Civil Aviation Authority

Economic regulation at Heathrow from April 2014: final proposals

CAP1103

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Executive Summary

1. This document sets out the CAA's final proposals for the price control for Heathrow Airport Limited (HAL) for the five years from 1 April 2014 (known as the sixth quinquennium, or Q6). It also contains proposals for service quality regulation to apply in Q6 and for a licence for HAL.

Key features of the price control

2. The proposed price control is a single-till, RPI-X control. It is composed of the following key building blocks:

- traffic forecasts of 359.2 million passengers;
- operating expenditure (opex) of £4,944 million[1];
- capital expenditure (capex) of £2,885 million;
- a pre-tax weighted average cost of capital (WACC) of 5.60% before inflation;
- commercial revenues of £2,880 million; and
- other regulated charges of £1,062 million and other revenues of £708 million.

3. This gives an average per passenger yield of £20.65 over Q6. This compares with £23.50 in HAL's July 2013 Alternative Business Plan (ABP) and £15.61 suggested by the Heathrow airlines. The CAA's proposed price control equates approximately to a real terms price freeze (i.e. RPI+0%) over Q6, compared with a 4.6% per year increase suggested by HAL in its July ABP and 9.8% per year decrease suggested by the Heathrow airlines in their response to the CAA's initial proposals.

[1] All financial numbers in this document are in 2011/12 prices unless otherwise stated.

Delivering the CAA's statutory duties

4. These price control proposals are those the CAA considers are best calculated to further its statutory duties in the Civil Aviation Act 2012 (the Act). The general duty is to further the interests of users (passengers and owners of air freight) regarding the range, availability, continuity, cost and quality of air operation services; and a range of secondary duties also apply.

5. In assessing users' interests, the CAA has taken account of airlines' views (among others), recognising that airline interests often align with those of users. However, this is not always the case, and the CAA has also reviewed a wide range of direct research about users' views and preferences. The CAA has also been advised by its Consumer Panel.

6. In assessing users' interests, the CAA must balance the interest of present users in lower airport charges with the interests of future users in HAL's ability to continue to be able to invest in modern infrastructure and services in a timely manner. Present and future users may often be the same people. Under section 1(5) of the Act, if there is a potential conflict between the interests of different classes of users or between their interests in the various different parameters set out in section 1(1), the CAA is directed to carry out its functions in a way that will further such interests as it thinks best.

7. The level of prices contained in these final proposals will enable HAL to build on its improvements in the passenger experience achieved during Q5, while delivering an affordable service to passengers, airlines and cargo owners. In particular, the CAA's proposals are:

   - Pro-investment. The regulatory asset base (RAB) and RPI-X form of control continue the stable regime of economic regulation at the airport, which provides stability for investors and users alike. The form of regulation adopted for HAL provides an unusually benign climate for investment compared to companies in competitive markets. For instance, the RAB gives a high degree of confidence that investments can be remunerated, subject to efficient operations; and, under the CAA's approach, investments are remunerated from when they are made, rather from when they begin to operate.

- Pro-growth. Although the CAA has no statutory duty to promote economic growth, it is mindful of the importance of efficient transport infrastructure for the economy as a whole. The best contribution that the CAA as economic regulator can make to economic recovery is to incentivise the UK's largest airport to operate efficiently and provide value-for-money services of high quality. This will provide passengers with a sound platform against which airlines can provide the best range of routes, and can invest in fleet renewal to reduce emissions and noise. The pace of progress on delivery of HAL's Masterplan implied by the CAA's proposals reflects the importance of ensuring that HAL's charges are affordable. This will enable it to deliver on its mission statement, agreed with the airlines, to be "the UK's direct connection to the world and Europe's hub of choice by making every journey better".
- Fair to users as well as shareholders. The CAA has taken great care to ensure the WACC can provide a fair return on the RAB and on future investments. Its proposals embody considerable stability compared to the last decade, during which HAL has invested more than £10 billion. Where the WACC has reduced compared to Q5, this arises because of observable reductions in external costs (debt market conditions and reductions in taxation). The CAA sees no merit in arguments that the allowed WACC is insufficient to support the capital plan foreseen in the price control.
- Challenging but fair. The control will incentivise HAL to reduce its opex, while enabling it to recover sufficient funds to pay its staff and suppliers. The CAA considers that these proposals are consistent with continuous improvements in quality of service and operational resilience. The onus for efficiency is placed on the company and its shareholders, rather than expecting users to pay for inefficiency (or airlines, in a way that could affect their investment plans and route development).
- Enabling high-quality services. The capex forecast and proposed service quality regulation will ensure that HAL continues to improve its quality of service and operational resilience. The service quality regime proposed will build on the achievements of the successful Q5 framework to incentivise HAL to improve both passenger- and airline-facing performance.

8. The licence will be the key document in enforcing the price control, and other components of the regulatory framework. It must be operational by 1 April 2014, containing all the main provisions for the price control and service quality. The CAA is required to ensure that its process in developing the licence is transparent, accountable and consistent, and the licence obligations themselves must be proportionate, consistent and targeted. This includes adopting, where appropriate, so-called 'sunset' provisions to ensure that parts of the licence do not become out of date and can be refreshed, modified or removed in light of the interests of passengers and market circumstances.

9. In the light of its better regulation duties, the CAA considers that it is not appropriate to aim to cover all possible issues in the initial licence. As the licence can be modified, this new regime can adapt to address further issues if this proves to be justified over time. The CAA has highlighted some issues for further consideration during 2014, once the initial licence is in place.

Main changes since the initial proposals

10. The main differences between the initial and final proposals are:

- The pre-tax real WACC has increased from 5.35% to 5.60%. This is due to a revised assessment of the cost of debt. This partly reflects placing greater emphasis on longer-run data and averages, and partly methodological changes in response to points raised during the consultation.
- Projected opex has declined from £5,017 million in the initial proposals to £4,944 million in the final proposals. This reduction of £73 million is more than explained by the reduction in HAL's opex projections between the Full Business Plan (FBP) and the ABP of £114 million, while changes made by the CAA have had a net effect of increasing the allowance by £41 million. These changes include assumptions on staff costs, maintenance costs, pensions, other opex, and the glidepath applied to the non-staff cost efficiency proposals.

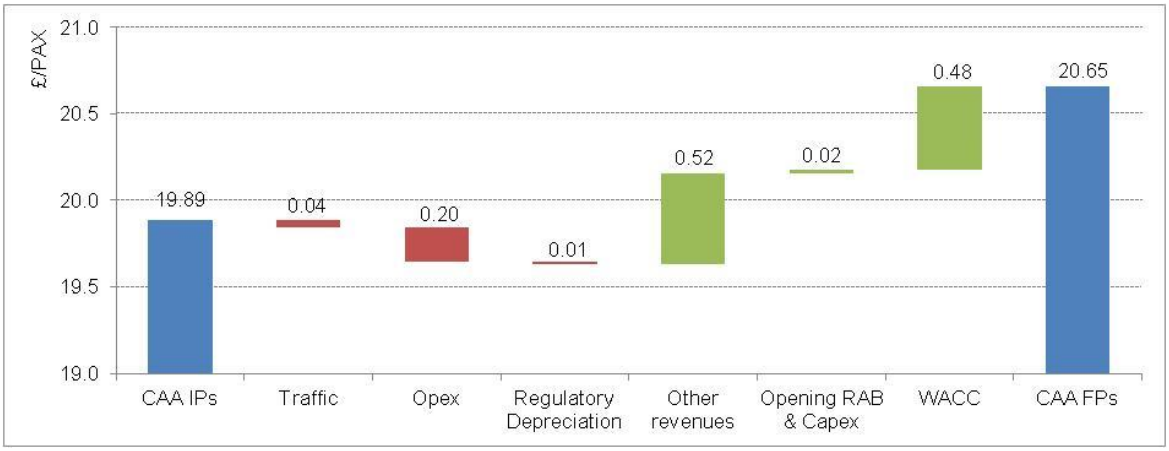
- Forecast capex has been reduced from £3,002 million to £2,885 million. This is for four reasons.
  - The elimination of capex associated with the Personal Rapid Transit (PRT) from the Terminal 5 building to the business car park. This was removed from the RAB at the fifth quinquennium (Q5) review as the CAA has not been convinced that it is the most efficient solution and it does not enjoy airline support.
  - A reduction in the Crossrail contribution to £70 million.
  - An amendment of HAL's assumption on Construction Price Inflation from RPI+1% to RPI+0%. This reduces projected capex by £82 million over Q6.
  - A reinsertion of the FBP's allowance of £28 million for works on fuel infrastructure, which HAL had removed from its ABP. Fuel infrastructure is critical to operational resilience, and airlines are concerned that Heathrow's is inadequate.
- Traffic forecasts have increased by 0.2% from 358.4 million to 359.2 million due to updated projections from HAL. This reflects a slight improvement in the macroeconomic environment. The airlines have asked whether the CAA is double-counting traffic risk by allowing an expected level of shocks in the forecasts as well as an allowance for risk in the asset beta. The CAA is confident that no such double-counting is involved.
- Projected commercial revenues have fallen from £2,912 million to £2,880 million. This reflects small changes in commercial revenues projections between the FBP and ABP and changes in the traffic forecasts described above.
- Forecast revenue from other regulated charges (ORCs) has decreased significantly, from £1,221 million to £1,062 million, or by £159 million. Of this change, £34 million is due to the inclusion of the CAA's projections for increased opex efficiency in the ORC projections, while the remaining £125 million is due to changes in HAL's projections between the FBP and the ABP. These principally relate to newly identified efficiency improvements in baggage activities. Under the single till, this decrease will result in an increase in the per-passenger yield. However, this increase will be offset by a reduction in the amount airlines pay in ORCs to HAL

