9%**	**32.6%**	**33.6%**	**34.7%**
Manchester Airport	Detractors (0-6)	16.3%	18.1%	21.6%	19.0%		23.7%	14.6%	12.3%	12.8%
	Passives (7-8)	37.0%	39.2%	38.8%	42.4%		40.5%	39.8%	40.5%	40.7%
	Promoters (9-10)	46.6%	42.6%	39.6%	38.6%		35.9%	45.6%	47.3%	46.5%
	NPS Score	**30.3%**	**24.5%**	**17.9%**	**19.6%**		**12.2%**	**31.1%**	**35.0%**	**33.8%**
Luton Airport	Detractors (0-6)	28.9%	23.2%	22.0%	12.2%		7.3%	12.5%	21.0%	20.5%
	Passives (7-8)	41.2%	43.8%	33.3%	33.2%		32.4%	40.1%	47.9%	50.8%
	Promoters (9-10)	29.9%	33.1%	44.7%	54.5%		60.3%	47.4%	31.2%	28.7%
	NPS Score	**1.0%**	**9.9%**	**22.7%**	**42.3%**		**52.9%**	**35.0%**	**10.2%**	**8.2%**

Summary NPS table (Large English Airports, 15 mppa+)

Year	Heathrow Airport	Gatwick Airport	Stansted Airport	Manchester Airport	Luton Airport
2016	37.3%	36.2%	13.9%	30.3%	1.0%
2017	41.1%	43.9%	17.9%	24.5%	9.9%
2018	44.2%	45.2%	15.6%	17.9%	22.7%
2019	46.6%	42.3%	27.3%	19.6%	42.3%
2022	39.0%	38.3%	33.9%	12.2%	52.9%
2023	42.7%	41.1%	32.6%	31.1%	35.0%
2024	42.5%	37.0%	33.6%	35.0%	10.2%
Q1-3 2025	45.1%	27.5%	34.7%	33.8%	8.2%

III: Capital Efficiency Further Information

1. Heathrow Terminals 2 and 5:

1. Delivered on time and within budget, **Terminal 5** is widely recognised in academic and institutional literature as a success story. [1] [2] [3] [4] [5] [6] This has been attributed to the following features:

    - Client led risk retention and systems integration. BAA deliberately departed from traditional fixed price contracting and retained programme level risk, acting as the single systems integrator. This approach avoided systematic risk pricing by suppliers and reduced duplication of contingencies across contracts, thereby improving aggregate cost control.
    - Programme level contingency management. Approximately £100 million of contingency was held centrally and allocated dynamically across the programme, rather than fixed prematurely at project level. OECD analysis highlights this as a key mechanism in achieving price certainty and maintaining overall budget discipline.
    - Relational contracting and incentive alignment. The bespoke T5 Agreement aligned Tier 1 suppliers around programme outcomes, significantly reducing claims, rework and adversarial behaviours that are widely cited as drivers of cost escalation in major infrastructure projects.
    - Disciplined cost management practices. Academic case studies highlight the structured application of earned value management, integrated baseline reviews and realtime cost reporting across more than 1,000 work packages, enabling early identification of cost pressures and timely corrective action.

2. Despite significant technical and interface complexity, and construction taking place between two active runways and their associated taxiways, **Terminal 2** was delivered on time and within budget, providing robust evidence of - and lessons on – cost efficient delivery in a highly constrained, live airport environment, as consistently recognised by industry and academic sources. [7] [8] [9] [10] Key features of Terminal 2 construction and governance included:

    - Adaptive risk management - Detailed research shows that T2 moved away from compliance heavy, audit focused approaches toward adaptive, learning based risk management practices, helping to limit late stage change and costly rework.
    - Integration of operational requirements into design decisions – Peer reviewed analysis demonstrates that embedding operational considerations throughout planning and delivery reduced downstream modification and early life remediation costs, improving whole life value.

