Final Report
May 2026

Technical assessment of the CAA regulatory models for Heathrow expansion

Civil Aviation Authority
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Acronyms and abbreviations

Acronym	Definition
CAA	UK Civil Aviation Authority
CAP 3195	CAA Working Paper on Regulatory Models for Heathrow Expansion
CATO	Competitively Appointed Transmission Owners
D&B	Design and Build
DBO	Design, Build and Operate
HAL	Heathrow Airport Limited
IT	Information Technology
JFK	John F. Kennedy International Airport
LRIC	Long-Run Incremental Cost
Model	Regulatory model
NA	Not Applicable
NC	Not Compatible
NESO	National Energy System Operator
PANYNJ	Port Authority of New York and New Jersey
RAB	Regulatory Asset Base
RM	Regulatory model
TTT	Thames Tideway Tunnel

Source: Steer

Executive summary

The Civil Aviation Authority (CAA) is considering alternative regulatory models for the delivery and operation of Heathrow expansion, as set out in its Working Paper on regulatory models (CAP 3195). This report provides a structured comparative assessment of those regulatory models against a defined assessment framework focused on three consultation criteria: Criterion A (appropriate support for capacity expansion, including delivery, operational integration and avoidance of delay and disruption), Criterion B (promotion of efficiency and control of the costs of expansion, while delivering benefits for consumers), and Criterion F (promotion of an appropriate level of service quality, including improvements where appropriate). The purpose of this report is to provide technical input and a transparent comparison of models to support the CAA's forthcoming evaluation and consultation process, rather than to recommend a preferred regulatory model.

The assessment framework was developed using a set of sub-criteria and metrics aligned with the consultation criteria and designed to provide traceability between the characteristics of each model and the resulting scores. Each model was assessed on a pre-mitigation basis (initial assessment) to reflect its intrinsic characteristics and then reassessed on a post-mitigation basis to reflect the potential effect of plausible governance, oversight and incentive measures.

Criterion A, appropriate support for capacity expansion, post-mitigation results indicate that Design, Build and Operate (Model 5b) performs most strongly, while Changes to capex governance processes (Model 1a) and Targeted adjustments to the existing incentive regime (Model 2) also show positive scores. These models perform better because they strengthen delivery governance, incentives and alignment between delivery and operation without introducing the same level of structural fragmentation as models involving long-term independent ownership and operation. The mitigation measures that support the improved performance of these models include stronger delivery governance, clearer accountability arrangements, and incentive mechanisms linked to delivery performance and operational outcomes. These measures are intended to reduce schedule exposure, improve coordination and limit the risk of disruption during delivery.

However, models involving sustained structural separation through third-party ownership and operation, particularly Direct competition for airport operation services (Model 7b) and Wholesale supplier model (Model 7a – Terminals), perform negatively under Criterion A, even after mitigation. While measures such as binding system-wide governance, joint operational planning, interoperability standards and central coordination functions can reduce risks, they do not fully remove the coordination complexity, operational interface risks and end-to-end integration challenges associated with structural fragmentation.

Criterion B, costs, post-mitigation results indicate that Direct competition for airport operation services (Model 7b) performs most strongly, followed by the Wholesale supplier model (Model 7a – Terminals and Other), Design, Build and Operate (Model 5b), and Mandate Design and Build contract (Model 4b). These

models perform well because they introduce competitive pressure, more simple commercial structures and stronger cost-risk allocation, which can support cost discipline and reduce consumer exposure to inefficient delivery costs. The mitigation measures that support the performance of these models include defined risk allocation, cost control mechanisms, incentive arrangements in delivery and operation contracts, and, where relevant, oversight by a technical adviser to support the CAA in challenging cost estimates, procurement strategy and execution efficiency. Other models with a meaningful positive score are: Changes to capex governance processes (Model 1a), Enhanced scrutiny of HAL's approach to procurement (Model 4a), and Targeted adjustments to the existing incentive regime (Model 2).

Price benchmarking (Model 9a) and Lighter-touch regulation (Model 9c) continue to perform negatively under Criterion B after mitigation. This reflects weaker regulatory leverage to establish and challenge cost baselines, reduced ability to track cost changes during construction, and weaker protection against cost escalation. In these models, the potential benefits of reduced regulatory intervention are outweighed by the risk that the operator does not provide the same level of value for money to consumers in developing and maintaining the infrastructure and, therefore, not acting in the interest of the consumers.

Criterion F, service quality, post-mitigation results indicate that Targeted adjustments to the existing incentive regime (Model 2) and Changes to capex governance processes (Model 1a) are the only models with meaningful positive scores. These models perform well because they strengthen incentives and governance within the existing integrated structure, allowing service quality improvements to be coordinated without introducing material fragmentation of passenger processes or accountability. The mitigation measures relevant to service quality include performance-linked incentives, and clearer accountability and traceability for service outcomes.

For models involving third-party operation, measures such as system-wide service standards, interface performance requirements and resilience protocols help reduce the risks of fragmented passenger experience and inconsistent service standards. However, these models remain broadly neutral overall under Criterion F after mitigation. This reflects that, while competitive or performance-based incentives may support improvement within individual areas or assets, they do not by themselves guarantee coherent passenger outcomes across the airport as a whole. The residual risk is that service quality improvements become asset-specific rather than system-wide, particularly where passengers, baggage, connections and irregular operations depend on coordination between multiple operators.

The choice of a new regulatory model ultimately requires balancing multiple factors and assessing the potential risks and opportunities that it may offer compared to the status quo. **The findings of this assessment indicate that no single model dominates across all criteria, but Changes to capex governance processes (Model 1a) and Targeted adjustments to the existing incentive regime (Model 2) have positive scores across the three criteria.**

This report is intended to support the CAA's next steps, which are expected to include a consultation on its evaluation of regulatory models and identification of a shortlist (expected Spring 2026), followed by a final report and conclusions on the preferred model and the next steps for implementation (expected Summer 2026). The findings in this report indicate that the next phase of work would benefit from a more detailed assessment of a shortlist of models, supported by clearer information on expansion phasing, delivery interfaces, procurement strategy, contractual structures, and risk allocation.

1 Introduction and scope

Background

1.1 This report has been prepared by Steer Davies & Gleave Limited (Steer) for the UK Civil Aviation Authority (CAA) as part of the Independent Technical Assessment of expansion plans for Heathrow Airport (Heathrow), delivered under the Contract Ref. 3634.

Purpose and scope of this report

1.2 This report addresses the technical assessment of the implications of different regulatory models for Heathrow Airport expansion.

1.3 The purpose of the assessment is to provide structured, evidence-based input to support the CAA's consideration of alternative regulatory approaches, as set out in the CAA's Working Paper on regulatory models (CAP 3195). The assessment considers the extent to which different regulatory models are capable of supporting the delivery and operation of expansion in a complex, live airport environment.

1.4 The assessment focuses on the technical implications of regulatory models in relation to:

- operational feasibility and deliverability,
- costs and efficiency, and
- service quality.

1.5 While all regulatory models set out in CAP 3195 are recognised, the depth of assessment varies by model. Particular focus is placed on those models that would introduce material third-party involvement in the delivery, ownership or operation of expansion assets, as these models raise more significant questions in relation to delivery complexity, cost control and operational integration.

1.6 The report does not seek to recommend a preferred regulatory model. Instead, it provides a transparent and structured assessment framework to inform the CAA's wider regulatory judgement.

Structure of this report

1.7 The remainder of this report is structured as follows:

- **Chapter 2** provides an overview of the regulatory models set out in CAP 3195, consideration of compatibility between models, relevant case studies referenced in the consultation document, and the criteria identified by the CAA for assessment. It

also clarifies which regulatory models and criteria are in scope for detailed assessment in this report.

- **Chapter 3** sets out the methodology and assessment framework applied in this report. This includes the structure of the assessment under Criteria A, B and F, and the scoring and mitigation approach.
- **Chapter 4** presents the assessment and results, including the application of the framework to the regulatory models in scope and the identification of mitigation measures where relevant.
- **Chapter 5** sets out the proposed next steps for further development and refinement of the assessment.
- **Appendix A** provides a brief description of each regulatory model set out in CAP 3195, intended to provide context for the assessment.
- **Appendix B** sets out the pre-mitigation and post-mitigation evaluation and scoring of each regulatory model against the assessment framework.

2 Overview of regulatory models

Regulatory models set out in CAP 3195

2.1 This section provides a brief description of each regulatory model set out in the Civil Aviation Authority's Working Paper on regulatory models (CAP 3195).

2.2 The descriptions of the regulatory models are included in Appendix A of this report and are intended to provide contextual understanding of the different approaches considered by the CAA and do not constitute an assessment of their merits.

List of regulatory models

2.3 The list below includes the regulatory models set out in the CAA's Working Paper on regulatory models (CAP 3195).

Table 2.1: List of regulatory models included in the CAA consultation document CAP 3195

Regulatory model	Description / Sub-options
Regulatory model 1	**Changes to the current capex governance framework**
Regulatory model 1a	Changes to capex governance processes
Regulatory model 1b	Separating HAL's system planning function from its operational function
Regulatory model 2	**Targeted adjustments to the existing incentive regime**
Regulatory model 3	**Long-term regulatory framework for expansion**
Regulatory model 4	**CAA oversight/mandate of procurement**
Regulatory model 4a	Enhanced scrutiny of HAL's approach to procurement
Regulatory model 4b	Mandate Design and Build contract
Regulatory model 5	**Contract for delivery and operation**
Regulatory model 5a	Operation (management contract)
Regulatory model 5b	Design, Build, Operate
Regulatory model 6	**Third party builds assets, then transfers ownership to HAL**
Regulatory model 7	**Third party continues to own and operate assets**
Regulatory model 7a	Wholesale supplier model
Regulatory model 7b	Direct competition for airport operation services
Regulatory model 8	**Transfer of ownership and operation of an existing asset**
Regulatory model 9	**New frameworks for setting airport charges**

Regulatory model	Description / Sub-options
Regulatory model 9a	Price benchmarking
Regulatory model 9b	LRIC (Long Run Incremental Costs)
Regulatory model 9c	"Lighter touch" regulation

Source: Working paper on regulatory models CAP 3195. Note: HAL stands for Heathrow Airport Limited

Review of case studies

2.4 Case studies of comparable airport expansion and infrastructure delivery programmes are used, where relevant, to inform the review of regulatory models. These case studies provide contextual evidence on how similar delivery, ownership and operational arrangements have functioned in practice, including the management of interfaces, cost control and service quality.

2.5 The case studies illustrate specific mechanisms, risks or governance arrangements associated with particular regulatory models. They are not treated by the CAA as direct analogues for Heathrow, given the unique scale, operational complexity and regulatory context of Heathrow Airport.

2.6 The table below summarises the case studies referenced in the CAA's consultation document (CAP 3195) and provides an initial assessment of their relevance to the corresponding regulatory models. The review focuses on the extent to which the case studies provide useful insights into delivery structures, governance arrangements and risk allocation, rather than on outcomes or performance.

Table 2.2: Review of the Case Studies used in the CAA consultation document CAP 3195

Regulatory model	Case studies provided by CAA	Review of the case studies
Regulatory model 1a	NA	NA
Regulatory model 1b	National Energy System Operator	The National Energy System Operator (NESO) became operational in 2024, following a multi-year implementation process. This included the legal separation of the system operator function and transfer of ownership, which followed earlier preparatory work on price control, licensing and organisational arrangements. NESO is a state-owned entity and is regulated by Ofgem. We assess that the NESO case is a suitable reference for stablishing a comparison in terms of the timescales that would be required to develop and implement a similar entity and governance for the strategic design and coordination of the capacity expansion at Heathrow. We also note that the creation of NESO was not legally challenged by stakeholders, and their concerns were channelled through the extensive consultation process. HAL would have the ability to legally challenge the creation of a similar entity, particularly given its recent

Regulatory model	Case studies provided by CAA	Review of the case studies
		precedent in appealing the CAA price determination for H7. Another variant of the proposed Regulatory model 1b is to provide an internal (rather than external) separation of the planning functions within HAL.
Regulatory model 2	Thames Tideway Tunnel	The Water Industry Regulations 2013 created a regime allowing Ofwat or the Secretary of State to designate a project as a "specified infrastructure project." In 2015, Ofwat awarded a Project Licence to design, build, finance, operate and maintain the Thames Tideway Tunnel (TTT). Ofwat regulates TTT under a bespoke framework that sets allowed revenues for the Infrastructure Provider, establishes performance incentives, and protects customer interests during construction and operation. This regime includes the protection of the licence holder to extreme cost overruns exposure. In the case of Heathrow's expansion, this type of regulatory protection could help to raise debt at a lower cost. Another relevant characteristic of the TTT regulatory model is the determination by the regulator of certain elements of the building blocks for a period longer than the regular 5-year regulatory period, providing a higher degree of financial stability and predictability for investors and financers.
Regulatory model 3	NA	NA
Regulatory model 4a	NA	NA
Regulatory model 4b	Istanbul New Airport, La Guardia Airport, Newark Airport, Changi Airport, LHR T2&T5	The cases of Istanbul New Airport, La Guardia Airport, and Newark Airport, are all cases in which a public entity signs a long-term concession contract with a consortium of private companies for the construction and operation of the entire airport (in the case of Istanbul New Airport) or one of the terminal buildings of the airport (in the rest of the cases). We assess that these cases are closer to the Regulatory model 5b (Design, Build, Operate) rather than to this model, although it is important to note that in this concession contracts, the revenue risk is (almost) entirely with the concessionaire. The main reason for the grantors of these projects to design these types of concessions is to avoid deploying capital and to transfer all design, construction and operation risks to a third party. JFK, operated by the Port Authority of New York and New Jersey, like Newark and La Guardia, also grants concession contracts for the development and operation (with revenue risk) to third parties. Changi Airport is operated by a public entity which is fully owned by the Government. Changi Airport outsources the design and construction of large infrastructure, in a very similar way to HAL.