during Q6, so the overall effect on HAL's revenues will be neutral.

- The opening RAB has increased by £113 million. The CAA has concluded that, on balance, it is not appropriate to remove the additional depreciation assumed for the year Q5+1. However, the CAA has retained the £30 million reduction identified due to HAL's inefficiency in the management of the Terminal 3 Integrated Baggage (T3IB) programme during Q5, identified by the CAA's consultants ASA.

11. The impact of these changes on the maximum average Q6 per passenger yield is set out in Figure E1 below.

Figure E1: Changes between initial and final proposals



Source: CAA

12. The CAA is keen to ensure that the Q6 capital programme is delivered efficiently. This includes the proposed introduction of a split between early-stage, or 'development' capex and 'core' capex, which is incurred once the project has been designed and approved by the airlines and HAL's management. This mechanism will allow HAL and the airlines flexibility over the capex programme, while ensuring that HAL does not recover revenue for projects that it does not undertake.

13. The CAA intends to build on the success of the Q5 service quality rebate (SQR) scheme with several enhancements that have, in most cases, broad stakeholder support.

14. The SQR improvements are:

- the inclusion of a self-modification provision allowing the airport operator and airlines to make immediate changes to the scheme where both sides agree;
- the removal of bonuses in areas which HAL has consistently outperformed;
- a proposed timeline on automated queue measurement for central and transfer search;
- additional reporting requirements, in particular on passenger satisfaction with Wi-fi and security queuing;
- an improved metric for control post search; and
- a rationalised metric of and pier-served stand usage.

HAL's licence

15. The draft licence gives effect to the price and service quality proposals contained elsewhere in the document. In addition, there have been a number of issues related to other parts of the licence. The CAA is proposing some changes from the draft in the Initial proposals.

- Revocation condition: the CAA has removed a failure to comply with an order made under the Competition Act 1998 or the Enterprise Act 2002 from the grounds for revocation, following representations from both Gatwick Airport Limited (GAL) and HAL. They argued that it was not proportionate to subject them to additional sanctions that others subject to those Acts do not face. The CAA has also removed non-payment of fees and insolvency as grounds for revocation.
- Service quality rebate and bonuses (SQRB) condition: the CAA has included a self-modification provision allowing the airport operator and airlines to make immediate changes to the SQRB scheme where both sides agree. It has also proposed a provision that allows the CAA to act as an arbiter if the parties could not reach agreement on the proposed changes.

- Operational resilience: the CAA has amended this proposal to require HAL to consult on the rules of conduct for airlines and groundhandlers.
- Procurement condition: the CAA has included an additional condition requiring HAL to ensure its procurement of capital projects is efficient and economical, and that it must publish its policies and procedures on how it will achieve this.
- Consultation condition: the CAA has included a new condition requiring HAL to consult stakeholders on a number of issues. HAL will have to publish protocols setting out how it will do this.
- Conditions on payment of fees and charges for other services: the CAA is not proposing any changes to these conditions.
- Regulatory accounts, financial resilience and continuity of service plan conditions: the CAA is not proposing to make any changes to these conditions.

16. In addition, the CAA has identified a possible need for a new licence condition, to be developed next year when the licence is in place, relating to the planning and delivery of capital projects. HAL's reaction to the CAA's initial proposals on the WACC included revising unilaterally the capex programme outside the agreed Constructive Engagement (CE) process. The CAA has therefore discussed with HAL including a licence condition relating to delivery of agreed capex, possibly putting greater accountability on HAL with regards to the CE process.

Next steps

17. Between now and the implementation of the Q6 price control on 1 April 2014 there are a number of steps.

- 4 November 2013: responses to the final proposals consultation must be submitted to the CAA.

- January 2014: the CAA will publish its decision on the Market Power Test (MPT) for HAL. Assuming that the MPT for HAL is met, the CAA will publish its decision on economic regulation and the final notice of the proposed licence and its conditions under section 15(1) of the Act.
- February 2014: the licence and final conditions under section 15(5) of the Act will be published, to come into force on 1 April 2014. Stakeholders will then have six weeks to decide whether or not to lodge an appeal with the Competition Commission (CC).
- 1 April 2014: the Q6 price control will come into force. If an appeal is lodged then there is no automatic suspension of the licence pending the CC's (or Competition and Markets Authority (CMA), the CC's successor body from 1 April 2014) decision.
- April 2014: The CC/CMA has ten weeks from the date of the licence grant (not from the receipt of the stakeholders' decision to lodge an appeal) to decide whether to give the stakeholders leave to present an appeal. The CC/CMA then has 24 weeks (again, from the date of the grant of the licence) to determine the appeal. The CC/CMA may request an eight-week extension to its deadline.

Responses

18. Responses to these final proposals must be sent to airportregulation@caa.co.uk no later than 4 November 2013. Parts of the responses that are confidential should be clearly marked as such.

CAA

October 2013

CHAPTER 1

Introduction

Purpose of this document

1.1 This document sets out the CAA's final proposals for the economic regulation of HAL from 1 April 2014 (Q6). The CAA is making these final proposals pursuant to its powers and duties in the Act. The main part of Part 1 of the Act came into force on 6 April 2013 and replaces the framework for airport economic regulation under the Airports Act 1986 (AA86) that has governed all previous quinquennial reviews.

1.2 The CAA welcomes views on its final proposals contained within this document by no later than 4 November 2013. The CAA cannot commit to take into account representations after this date. The CAA reserves the right not to take into account information, or place less weight on information that is provided after 4 November 2013 that could have been provided earlier.

1.3 The CAA has published a number of relevant documents alongside these final proposals. These include a Technical Appendix to this document that contains the CAA's views on the appropriate WACC for HAL. The CAA has also published a number of independent consultants' reports that it commissioned. These reports can be obtained from the CAA's website.[2]

1.4 The CAA has reflected views from stakeholders based on their submissions to the CAA. The CAA has endeavoured to check the accuracy of all these attributed statements. Should any stakeholder consider that the attributed statement does not reflect their previous submissions to the CAA, they may raise this in their response to this document.

1.5 References in this document to 'the airlines' mean views submitted to the CAA by the representative body for airlines for the purposes of CE. In the case of Heathrow, it means the London Airline Consultative Committee (LACC). The CAA acknowledges that the views of individual airlines may differ on particular issues.

[2] http://www.caa.co.uk

1.6 This is a redacted version of the CAA's final proposals. Some information has been removed at HAL's request on the basis that it is commercially confidential. Redactions are clearly marked. In accepting redactions for the purposes of this document, the CAA reserves its right to revisit its position for subsequent publications.

1.7 The price base used in this document is 2011/12 prices unless otherwise stated.

Who should be regulated?