1 Davies, A., Gann, D. & Douglas, T. (2009). Innovation in Megaprojects: Systems Integration at Heathrow Terminal 5. California Management Review.
2 Brady, T. & Davies, A. (2010). Learning to Deliver a Mega-Project: Heathrow Terminal 5. Routledge.
3 OECD (2020). Heathrow Terminal 5 – Infrastructure Governance Case Study.
4 Flyvbjerg, B., Holm, M. & Buhl, S. Underestimating Costs in Public Works Projects. Journal of the American Planning Association.
5 Cizaire, C. & Valerdi, R. (2014). Heathrow Terminal 5: Cost Management for a Mega Construction Project. CRC Press.
6 EC Harris (2009). Terminal 5 Cost and Value Management Review.
7 Zerjav, V., Edkins, A. & Davies, A. (2018). Project Capabilities for Operational Outcomes: The Case of Heathrow Terminal 2. International Journal of Project Management.
8 Vine, R. (2023). Riskwork in the Construction of Heathrow Terminal 2. University of Sussex / SSRN.
9Arup (2014). Heathrow Terminal 2: Programme Integration and Delivery.
10 Major Projects Association (2014). Heathrow T2: A Lesson in Value and Cost Efficiency.

- Whole programme coordination and testing discipline - Industry evidence indicates that systematic coordination across design, construction and transition phases reduced uncertainty at later stages of delivery and supported efficient cost management at programme level.
- Capital cost discipline and delivery approaches that reduced the likelihood of unplanned scope change and escalation. Structured application of earned value management, integrated baseline reviews and real time cost reporting across more than 1,000 work packages, enabling early identification of cost pressures and timely corrective action allowed T2 to achieve strong value for money.

2. Capital Governance – Current Model:

1. Heathrow's capital delivery model is supported by embedded programme and project management processes. A key feature is the role of Programme Sponsors, who act as single points of accountability for operational requirements. They guide strategic outcomes, oversee programme change, and ensure alignment with business needs, enabling delivery teams to maintain a clear execution focus. Central to Heathrow's governance is the Heathrow Gateway Lifecycle (HGL), which has been in place since 2014. HGL defines the stages through which projects progress, ensuring control of cost, schedule and outcomes. It maintains alignment between individual projects and overall programme objectives, particularly in delivering tranche-level benefits.

2. Although further developed for H7 as a result of the CAA's move to Outcome Based Regulation (OBR) and via the introduction of Delivery Obligations (DOs), the current governance model that Heathrow has developed, provides only a foundation to build on for expansion. The greater scale and complexity of the programme will require broader coordination across a wider set of stakeholders, including multiple government departments and regulated functions beyond Heathrow's direct control. The programme will be dependent on multiple government policies and processes, the delivery and content of which are outside of Heathrow's control. If these are not executed in line with current programme assumptions will impact both the cost and timescales of delivery. These include but are not limited to: airspace change, slot reform, mitigations included in the DCO and multiple consents beyond the DCO approval.
3. This is acknowledged in CAP3195, as the CAA flag that the "present focus of the capex incentives is on a project-by-project basis", and that "it may not be practicable to adopt this approach for a major capital programme". This corroborates CAA's conclusion in H7, supported by the independent review undertaken by Arcadis, that while ex ante incentives were suitable for the bounded and controllable risks of the H7 capital portfolio, that was not the case for capacity expansion, which involves materially greater uncertainty and risk: "In the context of a programme that HAL is expecting to deliver over the next four years, **and in the absence of programmes like capacity expansion**, we are of the view that there are no significant parts of HAL's capex plan that are not suitable for ex ante incentives".[31]

IV: Preliminary suitability assessment of DBO-style arrangements

The table below provides an initial suitability assessment of DBO-style delivery mechanism for different expansion programmes. Areas have been tested against the key criteria set out in our consultation response (separability; resilience & compliance; timeliness; market test; passenger outcomes). This is a preliminary 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 in future consultation rounds ahead of Summer 2026.

Table V: Preliminary assessment of alternative delivery schemes for expansion - RAG criteria: Likelihood of opportunity: **Low**, **medium**, **high**