Regulatory model	Case studies provided by CAA	Review of the case studies
		HAL develops different procurement processes depending on the complexity and scale of the project or projects that needs to design and build. HAL's procurement strategy for the expansion of the airport is different from the previous large-scale developments, as it involves multiple off-site logistics and construction locations.
Regulatory model 5a	UK Rail franchises	We assess that the case of the UK Rail franchises is a suitable example of a management contract. Closer examples of management contracts are the contracts that HAL has with third-party companies for the operation of the car parks, the security search, and the air traffic control. Examples of management contracts for the operation of an entire airport terminal building or entire airport can be found at small airports in the US, where generally the revenues generated by the operation are not sufficient to cover the costs.
Regulatory model 5b	Ofwat - Direct Procurement for Customers	The case of the Direct Procurement for Customers only includes one project that has gone through this model, and there is no assessment on the success of the model. As described under the Regulatory model 4b, there are multiple examples of airports and airport terminals that have been developed under a Design, Build and Operate model, with the important feature that the revenue risk is with the concessionaire, i.e. is not a management contract for the operation.
Regulatory model 6	Ofgem - Offshore Transmission Owners	The case of the Offshore Transmission assets is driven by a regulatory requirement which states the need to separate the ownership of energy transmission and generation assets. The situation of HAL does not seem to require such complexity, and the financing of the construction of the infrastructure by another party might not be as efficient as in the case of the Offshore Transmission assets, where the energy generators have the financial strength to undertake the investment.
Regulatory model 7a	Ofgem - CATO (to be launched in 2026)	The case of the Competitively Appointed Transmission Owners (CATO) delivery model developed by Ofgem will be launched in 2026 and, therefore, no results can be extracted yet from the example. A similar arrangement could be designed for HAL, where the development of a new terminal complies with the key requirements stablished in the CATO model: new, separable and significant asset. Important consideration should be put in assessing the complexity of having a double regulatory framework; one for the new asset and the other for HAL.
Regulatory model 7b	JFK, Hong Kong Airport cargo	The case of JFK's terminal competition is a unique situation worldwide, in which private operators (airlines in

Regulatory model	Case studies provided by CAA	Review of the case studies
		many cases) compete to attract airlines to their terminal. The Port Authority of New York and New Jersey (PANYNJ) establishes long-term concession agreements with these private companies for the design, build and operation of a terminal building. The operators have freedom to set the level of the terminal charges, and they compete on price and quality of the infrastructure and services to attract airlines to their terminal. The PANYNJ operates the airfield, and charges airlines for the air traffic movement activities. As the CAA correctly notes, the nuance of Heathrow Airport is that HAL, in a similar scenario, would be the airfield operator and also a terminal operator, creating the need to define a framework in which the allocation of costs (and charges) between the airfield and the terminal activities would be critical to provide a level playing field for competition. In addition, PANYNJ provides a useful example of how a multi-operator airport model can be supported by common system-wide requirements. The PANYNJ Airport Rules and Regulations apply across all terminals in JFK and include customer service standards as applicable operational requirements. In parallel, PANYNJ's Customer Experience Performance and Standards Manual provides a framework for terminal operators' service delivery standards and performance monitoring. This suggests that, in a multi-operator environment, competition is supported by common operational and service quality requirements that establish a minimum service level across the airport.[1] The case of the Airport Authority of Hong Kong is similar to the PANYNJ terminal concession model but for cargo terminals. The airport owner and operator grants contracts to the cargo terminal operators (which are generally controlled or participated by an airline) to design, build and operate a cargo terminal, without regulating the level of charges that they set to third-party companies.
Regulatory model 8	NA	NA
Regulatory model 9a	Changi Airport	We assess that the case of Changi Airport does not exactly match the definition of Regulatory model 9a, as the price benchmarking is only a reference point that the regulator uses to determine airport charges, being the cost recovery and the return on capital invested the main factors for the charge's determination. As an example, the regulator has recently determined an increase in the

[1] THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY, AIRPORT RULES AND REGULATIONS Issued by: The Port Authority of NY & NJ Aviation Department Issue Date: January 1, 2025

Regulatory model	Case studies provided by CAA	Review of the case studies
		maximum airport charges of 21% (up to 2030) to account for the capital investment in infrastructure that needs to be undertaken in the coming years, setting the airport charges to levels above similar airports in the region. Brussels Airport is another example in which the regulator also uses airport charges benchmarking as a reference for the price determination, but the source of the airport charges is the outcome of the dual-till regulatory regime.
Regulatory model 9b	NA	NA
Regulatory model 9c	Gatwick	The case of Gatwick Airport matches the Regulatory model 9c, in which the CAA has defined a lighter touch regulation in which there is currently not a price determination that is imposed by the regulator. The regulator of the Australian airports have gone a step further in this category of regulatory model, by taking a passive role in the activities of the airports (including airport charges and service quality) and only intervening when their a claim from a stakeholder.

Source: Steer

2.7 The table below provides our assessment of the potential suitability of the case studies analysed above with respect to the different regulatory models. Some of the case studies are applicable to several regulatory models.

Table 2.3: Suitability of case studies with regulatory models

Case studies	Regulatory model 1a	Regulatory model 1b	Regulatory model 2	Regulatory model 3	Regulatory model 4a	Regulatory model 4b	Regulatory model 5a	Regulatory model 5b	Regulatory model 6	Regulatory model 7a	Regulatory model 7b	Regulatory model 8	Regulatory model 9a	Regulatory model 9b	Regulatory model 9c
National Energy System Operator		✓													
Thames Tideway Tunnel			✓	✓						✓	✓				
Istanbul New Airport								✓					✓		
La Guardia Airport, Newark Airport, JFK								✓			✓				✓
UK Rail franchises							✓								
Ofwat - Direct Procurement for Customers								✓							
Ofgem - Offshore Transmission Owners									✓						
Ofgem - CATO									✓	✓		✓			
Hong Kong Airport cargo								✓			✓				
Gatwick															✓

Source: Steer

Assessment criteria set out in CAP 3195

2.8 Chapter 3 of the CAA's Working Paper on regulatory models (CAP 3195) sets out a number of criteria against which alternative regulatory models may be assessed. These criteria are intended to support the CAA's consideration of whether different models are capable of delivering expansion in a manner that is feasible, efficient and consistent with the CAA's statutory duties.

2.9 The consultation document identifies criteria relating to, among other matters:

- the ability of the regulatory model to appropriately support the delivery of expansion,
- the implications of the model for the efficiency of capital and operating costs,
- service quality outcomes,
- regulatory complexity and proportionality, and
- broader considerations relating to the CAA's duties.

2.10 The criteria are framed at a high level and are accompanied by consultation questions intended to elicit stakeholder views.

Criteria addressed in this assessment

2.11 This report focuses on the technical assessment of regulatory models under the following criteria set out in CAP 3195:

- **Criterion A – Appropriate support for capacity expansion:** Whether the regulatory model is suitable to support the delivery of expansion and to avoid delay and disruption.
- **Criterion B – Costs:** Whether the regulatory model promotes efficiency and control of the costs of expansion, while delivering the benefits of expansion for consumers.
- **Criterion F – Service quality:** Whether the regulatory model promotes an appropriate level of service quality, including improvements where appropriate.

2.12 These criteria have been selected for detailed assessment in this commission as they relate directly to the technical implications of alternative regulatory models for the delivery and operation of Heathrow expansion.

2.13 In particular, the focus of our assessment is on the following areas relevant to the Criteria A, B and F:

- the operational feasibility and deliverability implications of alternative regulatory models in a live airport environment (Criterion A);
- the implications for capital and operating costs, cost control and risk allocation (Criterion B); and
- the potential impacts on service quality and passenger experience (Criterion F).

2.14 Other criteria set out in CAP 3195 are recognised but are not the primary focus of this technical assessment. Where relevant, they are referenced to provide context, but the detailed analysis in this report is structured around Criteria A, B and F.

Regulatory models and criteria in scope for detailed assessment

2.15 While we assess all of the regulatory models set out in CAP 3195, the depth of assessment undertaken in this report varies by model. The assessment focuses in particular on those regulatory models that would introduce material changes to delivery, ownership or operation arrangements, as these models raise more significant technical considerations in relation to operational feasibility, cost efficiency and service quality.

3 Methodology and Assessment Framework

Methodology

3.1 This chapter sets out the methodology adopted to assess the implications of alternative regulatory models for Heathrow expansion.

3.2 The first step has been the definition of the type of assets that each regulatory model applies to. We have labelled this classification as 'asset perimeters'. These reflect the distinction between existing and new assets, and asset type by function.

3.3 Subsequently, the assessment framework has been developed to provide a structured and transparent basis for comparing regulatory models against the criteria set out in Chapter 3 of CAP 3195. These criteria are framed at a high level and supported by consultation questions. To enable a technically robust comparison of regulatory models, for each criterion, we have:

- defined subcriteria capturing distinct thematic areas; and
- individual metrics assessing specific, clearly bounded issues.

3.4 The metrics have been developed having regard to:

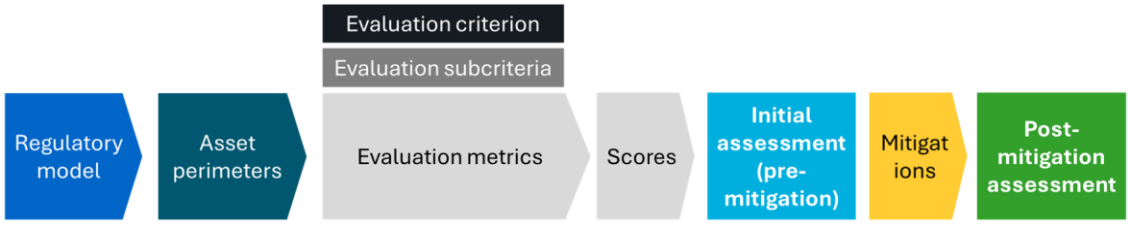
- the wording and intent of Criteria A, B and F in CAP 3195;
- the differences in issues under each criterion; and
- our technical experience of delivering and operating complex infrastructure within constrained, live environments.

3.5 Each regulatory model is then assessed against each metric within each criterion and subcriterion, resulting a numerical score. Each metric addresses one discrete dimension of impact. This avoids conflation of multiple effects within a single score and ensures traceability between qualitative reasoning and scoring outcomes.

3.6 The initial assessment is undertaken on a pre-mitigation basis (Initial assessment). Where relevant, potential mitigation measures are identified and assessed separately, providing the results on a post-mitigation basis.

3.7 The diagram below shows the key steps followed in the assessment process.

Figure 3.1: Assessment process



Source: Steer

3.8 It is important to note that the assessment process has been designed to be a collaborative engagement process to ensure we obtain a wide range of inputs for the assessment. This included working sessions with the CAA as well as internal workshops for the scoring.

Competitive landscape assumption

3.9 Our assessment is developed on the basis of Heathrow expansion and, for models involving competition between operators (particularly Models 7b and 8), the assumption that there will be opportunities for competition among different operators or infrastructure developers. Under these models, the creation of new capacity is assumed to introduce competitive dynamics, including differences in service quality, airline preference and operational performance across terminals.

3.10 For the purposes of this assessment, it is assumed that capacity will exceed demand for a period following expansion, enabling competition between operators. It is also assumed that airlines (with the exception of British Airways and its alliance partners, due to operational and network constraints) could have some ability to switch terminals over time. These assumptions are relevant to the assessment of competition-driven models and are not applied to models where airport operations remain integrated.

Criterion A – Appropriate support for capacity expansion: Subcriteria and metrics

3.11 Criterion A considers whether the regulatory model is suitable to support the delivery of expansion and avoid delay and disruption.

3.12 For the purposes of this assessment, Criterion A is structured into five sub criteria reflecting the operational, construction and integration challenges associated with delivering expansion at a live, capacity-constrained airport.

A1 – Operational control, safety and security

3.13 This subcriterion assesses whether Heathrow can continue to operate safely and coherently as a single system where third parties are involved. It is assessed through:

Table 3.1: Assessment metrics for subcriterion A1

Metric	Description
A1-M1 – Clarity and accountability of operational control, safety and security, and decision-making authority	Extent to which operational authority, including safety-critical decisions, is clearly defined and enforceable, and to which responsibility is clearly allocated across parties without gaps.
A1-M2 – Avoidance of conflict between construction activities and live operations	Extent to which the regulatory model avoids conflicts between construction activities and ongoing airport operations.

Source: Steer

A2 – Constructability, access and logistics

3.14 This subcriterion assesses whether assets can realistically be designed and built within Heathrow's physical, spatial and access constraints. It is assessed through:

Table 3.2: Assessment metrics for subcriterion A2

Metric	Description
A2-M1 – Enable physical constructability within a constrained airport environment	Extent to which construction activities are feasible given spatial, operational and infrastructure constraints.
A2-M2 – Provision of access and logistics for construction activities	Extent to which access routes, material flows and workforce movements avoid constraints or disruption.

Source: Steer

A3 – Delivery system complexity and schedule exposure

3.15 This subcriterion assesses exposure to delay arising from coordination, governance and programme structure. It is assessed through:

Table 3.3: Assessment metrics for subcriterion A3

Metric	Description
A3-M1 – Coordination complexity, dependency risk, and impact on schedule	Extent to which delivery relies on coordination between multiple interdependent parties, potentially increasing complexity, time, and risks including misalignment between design and construction responsibilities
A3-M2 – Contractual and governance complexity beyond regulatory change and exposure to delays.	Extent to which the model introduces additional contractual or governance interfaces beyond those inherent to the regulatory framework or could materially affect delivery timescales.

Source: Steer

A4 – System integration and end-to-end operational coherence during construction

3.16 This subcriterion assesses whether Heathrow continues to function as a single, coherent airport system during construction. It is assessed through:

Table 3.4: Assessment metrics for subcriterion A4

Metric	Description
A4-M1 – Clarity of accountability at operational system boundaries	Extent to which accountability is clear at interfaces between terminals, airfield and other systems.
A4-M2 – Smooth passenger journey and operational resilience	Extent to which passenger movements across assets operated by different parties have consistent and streamlined processes and capacity to face disruptions.

Source: Steer

A5 – System integration and end-to-end operational coherence post-construction

3.17 This subcriterion assesses whether Heathrow continues to function as a single, coherent airport system once expansion is operational. It is assessed through:

Table 3.5: Assessment metrics for subcriterion A5

Metric	Description
A5-M1 – Clarity of accountability at operational system boundaries	Extent to which accountability is clear at interfaces between terminals, airfield and other systems.
A5-M2 – Smooth passenger journey and operational resilience	Extent to which passenger movements across assets operated by different parties have consistent and streamlined processes and capacity to face disruptions.

Source: Steer

Criterion B – Costs: Subcriteria and metrics

3.18 Criterion B considers whether the regulatory model promotes efficiency and control of the costs of expansion while delivering benefits to consumers.

3.19 Criterion B is structured into three subcriteria reflecting baseline cost setting, cost escalation control during delivery, and long-term operating efficiency.

B1 – Identification of an efficient cost baseline

3.20 This subcriterion assesses whether the regulatory model gives the CAA real and enforceable capability to establish an efficient cost baseline prior to delivery. It is assessed through:

Table 3.6: Assessment metrics for subcriterion B1

Metric	Description
B1-M1 – Regulatory leverage to establish an efficient cost baseline	Extent to which the regulatory model provides the CAA with sufficient information and resources to credibly challenge or determine an efficient cost baseline prior to the commencement of delivery. In the absence of the CAA, market dynamics determine an efficient cost baseline.
B1-M2 – Ability to challenge scope definition and optimism bias	Extent to which the regulatory model supports robust challenge by stakeholders to scope definition, assumptions and optimism bias embedded in cost proposals.
B1-M3 – Ability to track and manage changes in cost baseline during construction	Extent to which the regulatory model supports changes in the baseline during construction due to changes in scope agreed with stakeholders.

Source: Steer

B2 – Incentives and protections against cost escalation

3.21 This subcriterion assesses whether incentives and protections within the regulatory model limit undue escalation of costs during delivery. It is assessed through:

Table 3.7: Assessment metrics for subcriterion B2

Metric	Description
B2-M1 – Appropriate cost risk allocation	Extent to which cost risk is clearly allocated and a clear process to manage disputes.
B2-M2 – Strength of incentives for cost control during delivery	Extent to which the model incentivises efficient delivery and discourages cost escalation.
B2-M3 – Protection of consumers from exposure to cost overruns	Extent to which consumers are protected from bearing undue cost overruns arising during delivery.