1.8 The Act prohibits an operator of a dominant airport area at a dominant airport from charging for airport operation services unless it has a licence granted by the CAA. An airport area is dominant if the CAA determines (and publishes) that the MPT is met in relation to the area by the relevant operator. The MPT has three parts:

- Test A: the relevant operator has, or is likely to acquire substantial market power (SMP) in a market, either alone or taken with such other persons as the CAA considers appropriate;
- Test B: that competition law does not provide sufficient protection against the risk that the relevant operator may engage in conduct that amounts to an abuse of that SMP; and
- Test C: that, for users of air transport services, the benefits of regulating the relevant operator by means of a licence are likely to outweigh the adverse effects.

1.9 The CAA published its 'minded to' position in relation to the MPT in May 2013. The CAA considers that the MPT is likely to be met by HAL in relation to, at least, the core area of Heathrow and this is likely to endure over the period 2014 to 2019. Assuming that the CAA's 'minded to' position that the MPT is met is confirmed in its final decision, HAL will require a licence from April 2014 to lift the prohibition on levying charges.

Structure of the remainder of the proposals

1.10 Following this Introduction, the remainder of the final proposals is structured as follows:

- Chapter 2: Form of regulation.
- Chapter 3: Traffic forecasts.
- Chapter 4: Capital expenditure.
- Chapter 5: Capital efficiency.
- Chapter 6: Operating expenditure.
- Chapter 7: Commercial revenues.
- Chapter 8: Other revenues and charges.
- Chapter 9: Q6 Regulatory Asset Base.
- Chapter 10: WACC, calculation of a price Cap and financeability.
- Chapter 11: Service quality.
- Chapter 12: A licence for HAL.

1.11 There are three Appendices:

- Appendix A: Draft HAL licence
- Appendix B: Draft RAB roll-forward condition
- Appendix C: Other service quality issues.
- Appendix D: List of abbreviations.

1.12 In addition, the CAA is publishing a Technical Appendix on the WACC simultaneously with this consultation document.[3]

1.13 The CAA received many responses to its initial proposals. It has carefully read and considered all the points made in each response. The final proposals contain summaries of, and answers to, many of those points. However, considerations of space have meant that it has not been possible to respond in detail in this document to each point raised. Respondents should not assume, therefore, that the

[3] Available from www.caa.co.uk

absence of detailed consideration of a point raised means that that point has not been carefully considered.

Questions for stakeholders

1.14 While the CAA has consulted on many aspects of these proposals previously, it would welcome further feedback. It recognises that some stakeholders have more resources than others to engage with the detail. That said, it is important the final proposals are seen as a package. Hence, the CAA would especially welcome feedback from stakeholders on the following strategic questions.

- Does the proposed cap on increases in airport charges[4] of RPI+0% per year represent a fair but challenging target for HAL?
- Is the decision to base its proposals on the £3 billion capex programme in HAL's ABP appropriate?
- Is the level of challenge for HAL's operating efficiency appropriate?
- Is the CAA's approach to developing the HAL licence appropriate?

Contact details for your response

1.15 Please email your response to airportregulation@caa.co.uk. If you would like to discuss informally with the CAA any aspect of this document, please contact Peter John (peter.john@caa.co.uk) or Tim Griffiths (tim.griffiths@caa.co.uk).

1.16 Where responses, business plans or other submissions include estimates of the price cap, building blocks or similar financial information, such estimates and information should be expressed in 2011/12 prices.

[4] a) Charges levied on operators of aircraft in connection with the landing, parking or taking off of aircraft at the airport (including charges that are to any extent determined by reference to the number of passengers on board the aircraft), including any separate charge for aerodrome navigation services; and

b) Charges levied on aircraft passengers in connection with their arrival at, or departure from the airport by air.

1.17 The CAA will publish responses to this consultation on its website shortly after the close of the consultation period. If there are parts of your response that you consider commercially confidential, please mark them clearly as such. Please note that the CAA has powers and duties with respect to information disclosure that can be found in section 59 to, and Schedule 6 of, the Act and in the Freedom of Information Act 2000.

Next steps

1.18 Before the implementation of the Q6 price control on 1 April 2014, there are a number of steps.

- 4 November 2013: responses to the final proposals consultation must be submitted to the CAA.
- January 2014: the CAA will publish its decision on MPT for HAL. Assuming that the MPT for HAL is met, the CAA will publish its decision on economic regulation and the final notice of the proposed licence and its conditions under section 15(1) of the Act.
- February 2014: the CAA will issue the licence and final conditions under section 15(5) of the Act, to come into force on 1 April 2014. Stakeholders, including HAL and airlines, will then have six weeks to decide whether or not to lodge an appeal with the Competition Commission (CC).
- 1 April 2014: the Q6 price control will come into force. If an appeal is lodged then there is no automatic suspension of the licence pending the CC's (CMA's, the CC's successor body from 1 April 2014) decision.
- April 2014: The CC/CMA has ten weeks from the date of the publication of the licence (not from the receipt of the stakeholder's decision to lodge an appeal) to decide whether to give the stakeholder leave to present an appeal. The CC/CMA then has 24 weeks (again, from the date of publication) to determine the appeal. The CC/CMA may request an eight-week extension to its deadline.

CHAPTER 2
Form of regulation

2.1 This chapter contains the CAA's final proposals for the design of the price control that will apply to HAL during Q6. It sets out the CAA's statutory duties that it must follow in formulating a price control and then discusses:

- the form of the control and whether to continue with a regulatory asset base (RAB) approach; and
- the duration of the Q6 control.

2.2 It then discusses a number of issues related to the detailed design of the price control including:

- whether to set the control on a single- or a dual-till basis;
- whether to include a mechanism for the recovery of the costs of major airport expansion projects;
- safeguarded assets;
- treatment of unanticipated changes in security costs, or the S factor;
- the proposed BR factor for the partial passthrough of changes in business rates costs owing to the 2017 revaluation;
- the proposed N factor for the passthrough of noise costs;
- a rolling opex incentive mechanism;
- traffic risk sharing;
- treatment of over- or under-recoveries, or the K factor;
- treatment of inflation; and
- non-passenger flights.

CAA's duties

2.3 The Act creates a new framework to govern the application of economic regulation to the airport sector. In essence, it modernises the previous arrangements and brings the CAA's duties and powers into line with best practice. Under the revised framework, the CAA has a new primary duty focused on the interests of passengers and those with rights in cargo. The scope of this duty concerns the range, availability, continuity, cost and quality of airport operation services. The CAA must carry out its functions, where appropriate, in a manner that will promote competition in the provision of airport operation services. The Act enables the CAA to regulate through a flexible licensing approach.

2.4 Those of the CAA's statutory duties which are most relevant to setting the Q6 price controls are set out in figure 2.1 below.

Figure 2.1: CAA statutory duties under the Act

S1	CAA's general duty
(1)	The CAA must carry out its functions...in a manner which it considers will further the interests of users of air transport services regarding the range, availability, continuity, cost and quality of airport operation services.
(2)	The CAA must do so, where appropriate, by carrying out the functions in a manner which it considers will promote competition in the provision of airport operation services.
(3)	In performing its duties under subsections (1) and (2) the CAA must have regard to: (a) the need to secure that each holder of a licence...is able to finance its provision of airport operation services in the area for which the licence is granted, (b) the need to secure that all reasonable demands for airport operation services are met, (c) the need to promote economy and efficiency on the part of each holder of a licence...in its provision of airport operation services at the airport to which the licence relates, (d) the need to secure that each holder of a licence...is able to take reasonable measures to reduce, control or mitigate the adverse environmental effects of the airport to which the licence relates, facilities used or intended to be used in connection with that airport…and aircraft using that airport, (e) any guidance issued to the CAA by the Secretary of State..., (f) any international obligation of the United Kingdom notified to the CAA by the Secretary of State..., and

S1	CAA's general duty
	(g) the principles in subsection (4).
(4)	Those principles are that – (a) regulatory activities should be carried out in a way which is transparent, accountable, proportionate and consistent, and (b) regulatory activities should be targeted only at cases in which action is needed.
S104	Regulatory burdens
	The CAA also has a duty not to impose or maintain unnecessary burdens while performing its regulatory functions under Chapter 1 of Part 1 of the Act.