Masterplan element	Separability, resilience, compliance and timeliness	Market Testing	Consumer Outcomes	Cost impact and performance vs integrated delivery
Car parks	Under the DCO, construction logistics including traffic counts are assessed against overall limits. A DBO model would need to pass this on and could constrain our ability to construct the rest of the programme and negatively impact costs, benefits elsewhere. As parkway assets are delivered progressively, a DBO approach would also require phasing and interfaces to be structured upfront, increasing delivery complexity. Critical interfaces with people movers, terminal areas and the Airport Operations Centre need to be considered (noting the T4 car park involved 200+ interfaces). Moreover, the first phase of Southern Parkway is on the critical path to T5X opening and could not be considered (but future phases, if separable, could be). This could be mitigated if the third party were Heathrow's Propco.	DBO suppliers exist with examples across the private & public sector. Existing markets provide a competitive environment. A notional property company would build and operate car parks on behalf of third parties so it is reasonable to assume Heathrow's notional Propco would be able to fund it, with or without a partner.	Current car parks at Heathrow are operated by a third party, provide high levels of satisfaction although there may be potential to seek alternative or improved propositions through a DBO arrangement.	Coupling design and build with operation in a DBO arrangement *may* have the potential to unlock a more efficient cost position over the life of the asset. However, this requires further understanding vs the current Heathrow third-party contracting arrangement to identify true opportunity.

Masterplan element	Separability, resilience, compliance and timeliness	Market Testing	Consumer Outcomes	Cost impact and performance vs integrated delivery
Cargo area	As this is consented under the DCO, construction logistics are subject to the same constraint as for car parks. Cargo infrastructure plays a key role in supporting project benefits – airline economics for long haul movements are heavily influenced by belly hold cargo – the timing of delivery would need to be acceptable to airline end users. Phasing would need to ensure impacts to existing cargo operations are minimised.	Cargo handling facilities share many characteristics with the industrial shed logistics sector, and there is evidence of a competitive market for delivery. Heathrow is engaged with third parties developers with experience and capability in this field who have indicated preliminary interest in a DBO-style arrangement.	Peak cargo traffic will outpace capacity ahead of a third runway, limiting airline growth and growth of cargo operations from Heathrow – if a DBO route enables development of cargo facilities at the right time in the right way, it should support airlines and cargo operators. Competition has the potential to improve the range and quality of services provided to airline operators, e.g., expedited cargo handling. However, historic third-party ownership of cargo facilities has laid bare the different incentives between a property company (maximising asset value and rental income) vs. an airport operator (maximising passenger volume / network breadth through cost efficient cargo facilities) – meaning third party ownership has led to *under* investment relative to notional integrated airport control. This could be mitigated if Heathrow, or Heathrow's Propco, were partners in design and delivery.	DBO for Cargo *could* provide the potential for reduced costs and enhanced value, benefitting from the experience, expertise and supply chain of a DBO partner, provided the time to deliver supports airline requirements for additional cargo processing capacity. However, given the airside-landside nature of cargo development it is unlikely a typical industrial developer has developed – or has a supply chain experienced in – the complexities of airside delivery. This could be mitigated if Heathrow, or Heathrow's Propco, were partners in the design and delivery.

Masterplan element	Separability, resilience, compliance and timeliness	Market Testing	Consumer Outcomes	Cost impact and performance vs integrated delivery
Central terminal area	Heathrow has identified sites that have commercial potential and are likely to be developed for predominantly commercial use. These pose a case for alternative investment given predominant use-case, whilst also considering how any operational use is accounted for. Future users could include airport users/operators. As this is consented under the DCO, construction logistics are subject to the same constraint as for car parks.	The real estate market around Heathrow perimeter has grown substantially over the last decades. There is increasing appetite from developers. Certain landside sites have been identified with commercial potential.	Within a fixed capital envelope investments in commercial property have been neglected by all stakeholders as "non-core". Heathrow's commercial property estate is in disrepair or nearing end-of-life, causing lost income opportunities and a worse airport experience for airport users. A DBO approach, particularly where Heathrow or its Propco are equity partners, can be an opportunity to modernise our portfolio and align it with standards required by consumers. NB: third party ownership and operation is suboptimal given historic experience of fragmented ownership in critical operational areas (which the CTA is) has led to worse outcomes for consumers.	The development under DBO should not leave customers any worse off, the RAB should not increase, and any future capital risks are borne exclusively by Heathrow. A DBO sharing agreement can ensure appropriate governance rights for Heathrow, securing operational and service integrity and resilience. Further consideration needed with regards to costs for enabling infrastructure for sites that are adjacent to direct airport operations with mixed operational/commercial use and costs related to potential Heathrow/operational tenancy.