Source: Steer

B3 – Long-term operating efficiency

3.22 This subcriterion assesses whether the regulatory model promotes efficient operation and cost control once expansion is complete. It is assessed through:

Table 3.8: Assessment metrics for subcriterion B3

Metric	Description
B3-M1 – Limited exposure to increased coordination and interface costs	Extent to which ongoing coordination across multiple parties increases operating costs.

Metric	Description
B3-M2 – Flexibility of operating cost structures over time	Extent to which operating arrangements allow adaptation to changing demand, technology or regulation.
B3-M3 – Incentives for sustained operational efficiency	Extent to which the model promotes efficiency over the long term rather than only short-term cost reduction.

Source: Steer

Criterion F – Service quality: Subcriteria and metrics

3.23 Criterion F considers whether the regulatory model promotes an appropriate level of service quality, including improvement where appropriate.

3.24 Criterion F is structured into two subcriteria reflecting accountability, passenger journey coherence, resilience, and ongoing improvement in service quality.

F1 – Accountability, coherence and resilience for service quality

3.25 Whether responsibility, coherence and resilience for service quality outcomes are properly managed.

Table 3.9: Assessment metrics for subcriterion F1

Metric	Description
F1-M1 – Clarity of accountability for service quality outcomes	Extent to which responsibility for service quality outcomes is clearly allocated across parties.
F1-M2 – Coherence of passenger processes across assets and services	Extent to which passenger processes remain consistent across assets and services potentially operated by different parties.
F1-M3 – Ability to manage connections and irregular operations across assets and services	Extent to which passenger and baggage connections, disruptions and irregular operations can be managed coherently.

Source: Steer

F2 – Service quality improvements

3.26 Whether the regulatory model supports coordinated, ongoing improvement in service quality.

Table 3.10: Assessment metrics for subcriterion F2

Metric	Description
F2-M1 – Ability to coordinate service quality improvements across assets and services	Extent to which service improvements can be planned and delivered coherently across the airport.

Metric	Description
F2-M2 – Incentives for continuous improvement in passenger experience	Extent to which the model encourages innovation and investment in service quality beyond minimum standards.

Source: Steer

Scoring approach

3.27 A single qualitative scoring scale is applied consistently across all metrics under Criteria A, B and F.

3.28 Scores reflect the pre-mitigation impact of each regulatory model relative to a baseline arrangement.

3.29 The scoring scale is defined as shown in the following table:

Table 3.11: Scoring mechanism for the assessment framework

Score	Description
-3	Very significant adverse impact
-2	Significant adverse impact
-1	Minor adverse impact
0	Neutral / broadly comparable to baseline / status quo
1	Minor beneficial impact
2	Significant beneficial impact
3	Very significant beneficial impact

Source: Steer

3.30 Scores are intended to support structured comparison and transparency. They are not mechanically aggregated to produce an overall ranking.

3.31 For those metrics that are financially oriented (e.g. construction cost), we have also applied the scoring mechanism below to the extent possible. The positive scoring signals an efficiency or a reduction in costs (opex or capex).

Table 3.12: Scoring mechanism for the assessment framework – Financial impact

Score	Description
-3	Higher than 20%
-2	10% to 20%
-1	0% to 10%
0	No financial impact versus baseline / status quo
1	0% to -10%
2	-10% to -20%
3	Larger reduction than -20%

Source: Steer

Mitigation approach

3.32 In addition to the pre-mitigation assessment, the framework allows for the identification and qualitative assessment of potential mitigation measures. The mitigations should be interpreted as enhancements in general, and these could be applied to scores that are already positive in the pre-mitigation assessment.

3.33 Mitigation effectiveness is assessed using a separate qualitative scale ranging from:

Table 3.13: Mitigation Scoring mechanism for the assessment framework

Score	Description
0	No credible mitigation identified. The risk or adverse impact remains largely unchanged post-mitigation.
1	Very limited mitigation. Mitigation measures are weak, unproven or highly uncertain, resulting in only marginal reduction in exposure.
2	Limited mitigation. Some reduction in exposure is expected, but material risks remain due to implementation, governance or behavioural constraints.
3	Moderate mitigation. Mitigation measures are plausible and would reduce exposure to a degree but rely on effective coordination and ongoing oversight.
4	Good mitigation. Mitigation measures are well-defined and credible, and would materially reduce exposure, although some residual risk remains.
5	Strong mitigation. Mitigation measures are robust, enforceable and likely to reduce exposure to a low level if implemented effectively.
6	Very strong mitigation. Mitigation measures are comprehensive and structurally embedded, effectively addressing the identified exposure.

Source: Steer

3.34 The assessment is undertaken in two stages. First, each metric is scored on a pre-mitigation basis, reflecting the impact of the regulatory model prior to the application of mitigation measures. Second, where relevant, mitigation measures are identified and assessed for their effectiveness. A post-mitigation score is then assigned for each metric to reflect the expected residual impact once mitigation measures are assumed to be implemented.

3.35 Mitigation effectiveness is assessed using the 0 to 6 scale described above. This mitigation score is used to inform the adjustment from the pre-mitigation score to a post-mitigation score, based on professional judgement regarding the extent to which the proposed measures reduce the identified exposure. Post-mitigation scores remain on the same -3 to +3 scale and are capped at -3 and +3 to ensure consistency and comparability across metrics and models.

3.36 The assessment records, for each metric, the pre-mitigation score, the mitigation measures considered, the mitigation effectiveness score, and the resulting post-mitigation score. The rationale for the post-mitigation score is described narratively to ensure transparency and traceability.

4 Assessment and results

4.1 In this chapter we provide our assessment of the regulatory models according to the metrics, scoring framework, and mitigation framework described in the previous chapter. The assessment is first undertaken assuming no mitigation factors (Initial assessment), and afterwards we introduce the potential mitigations, and we present the resulting assessment post mitigations.

4.2 For the assessment of the regulatory models, we define the type of infrastructure assets that we consider that each regulatory model applies to, which we name 'asset perimeters'. There are cases in which we undertake different assessments of the same regulatory model depending on the type of asset it is referenced to.

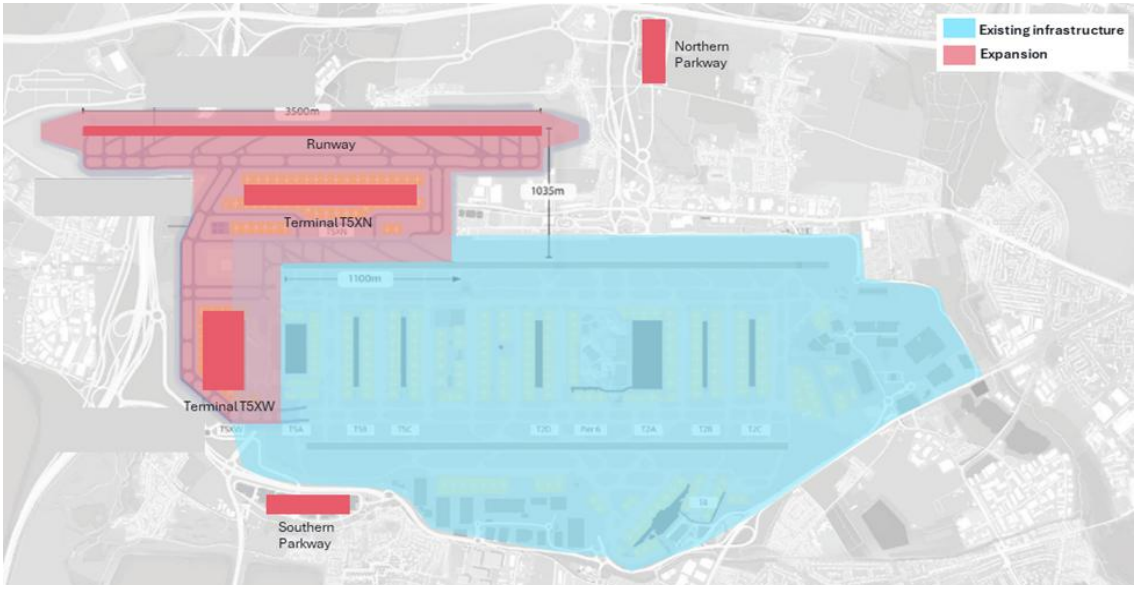
4.3 The results of the assessment are presented assuming that all metrics within a criterion have the same weight. We have undertaken a sensitivity analysis to understand how different weightings might change the results.

Asset perimeters

4.4 We have created two types of asset classifications; the first differentiates existing infrastructure and new infrastructure related to expansion, and the second separates the assets in airfield, terminal, and other assets (e.g. car parks).

4.5 The map below shows the footprint of Heathrow's existing infrastructure and the future expansion (and key assets) according to HAL's proposed scheme (2025).

Figure 4.1: Heathrow's existing infrastructure and new infrastructure related to expansion (illustrative)



Source: HAL, Steer

4.6 In the table below we summarise our assessment of the type of assets that are applicable to each regulatory model. In general, most of the regulatory models could be applied to all types of assets. We assess that there are certain incompatibilities, such as the possibility of having two operators of the airfield, which will imply duplication of resources to ensure safety levels and, potentially, a decrease in the efficiency and resilience of the operations. Likewise, the operation of the airfield should not be outsourced to a third party because is the core activity of the operating licence for an airport.

Table 4.1: Asset perimeters

Regulatory model	Existing infrastructure	New infrastructure - Expansion	Airfield	Terminal	Other assets
Regulatory model 1a	✓	✓	✓	✓	✓
Regulatory model 1b	✓	✓	✓	✓	✓
Regulatory model 2	✓	✓	✓	✓	✓
Regulatory model 3	Not applicable	✓	✓	✓	✓
Regulatory model 4a	✓	✓	✓	✓	✓
Regulatory model 4b	✓	✓	✓	✓	✓
Regulatory model 5a	✓	✓	Airfield operation should not split nor outsource	✓	✓
Regulatory model 5b	✓	✓		✓	✓
Regulatory model 6	✓	✓	✓	✓	✓
Regulatory model 7a	Not applicable	✓	Airfield operation should not split nor transfer	✓	✓
Regulatory model 7b	Not applicable	✓		✓	Other assets cannot compete
Regulatory model 8	✓	Not applicable		✓	
Regulatory model 9a	✓	✓	✓	✓	✓
Regulatory model 9b	✓	✓	✓	✓	✓
Regulatory model 9c	✓	✓	✓	✓	✓

Source: Steer

Potential mitigations

4.84 We assess that some regulatory models could be enhanced by introducing additional elements, or mitigations, that will enable the models to counteract unintended negative consequences and to be more effective in achieving the objective that is pursued.

4.85 The list below captures the main mitigations that we have used for our assessment of the regulatory models. Some of these mitigations are also partially captured under a proposed regulatory model, implying that there is potential to combine several of the proposed regulatory models to design an enhanced model.

- Enhanced oversight by the CAA on construction planning, budgeting, procurement and delivery of projects.
- Governance for procurement and delivery of projects.
- Formalised coordination arrangements between HAL and third-party developers and operators.
- Binding airport system-wide safety governance and mandatory joint operational planning for all developers and operators.
- A central system operator with binding authority and mandatory interoperability standards for all developers and operators, including shared IT systems and joint crisis management protocols.
- Governance protocols and formalised coordination arrangements between planning and operational functions.
- Binding airport system-wide service quality requirements for all developers and operators.
- Technical advisor to the CAA to enable further control and scrutiny of infrastructure development and maintenance.
- Performance-linked incentive mechanisms for construction delivery.
- Performance-linked incentive mechanisms for service levels.
- Appropriate risk allocation, cost control, and operating efficiency incentives mechanisms with third-party developers and operators.

Results of the assessment

4.86 The evaluation and scoring of each regulatory model are captured in Appendix B of this report. It follows the methodology set out in the previous chapter with an initial assessment, the proposed mitigations and the final assessment. This section provides the summary of the results. ass assessment. The table below captures the top five best performing regulatory models with positive values and the worst performing five with negative values. We are only including those regulatory models with total scores higher than 0.5 or lower than -0.5. The models with total scores between -0.5 and 0.5 are considered to be neutral to the current status quo.

Table 4.2: Post-mitigation assessment - Top five positive best performing and bottom five worst performing negative scores

	Criterion A	Criterion B	Criterion F
Positive scores			
Best performing 1	5b: Design, Build and Operate	7b: Direct competition for airport operation services	2: Targeted adjustments to the existing incentive regime
Best performing 2	1a: Changes to capex governance process 2: Targeted adjustments to the existing incentive regime	7a: Wholesale supplier model – Terminals and Other	1a: Changes to capex governance process
Best performing 3			NA
Best performing 4	NA	5b: Design, Build, Operate	NA
Best performing 5	NA	4b: Mandate Design and Build contract	NA
Negative scores			
Worst performing 1	7b: Direct competition for airport operation services	9a: Price benchmarking 9c: Lighter touch regulation	NA
Worst performing 2	7a: Wholesale supplier model - Terminals		NA
Worst performing 3	NA	NA	NA
Worst performing 4	NA	NA	NA
Worst performing 5	NA	NA	NA

Source: Steer. Note: NA implies that there are no regulatory models for that category with a meaningful score.

Criterion A

4.88 Factoring the proposed mitigations, the main conclusions for Criterion A are the following:

- The regulatory models with a meaningful positive score under Criterion A are Design, Build and Operate (Model 5b), Changes to capex governance processes (Model 1a), and Targeted adjustments to the existing incentive regime (Model 2). This indicates that, with appropriate mitigations, these models could provide some improvement relative to the current integrated structure in supporting delivery of expansion and reducing exposure to delay and disruption.
- Design, Build and Operate (Model 5b) has the highest score under Criterion A, reflecting the potential benefits of stronger delivery governance and closer alignment between delivery and operational outcomes.
- Regulatory models involving long-term independent ownership and operation of assets, namely Direct competition for airport operation services (Model 7b) and

Wholesale supplier model (Model 7a – Terminals), continue to score negatively under Criterion A even after mitigation. While mitigation measures reduce some coordination and governance risks, structural fragmentation and increased operational interfaces remain material risk drivers.

- All other models are assessed as broadly neutral post-mitigation.

Criterion B

4.89 Factoring the proposed mitigations, the main conclusions for Criterion B are the following:

- The regulatory models that most strongly promote efficiency and control of expansion costs after mitigation (in order of relative impact) are:
  - Direct competition for airport operation services (Model 7b),
  - Wholesale supplier model (Model 7a – Terminals and Other),
  - Design, Build and Operate (Model 5b), and
  - Mandate Design and Build contract (Model 4b).
- These models benefit from competitive pressure at the tender stage or at both the tender stage and the development (and operation if applicable) stage, defined commercial structures, and/or stronger risk allocation mechanisms following mitigation. However, for Models 5b, 7a and 7b, these benefits are partly offset by increased coordination and interface costs.
- Other models with a meaningful positive score are: Changes to capex governance processes (Model 1a), Enhanced scrutiny of HAL's approach to procurement (Model 4a), and Targeted adjustments to the existing incentive regime (Model 2).
- Price benchmarking (Model 9a) and "Lighter touch" regulation (Model 9c) are assessed as having meaningful negative scores under Criterion B after mitigation. This reflects weaker regulatory leverage to establish and challenge cost baselines, reduced ability to track cost changes during construction, and weaker protection against cost escalation. In these models, the potential benefits of reduced regulatory intervention are outweighed by the risk that the operator does not provide the same level of value for money to consumers in developing and maintaining the infrastructure and, therefore, not acting in the interest of the consumers.
- All other models are assessed as broadly neutral under Criterion B after mitigation.