Note: In performing its duties under section 1(1) and 1(2) of the Act the CAA must have regard to any international obligations of the UK notified to it by the Secretary of State. On 12 April 2013 the CAA was notified of the following international obligations, as they affect charges on airlines: Article 15 of the Chicago Convention; Air services agreements in force between the EU and its member states and any third country or countries; and Air services agreements in force between the UK and any third country or countries. These same obligations applied to the CAA in previous price control reviews conducted under the AA86.

Form of the control

Issue

2.5 In previous quinquennia, the CAA has set price controls for UK regulated airports using a RAB-based price cap.

CAA's initial proposals

2.6 The CAA's initial proposal for the form of HAL's control was to set another RAB-based price cap, for several reasons:

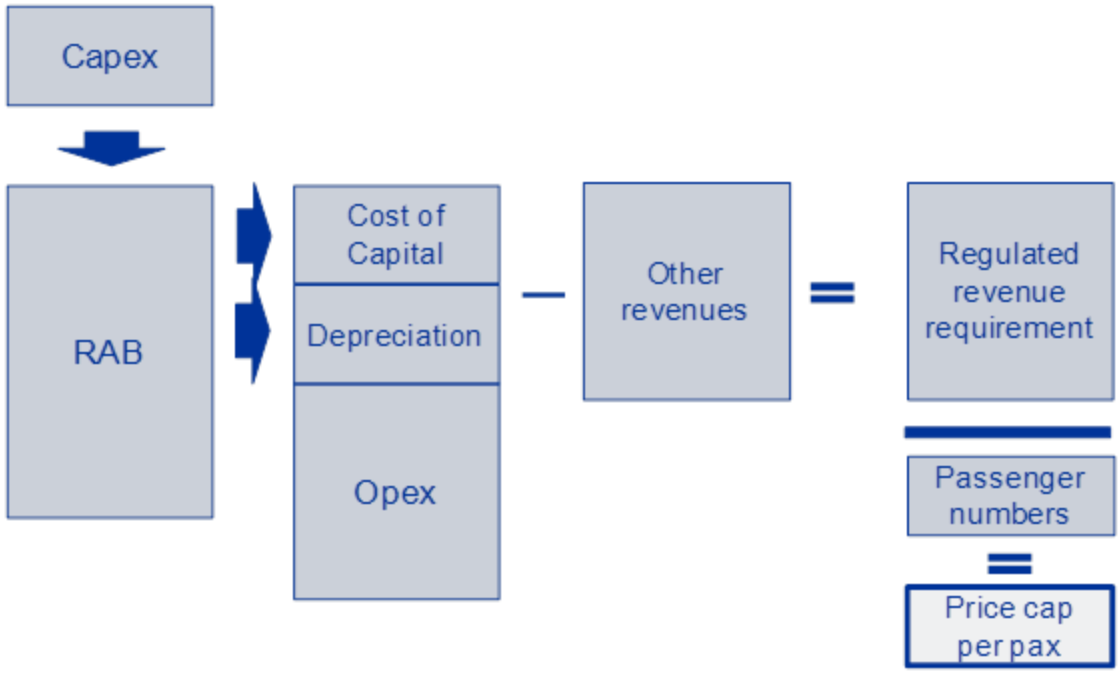
- the CAA considered that this form of regulation is appropriate given HAL's degree of market power. The RAB is a well-known model for regulation for organisations which have SMP. For example, it is used in the UK in regulated sectors such as energy, water, rail, and wholesale telecommunications;
- the RAB approach is appropriate where there is a requirement to ensure that there is a well-understood way of balancing the needs of users today and users in the future. This is because the RAB approach ensures that airport prices should be no more than the minimum needed to remunerate an efficient airport operator, whilst

ensuring a fair return on investment;

- during the business planning for CE, there appeared to be a high level of consensus between HAL and the airlines that the calculation of maximum price caps should be based on a RAB-based single-till methodology. HAL's business plans were prepared on this basis, as were responses from the airlines; and
- the CAA has consulted stakeholders, including HAL and the airlines, about alternative forms of regulation. However, there appears a broad consensus that none of these alternatives would be as effective as a RAB-based approach for HAL.

2.7 Figure 2.2 below illustrates a RAB-based control.

Figure 2.2: Building blocks to calculate the HAL price cap



Source: CAA

Stakeholder views

2.8 The CAA received two responses which contained substantive comments on the form of the control. The LACC and Virgin Atlantic Airways (Virgin) both continue to regard RAB-based regulation as appropriate for HAL.

CAA's final proposals

2.9 Given the high degree of stakeholder consensus on the issue, and the four reasons stated in the initial proposals, the CAA's final proposal is to continue to use RAB-based regulation.

Duration of the control

Issue

2.10 During CE and in their submissions to the CAA, both HAL and the airlines assumed that the price control period would remain at five years, with 31 March year ends. HAL requested that the CAA consider changing the regulatory year end from 31 March to 31 December to align it with HAL's year end for statutory accounting purposes. HAL's FBP proposed aligning the periods by means of reducing the initial 'year' of Q6 to nine months, meaning that Q6 would be composed of an initial nine month period (1 April 2014 to 31 December 2014) followed by four years to 31 December 2018.

2.11 HAL may request that its price control be reopened at any time. The CAA would consider such a request in the light of its statutory duties under the circumstances prevailing at the time.

CAA's initial proposals

2.12 The CAA's initial proposals assumed a five year duration for the Q6 price control, consistent with previous precedent and the parties' assumptions during CE. The CAA invited Stakeholder views on HAL's request to change the regulatory year end. The CAA's initial view was that it would not be appropriate, at this stage in the process, to extend Q6 to five years and nine months because the nine month period after April 2019 has not been subject to CE nor included in submissions to the CAA. The CAA noted that, to set a control on a four years and nine month basis, it would require all further submissions that include estimates of building blocks to be both on a nine month and four year basis and on a five year basis.

Stakeholder views

2.13 None of the responses to the CAA's consultation stated that a price control duration of approximately five years was inappropriate. Two respondents addressed the question of whether to align the price

control year with the financial year.

- HAL stated that alignment of the regulatory and financial year would be in the interest of all stakeholders, and enhance transparency and forecasting, and simplify both financial management processes and regulatory reporting.
- The LACC reserved its position pending further consideration.

CAA's final proposals

2.14 Following consideration of the responses, the CAA's final proposals are for a five year control.

2.15 The CAA believes that a control coinciding with HAL's financial year could present benefits in transparency and in facilitating regulatory calculations. The CAA is therefore minded to change the duration of the price control in this way between the final proposals and the implementation of the price control on 1 April 2014 provided that the required financial modelling and licence changes can be implemented in time. If this is not possible, it will implement these changes during the first year of Q6. However, such a change is exceptional, and the CAA does not envisage changing the financial year again during Q6.

Single- and dual-till

Issue

2.16 A single-till control deducts non-aeronautical revenues (such as commercial revenues) from forecast costs to arrive at the revenue requirement from airport charges. A dual-till control bases allowed revenues only on forecast costs. The CAA based its initial proposals for HAL on a single-till approach. The CAA noted that this was the basis of HAL's business plans and the responses from the airlines. There was a significant debate during previous regulatory reviews about the use of the single-till.[5]

CAA's initial proposals

2.17 The CAA's initial proposals were based on a single-till approach.

[5] The single-till approach was discussed in detail in the Q4 regulatory process and the issue was considered again in Q5. Both price controls were set on the basis of a single-till approach.

Stakeholder views

2.18 The CAA received three responses which contained substantive comments on the single-till issue.

- The LACC and Virgin favoured retaining the single-till approach.
- The London Borough of Hounslow expressed its concern that single-till regulation kept prices "artificially low" and thereby drives the need for the expansion of Heathrow.

CAA's final proposals

2.19 The CAA does not agree with the point made by the London Borough of Hounslow, that single-till regulation keeps airport prices "artificially low". As noted in the CAA's initial proposals, the single-till regulation replicates the pricing strategies generally used by competitive airport operators, which take retailing and other revenues into account in setting airport charges. The CAA's initial proposals also noted a number of benefits from the single-till mechanism, none of which were disputed by respondents.