Masterplan element	Separability, resilience, compliance and timeliness	Market Testing	Consumer Outcomes	Cost impact and performance vs integrated delivery
Perimeter commercial property	Heathrow has identified perimeter property areas with commercial potential that have less direct interface with aeronautical operation and are not in the critical path for expansion. Some works within this portfolio can be consented separately to the DCO – where this applies, construction logistics interfaces are less important.	The real estate market around Heathrow perimeter has grown substantially over the last decades. There is increasing appetite from developers. Perimeter property areas have been identified with commercial potential.	Within a fixed capital envelope investments in commercial property have been neglected by all stakeholders as "non-core". Heathrow's commercial property estate is in disrepair or nearing end-of-life, causing lost income opportunities and a worse airport experience for airport users. A DBO approach, particularly where Heathrow or its Propco are equity partners, can be an opportunity to modernise our portfolio and align it with standards required by consumers while retaining control of managing externalities with local communities / ANPS obligations.	The development under DBO should not leave customers any worse off, the RAB should not increase, and any future capital risks are borne exclusively by Heathrow. A DBO sharing agreement can ensure appropriate governance rights for Heathrow, securing operational and service integrity and resilience.

Masterplan element	Separability, resilience, compliance and timeliness	Market Testing	Consumer Outcomes	Cost impact and performance vs integrated delivery
Surface access - Highways	The works are within the core airfield expansion area. Highways works are on the critical path for runway opening, therefore it is unlikely that DBO arrangements could be successfully implemented if pursuing the 2035 runway opening date. As this is consented under the DCO, construction logistics are subject to the same constraint as for car parks.	DBO type arrangements have precedent within highways, but their application here would depend on agreement with National Highways and local councils, increasing complexity and likelihood of burdensome processes.	These works are a requirement of the ANPS and environmental regulation – the primary consumer interest is to complete them at lowest cost and on schedule to unlock the benefits that runway expansion deliver. Given the nature of the works and associated risks and governance requirements, a DBO does not necessarily drive better lower the cost.	The criticality and costs of these works and stakeholder interfaces make DBO arrangements challenging vs integrated delivery.

Masterplan element	Separability, resilience, compliance and timeliness	Market Testing	Consumer Outcomes	Cost impact and performance vs integrated delivery
Surface access - Rail	This would likely proceed under a separate consenting process, with obligations tied to the EH DCO that a DBO model would need to pass through contractually. Consenting advice suggests that promoting the rail scheme directly strengthens Heathrow's EH Surface Access strategy in view of ANPS mode share targets—meaning Heathrow may need full control of all mode share levers. DCO conditions could also set timelines for new rail connection. Rail systems must interface with existing Heathrow station and life-safety infrastructure, Network Rail/TfL systems, and major new below-ground assets such as the crossover box.	Heathrow previous and current engagement with private sector suggests that there is some interest in investing in rail schemes serving the airport. The works include significant tunnelling, deep excavations and rail integration – therefore involving an important risk profile that is likely to require a significant risk premium to secure a competitive market. There is unlikely to be a viable business case for a third party to build a rail scheme to Heathrow without a significant contribution by Heathrow (under CAA's surface access policy).	Heathrow already tenders Heathrow Express services operation and maintenance with robust service quality and cost performance.	Heathrow already tenders Heathrow Express services operation and maintenance with robust service quality and cost performance. Coupling design and build with operation in a DBO arrangement *may* have the potential to unlock substantial financing required and a more efficient cost position.

Masterplan element	Separability, resilience, compliance and timeliness	Market Testing	Consumer Outcomes	Cost impact and performance vs integrated delivery
Natural environment	Natural environment works are on the critical path for runway opening, therefore it is unlikely that DBO arrangements could be successfully implemented if pursuing the 2035 runway opening date. As this is consented under the DCO, construction logistics are subject to the same timing constraint as for car parks.	Natural assets do not offer, in principle, a clear commercial case for a DBO approach. Capabilities for earthmoving and environmental works are available in the market, in competition with other major programmes (e.g., HS2, Sizewell C).	These works are a requirement of the ANPS, and environmental regulation and consumers have an increasing interest in more sustainable aviation. A DBO does not necessarily drive better forms to address environmental regulations or to lower the cost of these works.	The nature, scale, and criticality of these works suggest that a DBO is unlikely to drive better efficiency or performance.