Criterion F

4.90 Factoring the proposed mitigations, the main conclusions for Criterion F are the following:

- The regulatory models with a meaningful positive score under Criterion F are Targeted adjustments to the existing incentive regime (Model 2) and Changes to capex governance processes (Model 1a). This indicates that improvements to incentives and governance within the existing framework are the clearest routes to promoting service quality outcomes after mitigation.
- Models involving third-party operation of assets, initially present negative scores under this criterion, but remain within the neutral range after applying mitigations. This reflects that, while competitive or performance-based incentives may support improvement within individual areas or assets, they do not by themselves guarantee coherent passenger outcomes across the airport as a whole. The residual risk is that service quality improvements become asset-specific rather than system-wide,

particularly where passengers, baggage, connections and irregular operations depend on coordination between multiple operators.

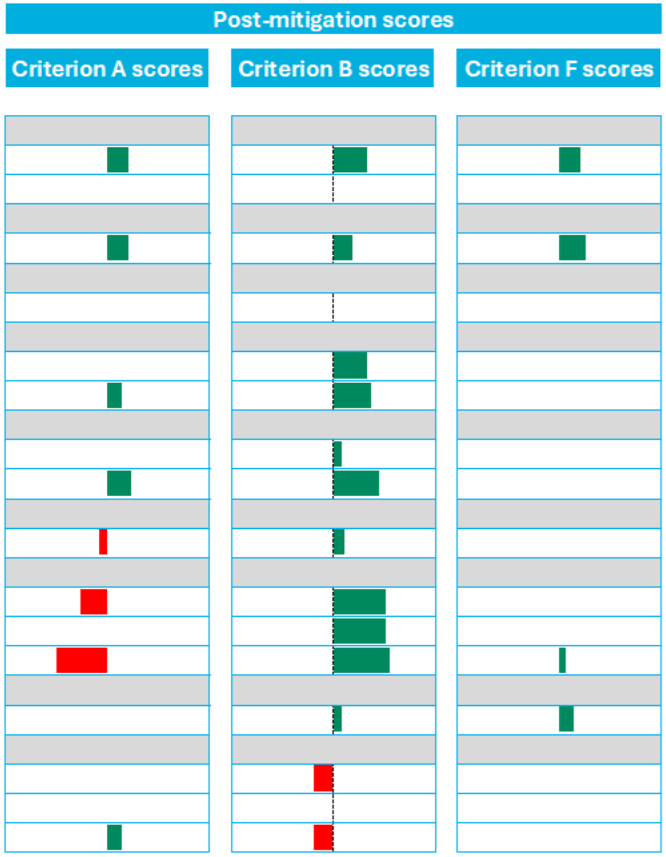
- There are no regulatory models with a meaningful negative score under Criterion F after mitigation.

4.91 Further detail of the results is reflected in the following chart, and in the table below.

4.92 The choice of a new regulatory model ultimately requires balancing multiple factors and assessing the potential risks and opportunities that it may offer compared to the status quo. **The findings of this assessment indicate that no single model dominates across all criteria, but Changes to capex governance processes (Model 1a) and Targeted adjustments to the existing incentive regime (Model 2) have positive scores across the three criteria.**

Figure 4.2: Summary results by regulatory model

Regulatory model	Description / Sub-options	Asset perimeter	Post-mitigation scores: Criterion A scores	Criterion B scores	Criterion F scores
Regulatory model 1	**Changes to the current capex governance framework**				
Regulatory model 1a	Changes to capex governance processes	All asset perimeters			
Regulatory model 1b	Separating HAL's system planning function from its operational function	All asset perimeters			
Regulatory model 2	**Targeted adjustments to the existing incentive regime**				
Regulatory model 2	Targeted adjustments to the existing incentive regime	All asset perimeters			
Regulatory model 3	**Long-term regulatory framework for expansion**				
Regulatory model 3	Long-term regulatory framework for expansion	Expansion			
Regulatory model 4	**CAA oversight/mandate of procurement**				
Regulatory model 4a	Enhanced scrutiny of HAL's approach to procurement	All asset perimeters			
Regulatory model 4b	Mandate Design and Build contract	All asset perimeters			
Regulatory model 5	**Contract for delivery and operation**				
Regulatory model 5a	Operation (management contract)	Excludes airfield			
Regulatory model 5b	Design, Build, Operate	Excludes airfield			
Regulatory model 6	**Third party builds assets, then transfers ownership to HAL**				
Regulatory model 6	Third party builds assets, then transfers ownership to HAL	All asset perimeters			
Regulatory model 7	**Third party continues to own and operate assets**				
Regulatory model 7a	Wholesale supplier model	Terminals			
Regulatory model 7a	Wholesale supplier model	Excluding terminals			
Regulatory model 7b	Direct competition for airport operation services	Terminals			
Regulatory model 8	**Transfer of ownership and operation of an existing asset**				
Regulatory model 8	Transfer of ownership and operation of an existing asset	Terminals			
Regulatory model 9	**New frameworks for setting airport charges**				
Regulatory model 9a	Price benchmarking	All asset perimeters			
Regulatory model 9b	LRIC	All asset perimeters			
Regulatory model 9c	"Lighter touch" regulation	All asset perimeters			



Source: Steer

Table 4.3: Scoring table by regulatory model

Regulatory model	Description / Sub-options	Asset perimeter	Criterion A. Appropriate support for capacity expansion – Post-mitigation Assessment											Criterion B. Costs – Post-mitigation Assessment										Criterion F. Service quality – Post-mitigation Assessment					
			A1-M1 – Clarity and accountability of operational	A1-M2 – Avoidance of conflict between construction	A2-M1 – Enable physical constructability within a	A2-M2 – Provision of access and logistics for construction	A3-M1 – Coordination complexity, dependency risk,	A3-M2 – Contractual and governance complexity	A4-M1 – Clarity of accountability at operational	A4-M2 – Smooth passenger journey and operational	A5-M1 – Clarity of accountability at operational	A5-M2 – Smooth passenger journey and operational	TOTAL	B1-M1 – Regulatory leverage to establish an efficient cost	B1-M2 – Ability to challenge scope definition and optimism	B1-M3 – Ability to track and manage changes in cost	B2-M1 – Appropriate cost risk allocation	B2-M2 – Strength of incentives for cost control during delivery	B2-M3 – Protection of consumers from exposure to	B3-M1 – Limited exposure to increased coordination and	B3-M2 – Flexibility of operating cost structures over time	B3-M3 – Incentives for sustained operational	TOTAL	F1-M1 – Clarity of accountability for service	F1-M2 – Coherence of passenger processes across	F1-M3 – Ability to manage connections and irregular	F2-M1 – Ability to coordinate service quality improvements	F2-M2 – Incentives for continuous improvement in	TOTAL
Regulatory model 1	**Changes to the current capex governance framework**																													
Regulatory model 1a	Changes to capex governance processes	All asset	1	1	0	0	1	1	1	0	1	0	**0.6**	3	3	3	0	0	0	0	0	0	**1.0**	1	0	0	1	1	**0.6**
Regulatory model 1b	Separating HAL's system planning function from its operational	All asset	0	0	0	0	0	0	0	0	0	0	**0.0**	0	0	0	0	0	0	0	0	0	**0.0**	0	0	0	0	0	**0.0**
Regulatory model 2	**Targeted adjustments to the existing incentive regime**																													
Regulatory model 2	Targeted adjustments to the existing incentive regime	All asset	0	0	0	0	2	2	0	1	0	1	**0.6**	0	0	0	0	3	2	0	0	0	**0.6**	0	0	0	2	2	**0.8**
Regulatory model 3	**Long-term regulatory framework for expansion**																													
Regulatory model 3	Long-term regulatory framework for expansion	Expansion	0	0	0	0	0	0	0	0	0	0	**0.0**	0	0	0	0	0	0	0	0	0	**0.0**	0	0	0	0	0	**0.0**
Regulatory model 4	**CAA oversight/mandate of procurement**																													
Regulatory model 4a	Enhanced scrutiny of HAL's approach to procurement	All asset	0	0	0	0	0	0	0	0	0	0	**0.0**	2	2	2	1	0	2	0	0	0	**1.0**	0	0	0	0	0	**0.0**
Regulatory model 4b	Mandate Design and Build contract	All asset	0	0	0	0	2	2	0	0	0	0	**0.4**	2	0	0	3	3	2	0	0	0	**1.1**	0	0	0	0	0	**0.0**
Regulatory model 5	**Contract for delivery and operation**																													
Regulatory model 5a	Operation (management contract)	Excludes airfield	0	0	0	0	0	0	0	0	0	0	**0.0**	0	0	0	0	0	0	0	0	2	**0.2**	0	0	0	0	0	**0.0**
Regulatory model 5b	Design, Build, Operate	Excludes airfield	0	0	0	0	2	2	0	1	1	1	**0.7**	2	0	0	3	3	2	0	0	2	**1.3**	0	0	0	0	0	**0.0**
Regulatory model 6	**Third party builds assets, then transfers ownership to HAL**																													
Regulatory model 6	Third party builds assets, then transfers ownership to HAL	All asset	0	0	0	0	-1	-1	0	0	0	0	**-0.2**	0	0	0	1	1	1	0	0	0	**0.3**	0	0	0	0	0	**0.0**
Regulatory model 7	**Third party continues to own and operate assets**																													
Regulatory model 7a	Wholesale supplier model	Terminals	-1	-1	0	0	-1	-1	-1	-1	-1	-1	**-0.8**	2	2	2	3	3	2	0	0	0	**1.6**	0	0	0	0	0	**0.0**
Regulatory model 7a	Wholesale supplier model	Excludes	0	0	0	0	0	0	0	0	0	0	**0.0**	2	2	2	3	3	2	0	0	0	**1.6**	0	0	0	0	0	**0.0**
Regulatory model 7b	Direct competition for airport operation services	Terminals	-2	-1	0	0	-2	-2	-2	-2	-2	-2	**-1.5**	3	2	2	2	2	2	-2	2	2	**1.7**	0	0	0	-1	2	**0.2**
Regulatory model 8	**Transfer of ownership and operation of an existing asset**																													
Regulatory model 8	Transfer of ownership and operation of an existing asset	Terminals	0	0	0	0	0	0	0	0	0	0	**0.0**	0	0	0	0	0	0	-2	2	2	**0.2**	0	0	0	0	2	**0.4**
Regulatory model 9	**New frameworks for setting airport charges**																													
Regulatory model 9a	Price benchmarking	All asset	0	0	0	0	0	0	0	0	0	0	**0.0**	-1	-1	-1	-1	-1	0	0	0	0	**-0.6**	0	0	0	0	0	**0.0**
Regulatory model 9b	LRIC	All asset	0	0	0	0	0	0	0	0	0	0	**0.0**	0	0	0	0	0	0	0	0	0	**0.0**	0	0	0	0	0	**0.0**
Regulatory model 9c	"Lighter touch" regulation	All asset	0	0	0	0	2	2	0	0	0	0	**0.4**	-1	-1	-1	-1	-1	0	0	0	0	**-0.6**	0	0	0	0	0	**0.0**

Source: Steer

5 Next steps

Overall approach to the next stage

5.1 This report provides a structured comparative assessment of the regulatory models set out in CAP 3195, based on the criteria currently in scope. The detailed scoring presented in this report is intended to support the CAA's forthcoming evaluation and consultation process.

5.2 Consistent with the CAA's stated timeline in CAP 3195, the next stages are expected to comprise:

- A consultation on the CAA's evaluation of different regulatory models, including identification of a short-list of possible regulatory models to be applied at Heathrow Airport (expected Spring 2026); and
- A final report setting out the CAA's recommendations on the regulatory model and the next steps for implementation (expected Summer 2026).

5.3 In this context, the findings of this assessment suggest that further work should focus on a shorter list of regulatory models that demonstrate the most promising balance across delivery, cost efficiency and service quality, while managing structural and coordination risks.

Recommendations for a more detailed assessment on a shorter list of regulatory models

5.4 Based on the comparative assessment undertaken, the next stage could usefully focus on a smaller number of models that:

- Demonstrate a balanced performance across Criteria A, B and F post-mitigation;
- Do not introduce disproportionate structural fragmentation relative to the anticipated benefits for the consumers; and
- Can be implemented within the statutory and regulatory framework applicable to Heathrow expansion in alignment with the CAA duties.

5.5 The more detailed assessment phase should move beyond high-level comparative scoring and consider:

- Implementation feasibility, including transitional arrangements and sequencing;
- Governance design, including allocation of safety, security and operational accountability;
- Risk allocation, particularly in relation to delivery, interface management and cost overruns;

- Consumer impact, including implications for airport charges and service quality commitments;
- For those regulatory models that are predicated on a competitive environment, competition framework for tender processes, competition framework for traffic; and
- Regulatory complexity, including the CAA's monitoring and enforcement requirements.

5.6 This phase may also require further scenario testing to examine how shortlisted models perform under different demand, cost and delivery risk assumptions.

Information requirements

5.7 To support a more detailed evaluation of shortlisted regulatory models, further information may be required from the CAA, Heathrow Airport Limited and other stakeholders. This could include:

- Definition of the asset perimeter or type of asset subject to operate under a new regulatory model;
- Plausible mitigations from a regulatory perspective;
- Information on expansion phasing, delivery interfaces, and potential construction ringfencing;
- Optioneering on procurement strategy and risk allocation for assets subject to operate under a new regulatory model;
- Proposed contractual structures, including risk-sharing and incentive mechanisms with third parties; and
- Proposed minimum safety and operational accountability arrangements under models involving third-party asset delivery or operation.

6 Appendix A: Description of the regulatory models

6.1 Below we provide a brief description of each regulatory model set out in the CAA's Working Paper on regulatory models (CAP 3195). The descriptions summarise the key features of each model, including the extent to which they imply changes to governance, procurement, delivery, ownership or operation arrangements. The descriptions are intended to provide context for the assessment that is included in this report and do not represent an evaluation of the merits of any model.

Regulatory model 1a – Changes to capex governance processes

6.2 Regulatory model 1a focuses specifically on changes to capex governance processes. This may include enhanced scrutiny, revised approval processes or strengthened assurance mechanisms within the existing HAL's regulatory framework. Responsibility for system planning, delivery and operation would remain with HAL.

Regulatory model 1b – Separating HAL's system planning function from its operational function

6.3 Regulatory model 1b considers the separation of system planning functions from operational responsibilities. This separation could be implemented through the creation of a distinct planning entity or through internal separation within HAL. The intent of this model is to introduce greater independence in strategic planning and coordination of expansion, while operational responsibilities would continue to sit with HAL or another designated operator.

Regulatory model 2 – Targeted adjustments to the existing incentive regime

6.4 Regulatory model 2 considers targeted adjustments to the existing incentive regime applied to HAL. The model seeks to influence behaviour and outcomes through modified incentives related to cost efficiency, delivery performance or service quality, without introducing material changes to ownership, procurement or operational structures.

Regulatory model 3 – Long-term regulatory framework for expansion

6.5 Regulatory model 3 considers the introduction of a long-term regulatory framework tailored to the delivery of expansion. The objective of this model is to

provide greater regulatory certainty over an extended period, reflecting the long timescales associated with planning and delivering major airport infrastructure, while retaining the existing delivery and ownership structure.