2.20 Following consideration of the responses, therefore, the CAA's final proposals are set on the basis of a single-till.

Airport expansion cost recovery mechanism

Issue

2.21 In 2003, the then government's White Paper into the future of air transport in the UK[6] backed the construction of a third runway and sixth terminal at Heathrow. However, following the 2010 election, the government withdrew its backing, and announced the Davies Commission, which is looking into the possible future expansion of Heathrow and other UK airports. The Commission is due to release an interim report late in 2013, and then its final report after the 2015 election. It is possible that planning for, and construction of, a major expansion of Heathrow could start during Q6.

2.22 Policy on airport expansion is a matter for the government. However,

[6] Available at: http://webarchive.nationalarchives.gov.uk/+/http:/www.dft.gov.uk/about/strategy/whitepapers/air/.

the CAA can decide whether to include a mechanism for the automatic recovery of airport expansion costs in HAL's Q6 price control, or whether other mechanisms could be more appropriate. These could include a licence condition automatically reopening the price control in the event that the government backs a major expansion of Heathrow or allowance of the costs in Q7 or subsequent reviews.

CAA's initial proposals

2.23 The CAA's initial proposals did not include any provision allowing HAL to recover the costs of airport expansion.

Stakeholder views

2.24 The CAA received one response concerning a possible mechanism for HAL to recover the costs of airport expansion. HAL set out proposals on "Notified Items" intended to allow for explicit procedures to recover any potential capacity expansion costs. HAL considered that, as currently drafted, the proposed mechanism in the draft licence to reopen the price control was uncertain and would likely be too slow and cumbersome.

CAA's final proposals

2.25 The CAA's current policy on the recovery of preliminary airport expansion costs, such as the planning of the expansion, preliminary consultation, or the airport operator's costs at the planning inquiry, was set out in the Regulatory Policy Statement of its Q5 decision on Heathrow's price control.[7] If the costs are known, or a reasonable estimate can be made at the price control review, the airport operator is given an allowance until the next review, at which point the CAA would conduct a review and allow efficiently incurred costs related to expansion into the RAB. However, at present, the costs of expansion, or indeed whether the expansion will take place, are uncertain. Therefore, no reasonable estimate can be made for the level of costs to be included in the Q6 RAB.

2.26 The final proposals contained in this document are based on HAL's two runway Masterplan, and do not include provision for a significant expansion of the airport. The CAA does not believe that an explicit

[7] Available at http://www.caa.co.uk/docs/5/ergdocs/heathrowgatwickdecision_mar08.pdf. In particular, see Annex E, paragraphs E44-E49.

mechanism in HAL's licence to incorporate expansion costs into HAL's allowed revenues is appropriate at this stage, because:

- it remains highly uncertain whether such costs will be incurred during Q6, if at all;
- it is likely that, if any airport expansion costs are incurred within Q6, they will be relatively small. Significant expenditure on the construction phase of a new runway or new terminal is highly unlikely during Q6;
- even if the government approves expansion at Heathrow, other parties, besides HAL, could be chosen to own or operate the new runway or terminals;
- it is theoretically possible that the CAA could consider that expansion approved by the government jeopardises its fulfilment of its statutory duties. Accordingly, including an automatic mechanism by which expenditure on expansion is included in the RAB without the CAA undertaking an assessment of that expenditure could be inappropriate;
- the CAA does not share HAL's view that a reopening condition in the price control would be too slow, uncertain and cumbersome. Such a condition could be activated relatively quickly once the government's plans for airport expansion were known; and
- the precise mechanism for the recovery of such costs is best decided once their magnitude and timing are known.

2.27 However, the CAA will consider further its treatment of the costs of significant capacity expansion and will consult on a policy statement.

Safeguarded assets

Issue

2.28 In discussions with airlines, the CAA was encouraged to consider different ways of rewarding ‘safeguarded’ assets. Safeguarded assets are created as part of a larger capex programme when it makes economic and construction sense to build an asset (or the space for an asset) for future use. There are five assets safeguarded in Q5 with

a value in excess of £5 million. In total these are valued at £276 million, of which the largest items were Terminal 2B baggage basement (£104 million) and Terminal 2B track transit system station box (£86 million). In addition, there are safeguarded assets in Terminal 5 which were added to the RAB in Q4. None of the Q6 capex plans include significant new safeguarded assets.

2.29 The current approach provides a real return on the assets, adds inflation to the assets and does not depreciate them until they are in use. Current users pay the finance costs (the real WACC), while future users (those that use the assets) pay for the asset including the increase in value because of inflation. The current approach in effect means that users bear the risk of stranded assets. The costs are borne by both current and future users while only future users will receive any benefit from the use of the assets. The CAA aims to avoid, and stakeholders agree that it should aim to avoid, retrospective adjustments to the treatment of assets in the RAB. The CAA considers that if any change is to be made to the treatment of safeguarded assets then it should be prospective[8] only.

2.30 An alternative to the current approach could be for HAL to invest in safeguarded assets at its own risk. If the assets ever came into use, they could be transferred into the RAB and valued at original cost, plus inflation plus a cost of capital (higher than the WACC used in the price cap to reflect the stranding risk borne by the airport operator).

CAA's initial proposals

2.31 The CAA's initial proposal was to retain the existing approach. However, it welcomed further discussion on this issue, especially if there was support for an alternative approach.

Stakeholder views

2.32 Four respondents commented on the treatment of safeguarded assets.

- British Airways (BA) understood the need for some safeguarding. However, it commented that the returns to HAL should mirror the returns to the passenger so that when the passenger enjoyed the full use of the asset, then HAL should earn the full return. Prior to

[8] In this case, prospective could mean safeguarded assets created in Q6 or thereafter, or could mean assets created as part of projects which commenced in Q6 or thereafter.

that, when the passenger does not enjoy the use of the asset, HAL should only earn the cost of debt.

- HAL stated that the current approach was appropriate, proportionate and established the correct incentives. It facilitated the construction of assets before they were required.
- The LACC and Virgin responded that airport users should not fund assets before they were in use. If funding for safeguarded assets was required, the airport operator's opportunity cost of capital, which they stated was the cost of debt, should be used.
- Virgin also responded that the safeguarded asset should not be allowed to appreciate in value over time in the period from completion to the point it enters the RAB.

CAA's final proposals

2.33 The CAA accepts that, in principle, there is an argument for not including safeguarded assets in the RAB, or for allowing a lower cost of capital for those assets before they are used. This could ensure that users benefit from lower prices than would otherwise be the case, for assets which they do not yet use.

2.34 However, altering the approach to calculating the RAB, even if only prospective assets are affected, can lead to increased regulatory uncertainty, and hence an increase in the overall cost of capital. Since the value of the safeguarded assets is small compared to the RAB as a whole, removing safeguarded assets while increasing the return on the RAB to compensate could increase, rather than reduce, overall airport charges.

2.35 Accordingly, the CAA's final proposals are based on the current approach to the remuneration of safeguarded assets. In the event that a significant increase in capacity at Heathrow is approved by the Government, involving a large number of safeguarded assets, it may be appropriate to revisit this issue at that time.

Security cost passthrough (S factor)

Issue

2.36 The risks arising from future security requirements are subject to

relatively wide bounds of uncertainty. Rather than deal with this uncertainty by making conservative (i.e. high) estimates of future security costs in the base case for setting the price cap, it seems more reasonable for HAL to passthrough more of the actual variances in costs as they arise.

2.37 The Q5 price control design included a passthrough mechanism within the control period for security cost increases resulting from a security standard tighter than that assumed by the CAA in setting the price cap. The CAA set the pass-through factor at 90% of the cost increase above the given deadband (£17 million).

CAA's initial proposals

2.38 The CAA's initial proposals were that:

- the security cost claim mechanism should be retained for Q6; and
- a pass-through rate of 90% and a deadband of £20 million (increased from £17 million to reflect inflation since the Q5 settlement) seemed appropriate.