Regulatory model 4a – Enhanced scrutiny of HAL's approach to procurement

6.6 Regulatory model 4a focuses on enhanced scrutiny of HAL's procurement approach. This may include increased regulatory oversight of procurement strategies, contract structures or supplier selection processes, while delivery and ownership responsibilities remain unchanged.

Regulatory model 4b – Mandate Design and Build contract

6.7 Regulatory model 4b considers mandating the use of a Design and Build contract for the delivery of expansion assets, but in a more consolidated and integrated manner than the way that HAL has done it in the past. Under this model, HAL would retain ownership and operational responsibility, while design and construction activities would be consolidated and undertaken by a contractor under a single integrated contract, to the extent practical and efficient.

Regulatory model 5a – Operation (management contract)

6.8 Regulatory model 5a involves the use of a management contract for the operation of assets. Under this model, ownership would remain with HAL, while operational activities would be undertaken by a third-party operator under contract. We understand that the third-party operator will not have revenue risk, and the contract could be structured as an availability payment or as a cost-plus margin type contract. In any scenario, it is expected that the contract will have financial penalties and bonuses associated with service levels.

Regulatory model 5b – Design, Build, Operate

6.9 Regulatory model 5b considers an integrated Design, Build and Operate arrangement, under which a third party would be responsible for designing, constructing and operating assets for a defined period. Ownership arrangements may vary depending on contract structure. We understand that the third-party operator will not have revenue risk, and the contract could be structured as an availability payment or as a cost-plus margin type contract. In any scenario, it is expected that the contract will have financial penalties and bonuses associated with the timely delivery of the infrastructure and will include service levels for the operation phase.

Regulatory model 6 – Third party builds assets, then transfers ownership to HAL

6.10 Regulatory model 6 considers an approach where a third party is responsible for the design and construction of expansion assets, with ownership transferred to HAL upon completion. Under this model, delivery responsibility is separated from long-term ownership and operation.

Regulatory model 7a – Wholesale supplier model

6.11 Regulatory model 7a considers a wholesale supplier arrangement, under which a third-party supplies airport services or facilities to the airport operator on a wholesale basis, while retaining ownership and operational control of the relevant assets. We understand that the model includes Design, Build and Operation of an asset or group of assets. This represents a change to the current integrated airport model and introduces additional interfaces between asset owners, operators and the regulator. The third party would operate under a regulatory framework within HAL's framework, which we assume that will include equivalent in terms of obligations, including service levels. In this model, HAL would pay the third party the charges that are determined by the regulator. Similarly to Model 5b (Design, Build, Operate), we understand that the third-party operator will not have revenue risk, and the revenues could be structured as an availability payment or as a cost-plus margin type contract.

Regulatory model 7b – Direct competition for airport operation services

6.12 Regulatory model 7b considers direct competition for airport development and operation. Under this model, multiple operators may compete to provide services and/or operate assets, subject to regulatory and contractual arrangements. We understand that the model includes Design, Build and Operation of an asset or group of assets, and that there would not be an economic regulatory framework for the third-party operator. This represents a more fundamental change to the current integrated airport model and introduces additional interfaces between asset owners, operators and the airport system. In contrast to model 7a, this model does not rely on a central economic regulatory framework and enables competition for demand.

Regulatory model 8 – Transfer of ownership and operation of an existing asset

6.13 Regulatory model 8 considers the transfer of ownership and operation of an existing airport asset from HAL to a third party. This model focuses on existing infrastructure rather than the delivery of new expansion assets.

Regulatory model 9a – Price benchmarking

6.14 Regulatory model 9a considers the use of price benchmarking as an input to the determination of airport charges. This model relates primarily to the economic regulation of airport charges rather than delivery or operational arrangements.

Regulatory model 9b – LRIC

6.15 Regulatory model 9b considers the use of long-run incremental cost (LRIC) approaches to inform the setting of airport charges. This model relates primarily to the economic regulation of airport charges rather than delivery or operational arrangements.

Regulatory model 9c – "Lighter touch" regulation

6.16 Regulatory model 9c considers a lighter-touch regulatory approach to airport charges, with reduced ex ante intervention by the regulator. This model relates primarily to the economic regulation of airport charges rather than delivery or operational arrangements.

7 Appendix B: Assessment of the regulatory models

7.1 In this appendix we provide our initial assessment of each regulatory model, potential mitigations to improve the impact of the changes associated to each regulatory model, and we undertake another assessment of the metrics providing an evaluation of the metrics within each subcriterion.

Criterion A – Appropriate support for capacity expansion

A1 – Operational control, safety and security

Initial Assessment

7.2 This subcriterion assesses whether Heathrow can continue to operate safely and coherently as a single system where third parties are involved. Our initial assessment is provided below.

Table 7.1: Initial assessment for subcriterion A1

Regulatory model	Evaluation and scoring
Regulatory model 1a	Changes to capex governance processes could improve clarity of operational accountability and reduce the risk of conflict between construction and live operations, by strengthening governance and assurance arrangements within HAL's existing framework. Responsibility for system planning, delivery and operation would remain with HAL. We therefore assess a minor beneficial impact (score +1 in A1-M1 and A1-M2).
Regulatory model 1b	Separating HAL's system planning function from its operational function does not change the allocation of operational control or safety-critical decision-making authority. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 2	We assess that targeted adjustments to the existing incentive regime will not impact the current status of this subcriterion, as operational structures and accountability arrangements would remain unchanged (score 0 in all metrics).
Regulatory model 3	A long-term regulatory framework for expansion does not change the allocation of operational control or safety accountability. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 4a	Enhanced scrutiny of HAL's procurement approach does not alter operational control arrangements, accountability structures or system interfaces. As

Regulatory model	Evaluation and scoring
	responsibilities remain within HAL's existing organisational framework, we assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 4b	Mandating the use of a Design and Build contract consolidates construction responsibility within a single contractual counterparty while HAL retains ownership and operational accountability. This integrated structure does not reduce clarity of operational control and may support clearer allocation of delivery responsibility. We therefore assess no material impact at pre-mitigation stage (score 0 in all metrics).
Regulatory model 5a	Under a management contract arrangement excluding the airfield, operational responsibility for defined terminal or landside assets is delegated to a third party, while HAL retains ownership and overarching system accountability. As the airfield remains outside of the scope and ultimate accountability remains clear, we assess no material impact (score 0 in all metrics).
Regulatory model 5b	Under a Design, Build and Operate arrangement excluding the airfield, delivery and operational responsibilities are consolidated within a single contractual counterparty under HAL oversight. Ultimate accountability remains with HAL. We therefore assess no material impact (score 0 in all metrics).
Regulatory model 6	Where a third party is responsible for design and construction prior to transferring ownership to HAL, temporary coordination risks arise during delivery. However, long-term operational accountability reverts to HAL. We therefore assess a minor adverse impact during delivery (score -1 in A1-M1 and -1 in A1-M2).
Regulatory model 7a	Where the wholesale supplier model applies to terminal assets, operational accountability is structurally divided between the asset owner/operator and the wider airport system. This reduces clarity of system-wide operational control and increases coordination risk. We therefore assess a significant adverse impact (score -2 in A1-M1 and A1-M2). Where the model excludes terminal assets, core operational control of the airport remains unified. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 7b	Direct competition introduces multiple independently governed operational systems within the airport. This materially reduces clarity of system-wide operational accountability and increases coordination risk between construction and live operations. We therefore assess a significant adverse impact on clarity of operational control and a very significant adverse impact on avoidance of conflict between construction and live operations (score -3 in A1-M1 and -2 in A1-M2).
Regulatory model 8	The transfer of ownership and operation of an existing terminal asset introduces a permanent operational boundary within the airport system. This reduces clarity of operational accountability at defined interfaces but does not materially increase construction conflict risk. We therefore assess a minor adverse impact (score -1 in A1-M1 and score 0 in A1-M2).
Regulatory model 9a	Price benchmarking relates to economic regulation and does not alter operational control arrangements. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 9b	A LRIC approach to airport charges does not alter operational control arrangements. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).

Regulatory model	Evaluation and scoring
Regulatory model 9c	A lighter-touch regulatory framework does not change operational control, safety accountability or decision-making authority. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).

Source: Steer

Mitigation measures and post-mitigation scoring

7.3 Our post-mitigation assessment is provided below.

Table 7.2: Mitigation and post-mitigation assessment for subcriterion A1

Regulatory model	Mitigation and scoring
Regulatory model 1a	No mitigations, hence, no changes in scores.
Regulatory model 1b	No mitigations, hence, no changes in scores.
Regulatory model 2	No mitigations, hence, no changes in scores.
Regulatory model 3	No mitigations, hence, no changes in scores.
Regulatory model 4a	No mitigations, hence, no changes in scores.
Regulatory model 4b	No mitigations, hence, no changes in scores.
Regulatory model 5a	No mitigations, hence, no changes in scores.
Regulatory model 5b	No mitigations, hence, no changes in scores.
Regulatory model 6	Enhanced oversight and formalised coordination arrangements between the delivery entity and HAL could partially mitigate risks to operational clarity and coordination (mitigation of +1 in A1-M1 and +1 in A1-M2 score 0 in A1-M1 and A1-M2).
Regulatory model 7a	Binding system-wide safety governance and mandatory joint operational planning could partially mitigate fragmentation risks (mitigation of +1 in A1-M1 and +1 in A1-M2 score -1 A1-M1 and -1 A1-M2). Excluding terminals: No mitigations, hence, no changes in scores.
Regulatory model 7b	A central system operator with binding authority and mandatory interoperability standards could partially mitigate risks to operational accountability and coordination between construction and live operations (mitigation of +1 in A1-M1 and A1-M2, score -2 in A1-M1 and score -1 in A1-M2).
Regulatory model 8	Formalised operational interface agreements could partially mitigate accountability risks (mitigation of +1 in A1-M1score 0 in A1-M1). No mitigation is applied to A1-M2.
Regulatory model 9a	No mitigations, hence, no changes in scores.
Regulatory model 9b	No mitigations, hence, no changes in scores.
Regulatory model 9c	No mitigations, hence, no changes in scores.

Source: Steer

A2 – Constructability, access and logistics

Initial Assessment

7.4 This subcriterion assesses whether assets can realistically be designed and built within Heathrow's physical, spatial and access constraints. Our initial assessment is provided below.

Table 7.3: Initial assessment for subcriterion A2

Regulatory model	Evaluation and scoring
Regulatory model 1a	Changes to capex governance processes do not alter the physical constraints of Heathrow's operating environment nor the arrangements for construction logistics. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 1b	Separating HAL's system planning function from its operational function does not change the physical constructability of assets within a constrained airport environment nor the practical arrangements for construction access and logistics. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 2	Targeted adjustments to the existing incentive regime do not alter delivery structures or site constraints. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 3	A long-term regulatory framework for expansion does not directly affect physical constructability or construction logistics arrangements. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 4a	Enhanced procurement scrutiny does not materially alter physical constructability constraints or access arrangements within the airport environment. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 4b	The use of a single integrated contractor does not materially alter physical constraints of the Heathrow environment. We therefore assess no material impact on constructability or logistics (score 0 in all metrics).
Regulatory model 5a	The management contract relates to operation rather than delivery and does not materially alter physical constructability or logistics arrangements. We therefore assess no material impact (score 0 in all metrics).
Regulatory model 5b	The integrated structure does not alter physical constraints of the airport environment. We therefore assess no material impact (score 0 in all metrics).
Regulatory model 6	Where a third party is responsible for design and construction prior to transferring ownership to HAL, physical constructability constraints remain unchanged. However, the co-existence of multiple accountable parties may marginally increase coordination challenges during construction. We therefore assess a minor adverse impact (score -1 in A2-M1 and A2-M2).
Regulatory model 7a	Where the wholesale supplier model applies to terminal assets, long-term separation between asset owner and airport operator may marginally increase delivery complexity within an already constrained airport environment. While physical constructability constraints remain unchanged, coordination of construction logistics across operational boundaries may be marginally more

Regulatory model	Evaluation and scoring
	complex. We therefore assess a minor adverse impact (score -1 in A2-M1 and A2-M2). Where this model excludes terminal assets, it does not materially alter physical constructability or construction logistics arrangements for expansion assets. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 7b	Direct competition for airport development and operation introduces parallel delivery and operational structures. While physical constraints remain unchanged, coordination of construction logistics within a live operating airport environment becomes more complex due to multiple accountable parties. We therefore assess a minor adverse impact (score -1 in A2-M1 and A2-M2).
Regulatory model 8	The transfer of ownership and operation of an existing terminal asset does not alter physical constructability or the arrangements for construction logistics. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 9a	Price benchmarking relates to the economic regulation of airport charges and does not affect physical constructability or construction logistics. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 9b	A LRIC approach to setting airport charges does not alter delivery structures or site constraints. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 9c	A lighter-touch regulatory framework for airport charges does not change physical constructability or construction logistics arrangements. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).

Source: Steer

Mitigation measures and post-mitigation scoring

7.5 Our post-mitigation assessment is provided below.

Table 7.4: Mitigation and post-mitigation assessment for subcriterion A2

Regulatory model	Mitigation and scoring
Regulatory model 1a	No mitigations, hence, no changes in scores.
Regulatory model 1b	No mitigations, hence, no changes in scores.
Regulatory model 2	No mitigations, hence, no changes in scores.
Regulatory model 3	No mitigations, hence, no changes in scores.
Regulatory model 4a	No mitigations, hence, no changes in scores.
Regulatory model 4b	No mitigations, hence, no changes in scores.
Regulatory model 5a	No mitigations, hence, no changes in scores.
Regulatory model 5b	No mitigations, hence, no changes in scores.
Regulatory model 6	Enhanced oversight and structured coordination between the delivery entity and HAL could partially mitigate constructability

Regulatory model	Mitigation and scoring
	and logistics interface risks (mitigation of +1 in A2-M1 and A2-M2, score 0 in A2-M1 and score 0 in A2-M2).
Regulatory model 7a	Binding system-wide operational planning and regulated integration requirements could partially mitigate constructability and logistics risks (mitigation of +1 in A2-M1 and A2-M2, score 0 in A2-M1 and score 0 in A2-M2). Excluding terminals: No mitigations, hence, no changes in scores.
Regulatory model 7b	A central system operator with binding authority and mandatory interoperability standards could partially mitigate constructability and logistics interface risks (mitigation of +1 in A2-M1 and A2-M2, score 0 in A2-M1 and score 0 in A2-M2).
Regulatory model 8	No mitigations, hence, no changes in scores.
Regulatory model 9a	No mitigations, hence, no changes in scores.
Regulatory model 9b	No mitigations, hence, no changes in scores.
Regulatory model 9c	No mitigations, hence, no changes in scores.

Source: Steer

A3 – Delivery system complexity and schedule exposure

Initial Assessment

7.6 This subcriterion assesses exposure to delay arising from coordination, governance and programme structure. Our initial assessment is provided below.

Table 7.5: Initial assessment for subcriterion A3

Regulatory model	Evaluation and scoring
Regulatory model 1a	Changes to capex governance processes could improve delivery discipline and reduce coordination risk by strengthening governance and assurance arrangements within HAL's existing framework. We therefore assess a minor beneficial impact (score +1 in A3-M1 and A3-M2).
Regulatory model 1b	Separating HAL's system planning function from its operational function introduces an additional interface between planning and delivery functions. While this does not fundamentally change delivery responsibility, it may marginally increase coordination requirements and governance complexity, leading to potential delays in delivery. We therefore assess a minor adverse impact (score -1 in A3-M1 and A3-M2).
Regulatory model 2	Targeted adjustments to the existing incentive regime could support delivery performance and coordination by strengthening incentives linked to programme outcomes. We therefore assess a moderate beneficial impact (score +2 in A3-M1 and A3-M2).
Regulatory model 3	A long-term regulatory framework for expansion does not change the underlying delivery structure or introduce additional delivery interfaces. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 4a	An enhanced scrutiny strengthens governance oversight but introduces additional delivery interfaces and potentially delays in the schedule.

Regulatory model	Evaluation and scoring
	Organisational accountability remains unified under HAL. We therefore assess a minor adverse impact in one of the metrics (score -1 in A3-M1, score 0 in A3-M2).
Regulatory model 4b	The consolidation of design and construction responsibilities may reduce interface risk between contractors and improve delivery coordination. We therefore assess a minor beneficial impact (score +1 in A3-M1 and A3-M2).
Regulatory model 5a	As the management contract applies to operational activities and excludes the airfield, delivery coordination arrangements are not materially altered. We therefore assess no material impact (score 0 in all metrics).
Regulatory model 5b	The consolidation of design, build and operate responsibilities may improve alignment between delivery and operations and reduce coordination interfaces. We therefore assess a minor beneficial impact (score +1 in A3-M1 and A3-M2).
Regulatory model 6	Where a third party is responsible for design and construction prior to transferring ownership to HAL, additional delivery interfaces arise, including handover and integration arrangements. This increases coordination complexity and dependency risk during delivery. We therefore assess a significant adverse impact (score -2 in A3-M1 and A3-M2).
Regulatory model 7a	Where the wholesale supplier model applies to terminal assets, structural separation between asset owner/operator and the airport system introduces multiple interdependent delivery parties. This increases coordination complexity and governance exposure during delivery. We therefore assess a moderate adverse impact (score -2 in A3-M1 and A3-M2). Where this model excludes terminal assets, the core delivery structure remains unchanged. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 7b	Direct competition introduces parallel delivery structures and independent governance arrangements for comparable assets. This materially increases coordination complexity, dependency risk and exposure to delay. We therefore assess a very significant adverse impact (score -3 in A3-M1 and A3-M2).
Regulatory model 8	The transfer of ownership and operation of an existing asset does not materially alter the delivery structure for expansion assets. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 9a	Price benchmarking relates to economic regulation and does not alter delivery structures or introduce additional coordination interfaces. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 9b	A LRIC approach to setting airport charges does not alter delivery governance arrangements. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 9c	A lighter-touch regulatory framework could reduce regulatory process complexity and provide greater flexibility in delivery decision-making. We therefore assess a moderate beneficial impact on coordination and governance complexity (score +2 in A3-M1 and A3-M2).

Source: Steer

Mitigation measures and post-mitigation scoring

7.7 Our post-mitigation assessment is provided below.

Table 7.6: Mitigation and post-mitigation assessment for subcriterion A3

Regulatory model	Mitigation and scoring
Regulatory model 1a	No mitigations, hence, no changes in scores.
Regulatory model 1b	Clearer governance protocols and formalised coordination arrangements between planning and operational functions could partially mitigate additional coordination and governance complexity (mitigation of +1 in A3-M1 and A3-M2, score 0 in A3-M1 and A3-M2).
Regulatory model 2	No mitigations, hence, no changes in scores.
Regulatory model 3	No mitigations, hence, no changes in scores.
Regulatory model 4a	The support of a technical advisor to the CAA could provide some mitigation to the potential delays with appropriate technical skills (mitigation of +1 in A3-M1, score 0 in A3-M1 and A3-M2).
Regulatory model 4b	A specific governance framework could strengthen oversight and delivery coordination (mitigation of +1 in A3-M1 and A3-M2), resulting in a post-mitigation score of +2 in A3-M1 and A3-M2.
Regulatory model 5a	No mitigations, hence, no changes in scores.
Regulatory model 5b	Stronger delivery governance enhances alignment between delivery and operations (mitigation of +1 in A3-M1 and A3-M2), resulting in a post-mitigation score of +2 in A3-M1 and A3-M2.
Regulatory model 6	Enhanced regulatory oversight and structured coordination between the delivery entity and HAL could partially mitigate coordination and governance complexity (mitigation of +1 in A3-M1 and A3-M2, score -1 in A3-M1 and score -1 in A3-M2).
Regulatory model 7a	Binding system-wide planning arrangements and regulated integration mechanisms could partially mitigate coordination and governance complexity (mitigation of +1 in A3-M1 and A3-M2, score -1 in A3-M1 and score -1 in A3-M2). Excluding terminals: No mitigations, hence, no changes in scores.
Regulatory model 7b	A central system operator with binding authority, strong regulatory override mechanisms and mandatory interoperability standards could partially mitigate coordination and governance complexity (mitigation of +1 in A3-M1 and A3-M2, score -2 in A3-M1 and score -2 in A3-M2).
Regulatory model 8	No mitigations, hence, no changes in scores.
Regulatory model 9a	No mitigations, hence, no changes in scores.
Regulatory model 9b	No mitigations, hence, no changes in scores.
Regulatory model 9c	No mitigations, hence, no changes in scores.

Source: Steer

A4 – System integration and end-to-end operational coherence during construction

Initial Assessment

7.8 This subcriterion assesses whether Heathrow continues to function as a single, coherent airport system during construction. Our initial assessment is provided below.

Table 7.7: Initial assessment for subcriterion A4

Regulatory model	Evaluation and scoring
Regulatory model 1a	Changes to capex governance processes could improve clarity of accountability at operational system boundaries during construction, while passenger journey and operational resilience remain broadly unchanged. We therefore assess a minor beneficial impact in one metric (score +1 in A4-M1 and score 0 in A4-M2).
Regulatory model 1b	Separating planning from operational functions does not introduce new operational boundaries during construction. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 2	Targeted adjustments to the existing incentive regime could support operational resilience during construction by strengthening incentives linked to delivery and performance outcomes. We therefore assess a minor beneficial impact in one metric (score 0 in A4-M1 and score +1 in A4-M2).
Regulatory model 3	A long-term regulatory framework does not change operational accountability during construction. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 4a	Operational accountability and system integration arrangements remain unchanged. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 4b	As ownership and system accountability remain with HAL, operational boundaries are not fragmented. We therefore assess no material impact (score 0 in all metrics).
Regulatory model 5a	Construction does not apply to this model.
Regulatory model 5b	Operational responsibility for defined assets sits with a single integrated counterparty, which may support clearer accountability for performance within asset boundaries. We therefore assess no material impact at pre-mitigation stage (score 0 in all metrics).
Regulatory model 6	Where a third party is responsible for design and construction prior to transferring ownership to HAL, additional interfaces exist during delivery. However, long-term operational control remains unified post-transfer. We therefore assess a minor adverse impact on integration during construction (score -1 in A4-M1 and A4-M2).
Regulatory model 7a	Where the wholesale supplier model applies to terminal assets, structural separation between asset owner/operator and the airport system introduces permanent operational boundaries during delivery. This reduces clarity of accountability across system interfaces and increases reliance on

Regulatory model	Evaluation and scoring
	coordination arrangements during construction. We therefore assess a significant adverse impact (score -2 in A4-M1 and A4-M2). Where this model excludes terminal assets, operational integration of core systems remains intact during construction. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 7b	Direct competition introduces multiple independently governed terminal systems operating alongside a unified airfield operator during construction. This materially reduces clarity of accountability at operational system boundaries and increases risk to passenger journey coherence during construction. We therefore assess a very significant adverse impact (score -3 in A4-M1 and A4-M2).
Regulatory model 8	The transfer of ownership and operation of an existing terminal introduces a permanent operational boundary within the airport system. While coordination arrangements can be defined contractually, clarity of accountability at system interfaces is reduced during construction. We therefore assess a minor adverse impact (score -1 in A4-M1 and A4-M2).
Regulatory model 9a	Price benchmarking relates to economic regulation and does not alter operational integration during construction. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 9b	A LRIC approach to airport charges does not alter operational integration during construction. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 9c	A lighter-touch regulatory framework does not introduce additional operational boundaries during construction. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).

Source: Steer

Mitigation measures and post-mitigation scoring

7.9 Our post-mitigation assessment is provided below.

Table 7.8: Mitigation and post-mitigation assessment for subcriterion A4

Regulatory model	Mitigation and scoring
Regulatory model 1a	No mitigations, hence, no changes in scores.
Regulatory model 1b	No mitigations, hence, no changes in scores.
Regulatory model 2	No mitigations, hence, no changes in scores.
Regulatory model 3	No mitigations, hence, no changes in scores.
Regulatory model 4a	No mitigations, hence, no changes in scores.
Regulatory model 4b	No mitigations, hence, no changes in scores.
Regulatory model 5a	No mitigations, hence, no changes in scores.
Regulatory model 5b	Stronger governance and performance integration mechanisms provide a minor beneficial uplift in operational resilience (mitigation of +1 in A4-M2, score 0 in A4-M1 and score +1 in A4-M2).

Regulatory model	Mitigation and scoring
Regulatory model 6	Enhanced coordination requirements during construction and clearly defined system-integration responsibilities prior to transfer could partially mitigate integration risks (mitigation of +1 in A4-M1 and A4-M2, score 0 in A4-M1 and score 0 in A4-M2).
Regulatory model 7a	Binding system-wide safety governance, mandatory joint operational planning and regulated performance integration metrics could partially mitigate fragmentation of operational boundaries and passenger journey risks (mitigation of +1 in A4-M1 and A4-M2, score -1 in A4-M1 and score -1 in A4-M2). Excluding terminals: No mitigations, hence, no changes in scores.
Regulatory model 7b	A central system operator with binding authority, mandatory interoperability standards, shared IT systems and joint crisis management protocols could partially mitigate boundary fragmentation and resilience risks (mitigation of +1 in A4-M1 and A4-M2, score -2 in A4-M1 and score -2 in A4-M2).
Regulatory model 8	Formal interface agreements and performance coordination requirements could partially mitigate accountability and resilience risks (mitigation of +1 in A4-M1 and A4-M2, score 0 in A4-M1 and score 0 in A4-M2).
Regulatory model 9a	No mitigations, hence, no changes in scores.
Regulatory model 9b	No mitigations, hence, no changes in scores.
Regulatory model 9c	No mitigations, hence, no changes in scores.

Source: Steer

A5 – System integration and end-to-end operational coherence post-construction

Initial Assessment

7.10 This subcriterion assesses whether Heathrow continues to function as a single, coherent airport system once expansion is operational. Our initial assessment is provided below.

Table 7.9: Initial assessment metrics for subcriterion A5

Regulatory model	Evaluation and scoring
Regulatory model 1a	Changes to capex governance processes could improve clarity of accountability at operational system boundaries post-construction, while passenger journey and operational resilience remain broadly unchanged. We therefore assess a minor beneficial impact in one metric (score +1 in A5-M1 and score 0 in A5-M2).
Regulatory model 1b	Separating HAL's system planning function from its operational function does not introduce permanent operational boundaries within the airport system. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 2	Targeted adjustments to the existing incentive regime could support operational resilience post-construction by strengthening incentives linked to

Regulatory model	Evaluation and scoring
	long-term performance outcomes. We therefore assess a minor beneficial impact in one metric (score 0 in A5-M1 and score +1 in A5-M2).
Regulatory model 3	A long-term regulatory framework for expansion does not introduce structural changes to operational accountability post-completion. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 4a	Passenger journey integration and operational resilience remain under unified control. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 4b	Passenger journey integration remains under HAL's control and is not altered by the delivery contract structure. We therefore assess no material impact (score 0 in all metrics).
Regulatory model 5a	Under a management contract arrangement excluding the airfield, operational responsibility for defined terminal or landside assets is delegated to a third party, while HAL retains ownership and overarching system accountability. We assess that, by default, the accountability, and operational resilience would suffer a minor adverse impact due to the fact that there is a third-party operator (score -1 in A5-M1 and A5-M2).
Regulatory model 5b	Integrated responsibility across design, construction and operation may support alignment of operational objectives with passenger outcomes. Under the initial assessment, we assess no material impact on long-term operational accountability or resilience (score 0 in all metrics).
Regulatory model 6	Where a third party builds assets prior to transferring ownership to HAL, long-term operational control reverts to HAL once expansion is complete. As structural integration of the airport system is restored post-transfer, we therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 7a	Where the wholesale supplier model applies to terminal assets, structural separation between asset owner/operator and the airport system persists after completion. This reduces clarity of accountability across operational system boundaries and increases reliance on coordination mechanisms for passenger transfers and irregular operations. We therefore assess a significant adverse impact (score -2 in A5-M1 and A5-M2). Where this model excludes terminal assets, core operational systems remain integrated. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 7b	Direct competition between terminal operators introduces permanent structural fragmentation within the airport system. Independent terminal operators operating alongside a unified airfield operator materially reduce clarity of system-wide accountability and increase risk to end-to-end passenger journey coherence, including during irregular operations. This fragmentation might impact the efficient use of gate capacity and staff resources. We therefore assess a very significant adverse impact (score -3 in A5-M1 and A5-M2).
Regulatory model 8	The transfer of ownership and operation of an existing terminal introduces a permanent operational boundary within the airport system. While coordination arrangements can be established contractually, clarity of accountability across system interfaces is reduced. We therefore assess a minor adverse impact (score -1 in A5-M1 and A5-M2).

Regulatory model	Evaluation and scoring
Regulatory model 9a	Price benchmarking relates to economic regulation and does not alter long-term operational integration arrangements. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 9b	A LRIC approach to airport charges does not introduce structural operational changes post-expansion. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 9c	A lighter-touch regulatory framework does not alter operational accountability or structural integration of the airport system following expansion. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).

Source: Steer

Mitigation measures and post-mitigation scoring

7.11 Our post-mitigation assessment is provided below.

Table 7.10: Post-mitigation assessment metrics for subcriterion A5

Regulatory model	Mitigation and scoring
Regulatory model 1a	No mitigations, hence, no changes in scores.
Regulatory model 1b	No mitigations, hence, no changes in scores.
Regulatory model 2	No mitigations, hence, no changes in scores.
Regulatory model 3	No mitigations, hence, no changes in scores.
Regulatory model 4a	No mitigations, hence, no changes in scores.
Regulatory model 4b	No mitigations, hence, no changes in scores.
Regulatory model 5a	Stronger governance and performance-linked incentive mechanisms could provide a minor beneficial uplift in accountability, and operational resilience (mitigation of +1 in all metrics, score 0 in all metrics).
Regulatory model 5b	Stronger governance and performance-linked incentive mechanisms could provide a minor beneficial uplift in accountability and operational resilience (mitigation of +1 in A5-M1 and A5-M2; score +1 in A5-M1 and A5-M2).
Regulatory model 6	No mitigations, hence, no changes in scores.
Regulatory model 7a	Binding system-wide governance, regulatory oversight of interface performance, mandatory interoperability standards and shared resilience protocols could partially mitigate long-term fragmentation risks (mitigation of +1 in A5-M1 and A5-M2, score -1 in A5-M1 and score -1 in A5-M2). Excluding terminals: No mitigations, hence, no changes in scores.
Regulatory model 7b	A central system operator with binding authority, common operational standards, shared IT platforms and coordinated crisis management arrangements could partially mitigate structural fragmentation (mitigation of +1 in A5-M1 and A5-M2, score -2 in A5-M1 and score -2 in A5-M2).