Stakeholder views

2.39 Three stakeholders commented on the CAA's initial proposals for the S factor.

- BA agreed with the CAA's proposals.
- HAL stated that changes in security legislation and requirements are outside its control. Hence there should be no deadband, or to put it another way, costs for meeting such changes should be passed through to customers in their entirety.
- the LACC supported the proposed increase in the S factor deadband to £20 million, in line with RPI. It also stated that the S factor should be symmetrical, taking into account cost savings to HAL due to reduced security requirements as well as extra costs from increased security requirements. The S factor should be for the aggregated increase in security costs in a year – this would maintain the incentive properties of the S factor. It should not be applied for each occasion of increased costs.

CAA's final proposals

2.40 Given the unpredictability of Department for Transport (DfT) security

requirements over the next quinquennium, the CAA considers it appropriate that a significant amount of unanticipated security costs above the deadband be passed directly through to users. However, the CAA considers that, though security requirements are mandatory, it is still appropriate that HAL be incentivised to control the costs of meeting those requirements, and therefore that HAL's price control should include both the £20 million threshold and the 90% sharing factor.

2.41 The CAA agrees with the airlines that, should security requirements be relaxed in any significant way, the unanticipated cost savings should be passed back to airlines. Accordingly, the CAA's final proposal is for a symmetrical S factor with a deadband set at £20 million and a 90% sharing factor.

Rates revaluation costs

Issue

2.42 A national revaluation of commercial property for the purpose of calculating business rates is expected in 2017. HAL's January 2013 FBP assumed that the revaluation would increase national business rates by £35 million (equivalent to 26% increase[9]). The CAA's consultants, Steer Davies Gleave (SDG), stated in its report that this was likely to be an overestimate.

2.43 Regulators often include a pass-through term in the price control to reduce the risk faced by regulated companies caused by a particular cost item. The CAA has used a partial pass-through for security costs (see the previous section). Another way is through a commitment by the regulator to allow the company to recover the actual level of costs in the future. The CAA understands that the Office of Rail Regulation (ORR) commits to passing through business rates costs incurred during each price control period at the next review, rather than including a specific term in the price control.

[9] Steer Davies Gleave (2012) Review of Other Operating Expenditure at Heathrow Airport, page 12, available at www.caa.co.uk.

CAA's initial proposals

2.44 The CAA's initial proposals did not include a pass-through term for business rates costs.

Stakeholder views

2.45 The CAA received one response on the possibility of a rates revaluation mechanism. HAL proposed a rates revaluation pass-through mechanism for Q6, given the external nature of the impact and cited examples of such mechanisms used by the ORR and Ofgem.

CAA's final proposals

2.46 The CAA believes that there can be a case for passing through individual cost items where:

- the cost item is of uncertain magnitude;
- the regulated company has little or no control over the cost item; and
- the cost item is likely to be a significant proportion of the regulated company's total costs.

2.47 There can also be a case for such mechanisms where there is an overriding public interest consideration (for example, in security costs) in having the output (for example, effective security) delivered in full rather than in the most efficient manner possible. However, this does not seem to be the case for rates revaluation costs. Accordingly, the CAA has used the criteria above to assess whether a pass-through mechanism is appropriate. After careful consideration, the CAA believes that each of these criteria is satisfied for rates revaluation costs:

- the level of the increase will not be decided until the review is conducted;
- the revaluation of business rates is conducted by the government, and the CAA understands that there is some, but not much, scope for companies to influence the outcome of the review; and
- at 9.6% of HAL's opex in 2011/12, business rates are a significant part of HAL's costs.

2.48 The CAA has discussed the possibility of passing through the difference in the CAA's forecast for rates revaluation costs and the outturn with the LACC. It did not receive any objections to the proposed mechanism or to the transfer of risk involved. Accordingly, it has included a variable, the BR term, to give effect to this change. It considers, however, that HAL has the ability to have some influence on rates revaluation. It has, therefore, included a sharing factor of 80%. Under this provision, 80% of the unanticipated increase in costs will be included in airline charges, while HAL will absorb the remaining 20% until the CAA resets the allowance at the Q7 review.

2.49 The CAA expects the transfer of risk from HAL to the airlines to be reflected in a lower cost of finance for HAL. It has taken this into account in setting HAL's cost of capital allowance.

Noise costs

Issue

2.50 HAL is required under statute to fund a significant level of costs caused to local residents and businesses by aircraft noise. HAL has stated that it has no direct control over much of these noise costs. HAL's noise costs over the past five years were around £5 million per year.

CAA's initial proposals

2.51 The CAA's initial proposals did not contain a mechanism for the passthrough of noise costs.

Stakeholder views

2.52 The CAA received one substantive comment on a pass-through mechanism for noise costs. HAL responded that it had explored a number of different regulatory mechanisms by which noise costs could be recovered. It felt that the cap and collar mechanism was fair as HAL and its users would not be exposed to the full risk or benefit and the thresholds would act as an incentive measure. HAL therefore recommended that a cap and collar mechanism be implemented for Q6 whereby via the K factor, HAL would return any costs progressively below £24 million and would receive full compensation for any justifiable expenditure progressively over £26 million, through

a sharing mechanism.

CAA's final proposals

2.53 The CAA has considered whether to include a pass-through for noise costs in the light of the criteria listed in the previous section of this chapter. While noise costs are uncertain, the CAA believes that HAL has some control over how much it spends. In addition, at £5 million per year, noise costs are only around 0.5% of HAL's opex. The CAA has seen no evidence that noise costs are likely to increase significantly over Q6. Therefore, a pass-through mechanism does not seem appropriate in this instance. It would reduce the incentives on HAL to minimise noise costs, thereby jeopardising the CAA's statutory duty to promote efficiency and economy. However, it would do relatively little to remove cost risk from HAL. Accordingly, the CAA has not included a pass-through mechanism for noise costs in its final proposals.

Rolling opex incentive mechanism

Issue

2.54 In other sectors, such as the CAA's economic regulation of NATS (En Route) plc (NERL), a mechanism to increase the incentive on regulated companies to make opex savings towards the end of the control period has been introduced. Such mechanisms give the regulated company greater incentive to make savings because it is allowed to keep those savings for a longer period (i.e. into the subsequent control period). The mechanism can also equalise the incentive to make efficiencies in each year of the control period. This mechanism is generally known as a rolling opex incentive mechanism. The CAA raised this idea earlier in the Q6 review and invited stakeholder feedback.

CAA's initial proposals

2.55 Given that little progress has been made during CE on opex efficiency incentives, the CAA's initial proposals did not introduce such a mechanism.

Stakeholder views

2.56 Two respondents to the CAA's initial proposals referred to the

possibility of an opex rollover mechanism. BA and Virgin agreed with the CAA that it would not be appropriate to include such a mechanism in HAL's Q6 price control.

CAA's final proposals

2.57 Given the reasons set out in the initial proposals, the CAA has not included such a mechanism in its final proposals.

Traffic risk sharing mechanism

Issue

2.58 At an earlier part of the Q6 review, the CAA asked whether there was merit in introducing a traffic risk sharing mechanism. The CAA has introduced such a mechanism for its regulation of NERL. During CE, neither HAL nor the airlines supported this concept, preferring to consider traffic risk through the medium of the traffic forecasts and the WACC.

CAA's initial proposals

2.59 Given this lack of support for the concept and the parties' preference to handle traffic risk using alternative mechanisms, the CAA did not pursue this concept for its initial proposals.

Stakeholder views

2.60 Two respondents commented on the possibility of a traffic risk sharing mechanism. HAL responded that it would consider its position further, while Virgin agreed that such a mechanism was not required.

CAA's final proposals

2.61 Given that no stakeholders have advanced persuasive reasons for the inclusion of such a mechanism, the CAA's final proposals do not include it.

K factor

Issue

2.62 HAL sets its structure of charges so that it expects to earn a revenue

yield per passenger equal to, or less than, the price cap (the permitted yield). In setting its structure of charges, HAL has to forecast traffic mix (for example, the share of domestic and international passengers who are subject to different charges, or the number of passengers per aircraft). Such mix cannot always be accurately forecast. The actual yield in a year is only precisely known at the end of the year, when charges for the next year have been set. Over- or under-recovery of the permitted yield (in total) is currently subject to a correction factor applied two years later.

2.63 In Q5 the correction mechanism allowed for financing costs. Claims for previous under-recoveries were uplifted by the Treasury Bill rate, while repayments for previous over-recoveries were uplifted by the Treasury Bill rate plus 3%. The purpose of the asymmetric finance costs was to give HAL a disincentive to over-recover deliberately.

CAA's initial proposals

2.64 The CAA 's initial proposal was for this mechanism to continue in Q6.

Stakeholder views

2.65 Three respondents commented on the CAA's initial proposal to continue the K factor.

- BA and Virgin both supported the CAA's proposal.
- HAL supported the CAA's initial proposal, and said that over- or under-recovery in the last two years of Q5+1 should be carried over to the first two years of Q6. HAL also stated that noise costs should be included in the K factor, with a cap and collar mechanism. The CAA's proposed treatment of noise costs is discussed in a previous section of this chapter.

CAA's final proposals

2.66 The CAA's final proposals contain a correction factor mechanism. The CAA will carry over under or over-recovery from the end of Q5+1 to Q6.

Inflation

Issue

2.67 Inflation has two functions in the price control design:

- to provide investors in HAL with an allowance to cover the erosionary effects of inflation on their investment return (the RAB is indexed each year for this purpose); and
- building blocks are modelled in real prices (i.e. excluding inflation) and the price cap is expressed as RPI±X%.

2.68 In previous control periods, RPI inflation was used for both of these functions. However, since they are independent of each other, the CAA could use a different measure of inflation for each.

2.69 Investors require a return for inflation and in the current regulatory design this is included by indexing the RAB each year. An alternative would be to include inflation in the cost of capital. The measure of inflation that should be used is the same measure implicitly used in deriving the real cost of capital. Financial markets currently use RPI – for example index-linked gilts are indexed to RPI, and the CAA's estimate of the cost of capital is based on market data and thus also implicitly assumes RPI inflation. It would therefore appear that RPI inflation is the appropriate measure of inflation for indexing the RAB during Q6.

2.70 The inflation measure used in the price cap should be the relevant inflation index for the cost base. For example, as a large part of opex is wages, if wages were thought to be set with reference to RPI inflation, then RPI would be the appropriate measure of inflation for the price cap. The CAA notes that, while previously most regulators used RPI to measure inflation, there has been a move towards CPI in some instances. Nevertheless, RPI is still used by most regulators in price control reviews, and for that reason and for consistency with past decisions, the CAA considered that its initial proposals should be to retain RPI for indexing the price cap in the RPI±X% formula.

CAA's initial proposals

2.71 The CAA considered that linking both the RAB and the price cap to

inflation substantially reduces HAL's exposure to inflation risk.[10] There is a risk that the Office for National Statistics (ONS) changes the definitions of some or all of the price indices during Q6. The CAA considers that the risk of a change in indices' definitions should be borne by HAL and it would bear the gain or loss arising from any changes in the definition during Q6. For the avoidance of doubt, HAL has, in previous control periods, been exposed to this risk and the ONS makes frequent, relatively minor, changes to the definitions. Therefore, the CAA considered that no additional or explicit cost of capital allowance was required.

Stakeholder views

2.72 Two respondents commented on the treatment of inflation in the CAA's price control review.

- BA agreed with the CAA's assessment of inflation; and
- Virgin stated that the CAA should keep the ONS definitions of inflation under review.

CAA's final proposals

2.73 The CAA has seen no reason to change its RAB indexation methodology, and respondents did not give any reasons for doing so. Accordingly, the CAA will base its treatment of inflation during Q6 on the arrangements which were in place during Q5. The CAA will expect HAL to bear the risk of changes in the inflation index during Q6, as during the Q5+1 period.

Non-passenger flights

Issue

2.74 Following a CC public interest finding, a separate condition for non-passenger flights was introduced in Q4, and retained for Q5. Before the introduction of the separate condition, the mathematics of the revenue per passenger price control condition led to the perverse effect that if HAL priced up to the cap it received no additional revenue from non-passenger carrying flights. The condition removed this oddity. It required charges for non-passenger flights to be no more

[10] Inflation risk is the risk that actual inflation turns out to be different to what was expected.

than the charges for an equivalent passenger carrying flight.

CAA's initial proposals

2.75 The CAA's initial proposal was to retain this condition.

Stakeholder views

2.76 Two respondents commented on the treatment of non-passenger flights. Both BA and Virgin supported the continuation of the present arrangements.

CAA's final proposals

2.77 The present condition protects the interests of cargo owners without prejudicing the interests of passengers or other users of the airport. The CAA is therefore of the view that it is consistent with its fulfilment of its statutory duty to protect the interests of those with rights in cargo. Given this and the lack of any support for changing the treatment of non-passenger flights, the CAA's final proposal is to retain this condition.

CAA's final proposals

2.78 To summarise, the CAA's final proposals for the form of the price control are:

- Form of control: an RPI-X, RAB-based regulation.
- Duration of the control: a five year control, possibly adjusted to four years and nine months if the modelling can be completed by the time the control is implemented.
- Single- or dual-till: a single-till control.
- Airport expansion cost recovery mechanism.
- Safeguarded assets: the final proposals continue the present treatment of safeguarded assets.
- S-factor: the final proposals continue the present S-factor. The CAA has increased the deadband to £20 million in line with inflation during Q5. The CAA will change the mechanism to ensure that 90% cost savings from unanticipated relaxations in security conditions are passed through to customers, subject to a

£20 million deadband.

- BR factor: the final proposals contain provision for a BR factor.
- Noise costs: the final proposals do not contain provision for a pass-through mechanism for noise costs.
- Opex rollover mechanism: the final proposals do not contain provision for such a mechanism.
- Traffic risk sharing mechanism: the final proposals do not contain provision for such a mechanism.
- K factor: the final proposals continue the present correction mechanism.
- Inflation: the final proposals continue the present treatment of inflation.
- Non-passenger flights: the final proposals continue the present treatment of non-passenger flights.

CHAPTER 3

Traffic forecasts

3.1 Traffic forecasts are important in a building block price control in a number of ways:

- they define the denominator in the price cap for Q6, which sets a maximum revenue yield;
- they influence other building blocks dependent on passenger numbers, such as opex, commercial revenues and service quality; and
- if the traffic forecasts include within them an allowance for traffic risk, this will need to be considered in estimating the appropriate WACC for HAL.

3.2 This chapter describes the CAA's approach to forecasting passenger volumes at Heathrow. It sets out:

- the approach to forecasting used;
- the forecasts contained in HAL's July 2013 ABP;
- issues between HAL and the airlines; and
- the forecasts on which the CAA's final proposals are based.

Approach to forecasting

3.3 HAL's traffic forecasting methodology consists of two separate forecasting models: an econometric model, which analyses likely future demand, and a capacity model, which extrapolates from trends in supply and known airline capacity plans. Both models include an allowance for non-economic demand 'shocks' and generate a probability distribution of future traffic through a 'Monte Carlo' technique.[11]

[11] Each input is considered as a range of possibilities and multiple forecasts are generated. Each uses particular input values chosen from those ranges.

3.4 The econometric model is based on a regression analysis of passenger traffic at Heathrow only for the period from 1996 until 2011, against economic, cost and airline fare variables. Forecasts are generated using ranges for each of these input variables based upon standard industry sources.

3.5 The capacity model explains passenger numbers as a function of supply decisions: number of aircraft, average aircraft size and passenger load factor. The model considers long haul and short haul services separately, and therefore requires an assumption about the future proportion of such services at the airport.

HAL's July 2013 Alternative Business Plan

3.6 For HAL's January 2013 FBP, the two models produced very similar output for Q6. HAL chose to use the output from the econometric model. For the June 2013 Revised Business Plan (RBP) and the July 2013 ABP, HAL produced updated Q6 traffic forecasts, which were higher by 2.6 million than those in the FBP. HAL gave five reasons for the change in traffic forecasts between the FBP and its response.

- updates to the base year to reflect passenger traffic in the first three months of 2013 and the Olympic effect,
- a correction to the shocks methodology,
- updated GDP growth forecasts,
- increased taxes on departing passengers, and
- an improved approach to the variance in GDP forecasts.

3.7 The forecasts are shown in figure 3.1 below. For comparison, the figure also includes the forecasts in the CAA's initial proposals.