Regulatory model	Mitigation and scoring
Regulatory model 8	Formal interface agreements, regulatory performance standards and system-wide coordination requirements could partially mitigate accountability and resilience risks (mitigation of +1 in A5-M1 and A5-M2, score 0 in A5-M1 and score 0 in A5-M2).
Regulatory model 9a	No mitigations, hence, no changes in scores.
Regulatory model 9b	No mitigations, hence, no changes in scores.
Regulatory model 9c	No mitigations, hence, no changes in scores.

Source: Steer

Criterion B – Costs

B1 – Identification of an efficient cost baseline

Initial Assessment

7.12 This subcriterion assesses whether the regulatory model gives the CAA real and enforceable capability to establish an efficient cost baseline prior to delivery. Our initial assessment is provided below.

Table 7.11: Initial assessment for subcriterion B1

Regulatory model	Evaluation and scoring
Regulatory model 1a	Enhancements to the current capex governance processes could somewhat assist in establishing an efficient cost baseline and the ability to challenge the proposals from HAL, by ensuring a higher degree of information sharing and adding more controls to the approval processes (score 1 in B1-M1, B1-M2). The ability to track and manage changes during construction could have a significant benefit (score 2 in B1-M3).
Regulatory model 1b	We assess that the separation of the planning and the operational functions will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 2	We assess that adjustments to the incentive regime will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 3	We assess that a long-term regulatory framework for expansion will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 4a	A more thorough scrutiny of HAL's approach to procurement could be beneficial in establishing an efficient cost baseline, the ability to challenge proposals from HAL, and managing changes during construction, by supervising decisions on risk allocation, contract type, tender process and negotiations with contractors (score 1 in B1-M1, B1-M2 and B1-M3).
Regulatory model 4b	We assess that by mandating HAL to tender the development of a large asset (e.g. a new terminal building) to a single contractor there could be a significant benefit in establishing an efficient cost baseline (score 2 in B1-M1). Although this type of contract is generally associated with a 'fixed-cost' type agreement in which the contractor takes most of the delivery risks and, at the same time,

Regulatory model	Evaluation and scoring
	benefits from potential savings during the construction, creating a framework in which the level of information sharing is very limited (score 0 in B1-M2, B1-M3).
Regulatory model 5a	We assess that granting the operation of an asset to a third party will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 5b	We assess that by mandating HAL to tender the development and operation of a large asset (e.g. a new terminal building) to a single contractor there could be a significant benefit in establishing an efficient cost baseline (score 2 in B1-M1). Although this type of contract is generally associated with a 'fixed-cost' type agreement in which the contractor takes most of the delivery risks and, at the same time, benefits from potential savings during the construction, creating a framework in which the level of information sharing is very limited (score 0 in B1-M2, B1-M3).
Regulatory model 6	The development and ownership of an asset by a third party for the construction phase (and its subsequent ownership transfer to HAL) should not trigger by itself a cost efficiency benefit. Any potential benefit will come from the type of risk allocation and incentive mechanisms (score 0 in all metrics).
Regulatory model 7a	The wholesale supplier should enable a competitive environment in which several developers and operators would bid for a contract to build and operate a facility (e.g. a terminal building or a car park). The competition itself might trigger more efficient solutions and/ or lower profit margins. The interface with HAL might impede a full cost-efficient regime. Under this model, we assess that the establishment of an efficient cost baseline, and the ability to challenge the proposals and track changes will have a significant beneficial impact due to the close monitoring that each party will undertake on the other (score 2 in B1-M1, B1-M2 and B1-M3).
Regulatory model 7b	Assuming that there is a competitive level playing field between HAL and a third-party developer (and operator) for two comparable assets in Heathrow (e.g. a terminal building), and that there is no excess demand, HAL and the third party will have strong incentives to deliver the construction at a lower cost and to operate efficiently while ensuring high service quality. We assume that the economic regulatory framework for calculating airport charges (terminal charges in this example) will remain similar to today's framework. Under this model, we assess that the establishment of an efficient cost baseline will have a very significant beneficial impact (score 3 in B1-M1), and that the ability to challenge proposals and track changes will have a significant beneficial impact due to the close monitoring that each party will undertake on the other (score 2 in B1-M2 and B1-M3).
Regulatory model 8	We assess that the transfer of ownership and operation of an asset to a third party will not impact by itself the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 9a	The change of the airport charges determination from a single-till mechanism to a price benchmark could reduce the CAA's ability to directly establish and challenge the cost baseline and limit oversight during delivery. We therefore assess a moderate adverse impact (score -1 in B1-M1, B1-M2 and B1-M3).
Regulatory model 9b	We assess that a LRIC model will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).

Regulatory model	Evaluation and scoring
Regulatory model 9c	A lighter-touch regulatory framework could reduce the CAA's ability to establish and challenge the cost baseline and limit oversight during delivery. We therefore assess a moderate adverse impact (score -1 in B1-M1, B1-M2 and B1-M3).

Source: Steer

Mitigation measures and post-mitigation scoring

7.13 Our post-mitigation assessment is provided below.

Table 7.12: Mitigation and post-mitigation assessment for subcriterion B1

Regulatory model	Mitigation and scoring
Regulatory model 1a	The support of a technical advisor to the CAA could provide some mitigation and an uplift to the positive impact in the changes to the capex governance processes, by undertaking detailed assessments on project scope definition, procurement strategy, cost estimate, and execution efficiency (mitigation of +2 in all metrics, score 3 in all metrics).
Regulatory model 1b	No mitigations, hence, no changes in scores.
Regulatory model 2	No mitigations, hence, no changes in scores.
Regulatory model 3	No mitigations, hence, no changes in scores.
Regulatory model 4a	The support of a technical advisor to the CAA could provide some mitigation and an uplift to the positive impact of enhanced scrutiny of HAL's approach to procurement, by undertaking detailed assessments on procurement strategy, cost estimate and execution efficiency (mitigation of +1 in all metrics, score 2 in all metrics).
Regulatory model 4b	No mitigations, hence, no changes in scores.
Regulatory model 5a	No mitigations, hence, no changes in scores.
Regulatory model 5b	No mitigations, hence, no changes in scores.
Regulatory model 6	No mitigations, hence, no changes in scores.
Regulatory model 7a	No mitigations, hence, no changes in scores.
Regulatory model 7b	No mitigations, hence, no changes in scores.
Regulatory model 8	No mitigations, hence, no changes in scores.
Regulatory model 9a	No mitigations, hence, no changes in scores.
Regulatory model 9b	No mitigations, hence, no changes in scores.
Regulatory model 9c	No mitigations, hence, no changes in scores.

Source: Steer

B2 – Incentives and protections against cost escalation

Initial Assessment

7.14 This subcriterion assesses whether incentives and protections within the regulatory model limit undue escalation of costs during delivery. Our initial assessment is provided below.

Table 7.13: Initial assessment for subcriterion B2

Regulatory model	Evaluation and scoring
Regulatory model 1a	We assess that changes to the current governance processes will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 1b	We assess that the separation of the planning and the operational functions will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 2	Targeted adjustments to the existing incentive regime could provide a very significant beneficial impact to cost control during delivery (score 3 in B2-M2) and, as a consequence, a significant beneficial impact in the protection to consumers for cost overruns (score 2 in B2-M3). We assess that this model will not have an impact on the risk allocation metric (score 0 in B2-M1).
Regulatory model 3	We assess that a long-term regulatory framework for expansion will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 4a	A more thorough scrutiny of HAL's approach to procurement could support improved risk allocation and protection of consumers from cost overruns, although it may not materially strengthen direct incentives for cost control during delivery (score 1 in B2-M1, score 0 in B2-M2, and score 1 in B2-M3).
Regulatory model 4b	We assess that mandating the procurement of the design and build of an asset to a single contractor will not impact by itself the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 5a	We assess that granting the operation of an asset to a third party will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 5b	We assess that mandating the procurement of the design, build and operate of an asset to a single contractor will not impact by itself the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 6	The development and ownership of an asset by a third party for the construction phase (and its subsequent ownership transfer to HAL) should not trigger by itself a cost efficiency benefit. Any potential benefit will come from the type of risk allocation and incentive mechanisms (score 0 in all metrics).
Regulatory model 7a	We assess that the wholesale supplier model will not impact by itself the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 7b	Assuming that there is a competitive level playing field between HAL and a third-party developer (and operator) for two comparable assets in Heathrow (e.g. a terminal building), and that there is no excess demand, HAL and the third party will have strong incentives to deliver the construction at a lower cost and to operate efficiently while ensuring high service quality. We assume

Regulatory model	Evaluation and scoring
	that the economic regulatory framework for calculating airport charges (terminal charges in this example) will remain similar to today's framework. Under this model, we assess that the risk allocation, cost escalation control, and protection to consumers due to costs overruns will have a significant beneficial impact (score 2 in B2-M1, B2-M2 and B2-M3).
Regulatory model 8	We assess that the transfer of ownership and operation of an asset to a third party will not impact by itself the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 9a	The change of the airport charges determination from a single-till mechanism to a price benchmark could weaken regulatory control over cost escalation and reduce protection to consumers (score -1 in B2-M1 and B2-M2, score 0 in B2-M3).
Regulatory model 9b	We assess that a LRIC model will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 9c	A lighter-touch regulatory framework could weaken regulatory control over cost escalation and reduce protection to consumers (score -1 in B2-M1 and B2-M2, score 0 in B2-M3).

Source: Steer

Mitigation measures and post-mitigation scoring

7.15 Our post-mitigation assessment is provided below.

Table 7.14: Mitigation and post-mitigation assessment for subcriterion B2

Regulatory model	Mitigation and scoring
Regulatory model 1a	No mitigations, hence, no changes in scores.
Regulatory model 1b	No mitigations, hence, no changes in scores.
Regulatory model 2	No mitigations, hence, no changes in scores.
Regulatory model 3	No mitigations, hence, no changes in scores.
Regulatory model 4a	The support of a technical advisor to the CAA could provide some mitigation and an uplift to the positive impact of enhanced scrutiny of HAL's approach to procurement, by undertaking detailed assessments on procurement strategy, cost estimate and execution efficiency (mitigation of +1 in B2-M3, score 1 in B2-M1, score 0 in B2-M2, and score 2 in B2-M3).
Regulatory model 4b	We assess that if the appropriate risk allocation and cost control mechanisms are implemented as part of the procurement of the design and build contract to a single contractor, the mitigation could have a moderate impact and the beneficial impact could be very significant for the risk allocation and cost control metrics (mitigation of +3 in B2-M1 and B2-M2, score 3 in B2-M1 and B2-M2) and, as a consequence, have a significant beneficial impact in the protection to consumers from costs overruns (mitigation of +2 in B2-M3, score 2 in B2-M3).
Regulatory model 5a	No mitigations, hence, no changes in scores.

Regulatory model	Mitigation and scoring
Regulatory model 5b	We assess that if the appropriate risk allocation, cost control, and operating efficiency incentives mechanisms are implemented as part of the procurement of the design, build and operate contract to a single contractor, the mitigation could have a very significant beneficial impact for the risk allocation and cost control metrics (mitigation of +3 in B2-M1 and B2-M2, score 3 in B2-M1 and B2-M2) and, as a consequence, have a significant beneficial impact in the protection to consumers from costs overruns (mitigation of +2 in B2-M3, score 2 in B2-M3).
Regulatory model 6	We assess that if appropriate risk allocation and cost control mechanisms are implemented in the contract with the third-party developer, this could provide a moderate beneficial impact (score 1 in B2-M1, B2-M2 and B2-M3).
Regulatory model 7a	We assess that if the appropriate risk allocation, cost control, and operating efficiency incentives mechanisms are implemented as part of the procurement of the wholesale supplier model contract, the mitigation could have a very significant beneficial impact for the risk allocation and cost control metrics (mitigation of +3 in B2-M1 and B2-M2, score 3 in B2-M1 and B2-M2) and, as a consequence, have a significant beneficial impact in the protection to consumers from costs overruns (mitigation of +2 in B2-M3, score 2 in B2-M3).
Regulatory model 7b	No mitigations, hence, no changes in scores.
Regulatory model 8	No mitigations, hence, no changes in scores.
Regulatory model 9a	No mitigations, hence, no changes in scores.
Regulatory model 9b	No mitigations, hence, no changes in scores.
Regulatory model 9c	No mitigations, hence, no changes in scores.

Source: Steer

B3 – Long-term operating efficiency

Initial Assessment

7.16 This subcriterion assesses whether the regulatory model promotes efficient operation and cost control once expansion is complete. Our initial assessment is provided below.

Table 7.15: Initial assessment for subcriterion B3

Regulatory model	Evaluation and scoring
Regulatory model 1a	We assess that changes to the current governance processes will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 1b	We assess that the separation of the planning and the operational functions will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).

Regulatory model	Evaluation and scoring
Regulatory model 2	We assess that adjustments to the incentive regime will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 3	We assess that a long-term regulatory framework for expansion will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 4a	We assess that an enhanced scrutiny on procurement will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 4b	We assess that mandating the procurement of the design and build of an asset to a single contractor will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 5a	Outsourcing the operation of an asset to a third party could have a significant adverse impact in the overall operating cost due to coordination requirements, and also on the capacity to have flexible structures (score -2 in B3-M1 and B3-M2), whereas there might be no impact on the ongoing operating efficiencies (score 0 in B3-M3).
Regulatory model 5b	Granting the design, build and operation of an asset to a third party could have a significant adverse impact in the overall operating cost due to coordination requirements, and also on the capacity to have flexible structures (score -2 in B3-M1 and B3-M2), whereas there might be no impact on the ongoing operating efficiencies (score 0 in B3-M3).
Regulatory model 6	We assess that development and ownership of an asset by a third party for the construction phase (and its subsequent ownership transfer to HAL) will not impact by itself the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 7a	The wholesale supplier model could have a significant adverse impact in the overall operating cost due to coordination requirements, and also on the capacity to have flexible structures due to the interface with HAL (score -2 in B3-M1 and B3-M2). We understand that, under this model, there is no competition for the operations phase, hence no ongoing efficiencies (score 0 in B3-M3).
Regulatory model 7b	Assuming that there is a competitive level playing field between HAL and a third-party developer (and operator) for two comparable assets in Heathrow (e.g. a terminal building), and that there is no excess demand, HAL and the third party will have strong incentives to deliver the construction at a lower cost and to operate efficiently while ensuring high service quality. We assume that the economic regulatory framework for calculating airport charges (terminal charges in this example) will remain similar to today's framework. Under this model, we assess that there could be a significant adverse impact in the overall operating cost due to the additional coordination requirements (score -2 in B3-M1), whereas the flexibility and ongoing efficiencies could have a significant beneficial impact (score 2 in B3-M2 and B3-M3).
Regulatory model 8	We assess that the transfer of ownership and operation of an asset to a third party could have a significant adverse impact in the overall operating cost due to coordination requirements (score -2 in B3-M1), whereas the flexibility and ongoing efficiencies could have a significant beneficial impact (score 2 in B3-M2 and B3-M3).

Regulatory model	Evaluation and scoring
Regulatory model 9a	We assess that a price benchmark model will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 9b	We assess that a LRIC model will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).
Regulatory model 9c	We assess that a lighter-touch regulatory framework model will not impact the current status of this subcriterion as it will not apply to these metrics (score 0 in all metrics).

Source: Steer

Mitigation measures and post-mitigation scoring

7.17 Our post-mitigation assessment is provided below.

Table 7.16: Mitigation and post-mitigation assessment for subcriterion B3

Regulatory model	Mitigation and scoring
Regulatory model 1a	No mitigations, hence, no changes in scores.
Regulatory model 1b	No mitigations, hence, no changes in scores.
Regulatory model 2	No mitigations, hence, no changes in scores.
Regulatory model 3	No mitigations, hence, no changes in scores.
Regulatory model 4a	No mitigations, hence, no changes in scores.
Regulatory model 4b	No mitigations, hence, no changes in scores.
Regulatory model 5a	Introducing the right incentives in the operation contract with the third party, there could be some mitigation for the coordination, flexibility and efficiency metrics (mitigation of +2 in all metrics, score 0 in B3-M1 and B3-M2, score 2 in B3-M3).
Regulatory model 5b	Introducing the right incentives in the operation contract with the third party, there could be some mitigation for the coordination, flexibility and efficiency metrics (mitigation of +2 in all metrics, score 0 in B3-M1 and B3-M2, score 2 in B3-M3).
Regulatory model 6	No mitigations, hence, no changes in scores.
Regulatory model 7a	By introducing the right incentives in the contract with the third-party operator there could be some mitigation for the coordination, and even more for flexibility (mitigation of +2 in B3-M1 and B3-M2, score 0 in all metrics).
Regulatory model 7b	No mitigations, hence, no changes in scores.
Regulatory model 8	No mitigations, hence, no changes in scores.
Regulatory model 9a	No mitigations, hence, no changes in scores.
Regulatory model 9b	No mitigations, hence, no changes in scores.
Regulatory model 9c	No mitigations, hence, no changes in scores.

Source: Steer

Criterion F – Service quality

F1 – Accountability, coherence and resilience for service quality

Initial Assessment

7.18 Whether responsibility, coherence and resilience for service quality outcomes are properly managed.

Table 7.17: Initial assessment for subcriterion F1

Regulatory model	Evaluation and scoring
Regulatory model 1a	Enhancements to the current capex governance processes could improve clarity of accountability for service quality outcomes, while coherence of passenger processes and resilience remain broadly unchanged under HAL. We therefore assess a minor beneficial impact in one metric (score +1 in F1-M1, score 0 in F1-M2 and F1-M3).
Regulatory model 1b	Separating HAL's system planning function from its operational function does not change the accountability, coherence and resilience for service quality. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 2	We assess that targeted adjustments to the existing incentive regime will not impact the current status of this subcriterion, as accountability, coherence and resilience for service quality would remain unchanged (score 0 in all metrics).
Regulatory model 3	A long-term regulatory framework for expansion does not change the accountability, coherence and resilience for service quality. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 4a	Enhanced scrutiny of HAL's procurement approach (towards construction) does not alter accountability, coherence and resilience for service quality. We assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 4b	Mandating the use of a Design and Build contract does not impact accountability, coherence and resilience for service quality. We therefore assess no impact in this subcriterion (score 0 in all metrics).
Regulatory model 5a	Under a management contract arrangement excluding the airfield, operational responsibility for defined terminal or landside assets is delegated to a third party, while HAL retains ownership and overarching system accountability. We assess that, by default, the accountability, coherence and resilience for service quality would suffer a minor adverse impact due to the fact that there is a third-party operator (score -1 in F1-M1, F1-M2, and F1-M3).
Regulatory model 5b	Under a Design, Build and Operate arrangement excluding the airfield, delivery and operational responsibilities are consolidated within a single contractual counterparty under HAL oversight. We assess that the accountability, coherence and resilience for service quality would suffer a minor adverse impact due to the fact that there is a third-party operator (score -1 in F1-M1, F1-M2, and F1-M3).
Regulatory model 6	The development and ownership of an asset by a third party for the construction phase (and its subsequent ownership transfer to HAL) should not

Regulatory model	Evaluation and scoring
	impact the accountability, coherence and resilience for service quality (score 0 in all metrics).
Regulatory model 7a	Where the wholesale supplier model applies to terminal assets, structural separation between asset owner/operator and the airport system introduces operational boundaries during construction and operation. This reduces clarity of accountability across system interfaces, and reduces coherence and resilience across the airport, increasing reliance on coordination arrangements. We therefore assess a minor adverse impact (score -1 in F1-M1, F1-M2 and F1-M3). Where this model excludes terminal assets, operational coordination becomes easier. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 7b	Direct competition introduces multiple independently governed terminal systems operating alongside a unified airfield operator during construction and operation. This materially reduces clarity of accountability at operational system boundaries and increases risk to passenger journey coherence and resilience due to the competitive nature of the model. We therefore assess a significant adverse impact (score -2 in F1-M1, F1-M2 and F1-M3).
Regulatory model 8	The transfer of ownership and operation of an existing terminal asset introduces a permanent operational boundary within the airport system. This may reduce clarity of accountability, coherence and resilience for service quality outcomes, although the impact is less significant than under a direct competition model. We therefore assess a minor adverse impact (score -1 in F1-M1, F1-M2 and F1-M3).
Regulatory model 9a	Price benchmarking relates to the economic regulation of airport charges and does not affect the accountability, coherence and resilience for service quality. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 9b	A LRIC approach to setting airport charges does not alter the accountability, coherence and resilience for service quality. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 9c	A lighter-touch regulatory framework for airport charges does not change the accountability, coherence and resilience for service quality. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).

Source: Steer

Mitigation measures and post-mitigation scoring

7.19 Our post-mitigation assessment is provided below.

Table 7.18: Mitigation and post-mitigation assessment for subcriterion F1

Regulatory model	Mitigation and scoring
Regulatory model 1a	No mitigations, hence, no changes in scores.
Regulatory model 1b	No mitigations, hence, no changes in scores.
Regulatory model 2	No mitigations, hence, no changes in scores.
Regulatory model 3	No mitigations, hence, no changes in scores.

Regulatory model	Mitigation and scoring
Regulatory model 4a	No mitigations, hence, no changes in scores.
Regulatory model 4b	No mitigations, hence, no changes in scores.
Regulatory model 5a	Stronger governance and performance-linked incentive mechanisms could provide a minor beneficial uplift in accountability, coherence and resilience for service quality (mitigation of +1 in all metrics, score 0 in all metrics).
Regulatory model 5b	Stronger governance and performance-linked incentive mechanisms could provide a minor beneficial uplift in accountability, coherence and resilience for service quality (mitigation of +1 in all metrics, score 0 in all metrics).
Regulatory model 6	No mitigations, hence, no changes in scores.
Regulatory model 7a	Binding system-wide governance, regulatory oversight of interface performance, mandatory interoperability standards and shared resilience protocols could partially mitigate long-term fragmentation risks (mitigation of +1 in F1-M1, F1-M2 and F1-M3, score 0 in F1-M1, F1-M2 and F1-M3). Excluding terminals: No mitigations, hence, no changes in scores.
Regulatory model 7b	Binding system-wide governance, regulatory oversight of interface performance, mandatory interoperability standards and shared resilience protocols could mitigate fragmentation risks related to accountability, coherence and resilience (mitigation of +2 in F1-M1, F1-M2 and F1-M3, score 0 in F1-M1, F1-M2 and F1-M3).
Regulatory model 8	Binding system-wide governance, regulatory oversight of interface performance, mandatory interoperability standards and shared resilience protocols could partially mitigate long-term fragmentation risks (mitigation of +1 in F1-M1, F1-M2 and F1-M3, score 0 in F1-M1, F1-M2 and F1-M3).
Regulatory model 9a	No mitigations, hence, no changes in scores.
Regulatory model 9b	No mitigations, hence, no changes in scores.
Regulatory model 9c	No mitigations, hence, no changes in scores.

Source: Steer

F2 – Service quality improvements

Initial Assessment

7.20 Whether the regulatory model supports coordinated, ongoing improvement in service quality.

Table 7.19: Initial assessment for subcriterion F2

Regulatory model	Evaluation and scoring
Regulatory model 1a	Enhancements to the current capex governance processes could support coordination of service quality improvements and incentives for continuous improvement, by strengthening governance and assurance arrangements within HAL's existing framework (score +1 in F2-M1 and F2-M2).

Regulatory model	Evaluation and scoring
Regulatory model 1b	Separating HAL's system planning function from its operational function does not change the service quality improvement mechanisms. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 2	Targeted adjustments to the existing incentive regime could provide a significant beneficial impact to service quality improvement by increasing the percentage of revenues that can be obtained from improvements in the service quality standards (score 2 in F2-M1 and F2-M2).
Regulatory model 3	A long-term regulatory framework for expansion does not change the service quality improvement mechanisms. We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 4a	Enhanced scrutiny of HAL's procurement approach (towards construction) does not alter service quality improvement mechanisms. We assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 4b	Mandating the use of a Design and Build contract does not impact service quality improvement mechanisms. We therefore assess no impact in this subcriterion (score 0 in all metrics).
Regulatory model 5a	Under a management contract arrangement excluding the airfield, operational responsibility for defined terminal or landside assets is delegated to a third party, while HAL retains ownership and overarching system accountability. We assess that, by default, the service quality improvement mechanisms would suffer a minor adverse impact due to the fact that there is a third-party operator (score -1 in F2-M1 and F2-M2).
Regulatory model 5b	Under a Design, Build and Operate arrangement excluding the airfield, delivery and operational responsibilities are consolidated within a single contractual counterparty under HAL oversight. We assess that, by default, the service quality improvement mechanisms would suffer a minor adverse impact due to the fact that there is a third-party operator (score -1 in F2-M1 and F2-M2).
Regulatory model 6	The development and ownership of an asset by a third party for the construction phase (and its subsequent ownership transfer to HAL) should not impact the service quality improvement mechanisms (score 0 in all metrics).
Regulatory model 7a	The wholesale supplier model might not assist in coordinating service quality improvements across the airport, and service levels could suffer a minor adverse impact due to the fact that there is a third-party operator (score -1 in F2-M1). We understand that, under this model, there is no competition for the operations phase, hence no incentives for continues improvements (score 0 in F2-M2). Where this model excludes terminal assets, we assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 7b	Direct competition for airport operation services may not assist in coordinating service quality improvements across the airport and may increase the risk of fragmented improvement priorities across operators (score -2 in F2-M1). However, the competitive nature of the model could provide an incentive to improve service quality within the asset under operation (score +2 in F2-M2).
Regulatory model 8	The transfer of ownership and operation of an asset becomes similar to the direct competition for airport operation services model. It might not assist in coordinating service quality improvements across the airport (score 0 in F2-M1), but the competitive nature would contribute as an incentive to improve

Regulatory model	Evaluation and scoring
	service quality in the asset under operation and provide a significant beneficial impact (score 2 in F2-M2).
Regulatory model 9a	Price benchmarking relates to the economic regulation of airport charges and does not affect the service quality improvement mechanisms (unless there is also a change in how the service quality regime currently works). We therefore assess that this model will not impact the current status of this subcriterion (score 0 in all metrics).
Regulatory model 9b	A LRIC approach to setting airport charges would likely involve less prescriptive scrutiny of service quality incentives, rather than the exclusion of service quality regulation altogether. Where HAL retains market power, weaker incentives or less active regulatory oversight could reduce the pressure to improve service quality over time. We therefore assess a minor adverse impact on incentives for continuous improvement in passenger experience (score 0 in all metrics).
Regulatory model 9c	A lighter-touch regulatory framework for airport charges normally implies that the service levels are also excluded from regulation and, therefore, in absence of market pressures, service levels might deteriorate (score 0 in F2-M1, score -2 in F2-M2).

Source: Steer

Mitigation measures and post-mitigation scoring

7.21 Our post-mitigation assessment is provided below.

Table 7.20: Mitigation and post-mitigation assessment for subcriterion F2

Regulatory model	Mitigation and scoring
Regulatory model 1a	No mitigations, hence, no changes in scores.
Regulatory model 1b	No mitigations, hence, no changes in scores.
Regulatory model 2	No mitigations, hence, no changes in scores.
Regulatory model 3	No mitigations, hence, no changes in scores.
Regulatory model 4a	No mitigations, hence, no changes in scores.
Regulatory model 4b	No mitigations, hence, no changes in scores.
Regulatory model 5a	Stronger governance and performance-linked incentive mechanisms could provide a minor beneficial uplift in accountability, coherence and resilience for service quality (mitigation of +1 in all metrics, score 0 in all metrics).
Regulatory model 5b	Stronger governance and performance-linked incentive mechanisms could provide a minor beneficial uplift in accountability, coherence and resilience for service quality (mitigation of +1 in all metrics, score 0 in all metrics).
Regulatory model 6	No mitigations, hence, no changes in scores.
Regulatory model 7a	The regulatory framework establish incentive mechanisms to ensure appropriate coordination for consistent service levels across the airport (mitigation of +1 in F2-M1, score 0 in all metrics).

Regulatory model	Mitigation and scoring
Regulatory model 7b	Performance incentive schemes and system-wide service quality requirements could partially mitigate the risk of fragmented service quality improvement priorities across operators (mitigation of +1 in F2-M1, score -1 in F2-M1). No mitigation is applied to asset-level incentives for continuous improvement, which remain positive (score +2 in F2-M2).
Regulatory model 8	No mitigations, hence, no changes in scores.
Regulatory model 9a	No mitigations, hence, no changes in scores.
Regulatory model 9b	No mitigations, hence, no changes in scores.
Regulatory model 9c	Heathrow could have lighter-touch regulation similar to Gatwick's, in which there is a service quality regime that includes financial penalties for the operator, ensuring that service levels do not deteriorate (mitigation of +2 in F2-M2, score 0 in F2-M2).

Source: Steer

Sensitivity analysis

7.22 In order to understand if the results are impacted by the weight of each metric for each criterion, we have undertaken a series of sensitivities and compared the results.

7.23 The base scenario (presented above in this report) includes the same weight for all the metrics within a criterion. We have changed the weights following two methods:

- Grip test: We double the weight of one metric, and we recalculate the weight of the remaining metrics giving them the same value. For example, in Criterion A, in the base scenario all metrics have a weight of 10% (as there are 10 metrics); for this sensitivity we increase the weight of one metric to 20% and the remaining ones obtain a weight of c.8.9%.
- Random pattern: We let Excel create random weights for each metric and we rebase each sensitivity pattern to sum 100%.

7.24 For Criterion A, we have run 20 sensitivities, for Criterion B we have run 18 sensitivities, and for Criterion F we have run 14 sensitivities. The total number of sensitivities is linked to the number of metrics of each criterion.

7.25 The results of the sensitivity analysis concluded that, regardless of the weights applied to the metrics, the scores obtained for the regulatory models do not change materially and, therefore, the base scenario is valid from a metrics weighting perspective.

7.26 The charts below show the results of the sensitivities, which reflects that the conclusion remains consistent.

Figure 7.1: Sensitivity analysis - Scores post-mitigation

Source: Steer

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