Figure 3.1: HAL Q6 traffic forecasts

Passengers (millions)	2014/15	2015/16	2016/17	2017/18	2018/19	Q6
FBP (central case)	69.5	70.3	71.0	71.8	72.6	355.2
ABP/RBP	70.1	70.8	71.5	72.3	73.0	357.8
CAA's initial proposals	70.8	70.7	71.5	72.3	73.1	358.4

Source: HAL

Issues

3.8 The CAA's initial proposals listed four issues of contention between HAL and the airlines concerning traffic forecasts:

- the inclusion of demand shocks;
- the size of demand shocks;
- how to combine econometric and capacity forecasts; and
- truncated and non-symmetric input variables.

3.9 This section considers each in turn.

Inclusion of demand shocks

Issue

3.10 All parties accept that the inclusion of shocks in the forecasting model is likely to produce a more accurate traffic forecast in total for Q6. However, there is concern that the risk faced by the airport operator through such shocks has previously been accounted for in the WACC. Thus, if the likely effect of shocks is to be explicitly included in the traffic forecast, HAL's risk from shocks should be removed from the WACC calculation.

CAA's initial proposals

3.11 The CAA's initial proposals proposed that the traffic forecasts used in the price control calculation should be the best estimate of mean passenger numbers during the forecast period. Since demand shocks are a phenomenon which can affect traffic demand and whose existence is accepted by all parties, the CAA's initial proposals commented that it is appropriate for the traffic forecast to attempt to

account for their effect. The variance from the forecast level of shocks is unquantifiable risk, which is included in the cost of capital.

Stakeholder views

3.12 The CAA received four responses containing substantive comments on the inclusion of demand shocks in traffic forecasts for HAL's price control.

- BA objected to the inclusion of the demand shock generator in traffic forecasts. It commented that, as the demand risk was included in the asset beta, to include it in the passenger forecast without offsetting the risk accounted for elsewhere would be double-counting.
- HAL commented that the inclusion of the expected level of demand shocks in the traffic forecasts was necessary to achieve an unbiased forecast, whilst risk around the forecast should be reflected in the cost of capital.
- The LACC proposed that the risk allowance be included in the equity beta, rather than the traffic forecasts.
- Virgin responded that the CAA's proposals double-counted the issue of volume risk, and were therefore not in passengers' interests. It commented that the CAA had not made a case that the way the CAA dealt with volume risk should be changed.

CAA's final proposals

3.13 The CAA considers that the effects of demand shocks on traffic can be split into two:

- an expected level of demand shocks, which may be accounted in the forecast level of traffic; and
- variations around this expected level, which may be accounted for in the cost of capital, as these constitute risk.

3.14 The allowances for demand shocks in the traffic forecasts and in the cost of capital are two different concepts. The CAA does not, therefore, consider that its proposals constituted double-counting. For example, the CAA may set the price control on the basis of a forecast level of shocks of 1% per annum. However, there could be a 10% chance that the outturn level of shocks exceeds the forecast level by

one percentage point or more. The risk that the outturn is different is borne by the company and its shareholders. The CAA therefore allows a higher rate of return for the company than would otherwise be the case to compensate for this risk.

Size of demand shocks

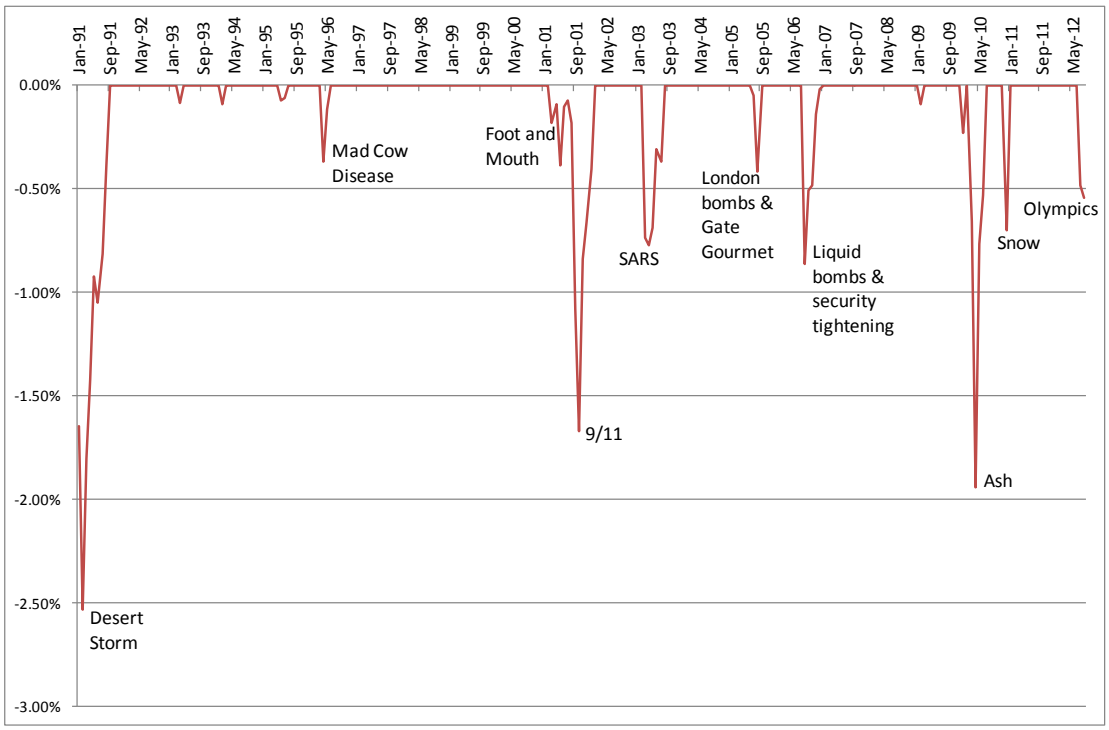
Issue

3.15 In its modelling, HAL defined demand shocks as significant departures from the expected trend in Heathrow's passenger numbers. It excluded the effects of the recession where variances between forecast and outturn passenger volumes are simply due to inaccuracies in forecasts of economic activity. The main shocks experienced at Heathrow were the September 2001 terrorist attacks and the closure of airspace due to volcanic ash in April 2010. However, HAL has identified many smaller shocks, ranging from SARS to the 7 July London bombings to disruption from snow during the winter of 2010.

3.16 Airlines have commented that this analysis overestimates the impact of shocks since many trips affected by shocks, rather than being lost, are deferred into the following months or to other destinations, effects not large enough to be detected as a 'positive shock'. Also the size of many shocks is related to HAL's ability to recover from adverse events (e.g. winter weather) and so the risk should be borne by the airport operator and not mitigated through the traffic forecast.

3.17 The distribution of shocks used in HAL's model has been derived from the period January 2001 to August 2012. However, as figure 3.2 shows, this period had many more demand shocks identified than the years preceding it. HAL has used this period because it considers that shocks are more likely and their effects stronger at a capacity constrained airport, and because it is from 2001 that Heathrow's movements approached the annual 480,000 cap.

Figure 3.2: Heathrow traffic shocks 1991 – 2012, effect on annual passengers



Source: HAL

CAA's initial proposals

3.18 In its initial proposals, the CAA noted that the extent of the major shocks to Heathrow traffic over this timescale (Desert Storm, 9/11, SARS and ash) was not materially affected by capacity constraints, and therefore the expected size of shocks for Q6 should be based on the whole period. The presence of as large a shock as Desert Storm at the start of the period was counterbalanced somewhat by the relatively shock-free period in the mid-to-late-1990s.

3.19 The CAA considered that this analysis could underestimate the effects of shocks since smaller events may be exacerbated by congestion at Heathrow. There may also be merit in the argument that this analysis is an overestimate since the magnitude of certain shocks (for example, snow) is influenced by the efficiency of HAL's response. However, the CAA considered that, to the extent that these arguments are valid, they have only a minor effect on the calculation and may tend to cancel each other out.

3.20 Analysis of the shock effects illustrated in figure 3.2 led the CAA to

conclude that the average effect of demand shocks should be assumed to be -1.2% per annum rather than -1.4% per annum estimated by HAL.

Stakeholder views

3.21 Four respondents commented on the magnitude of the demand shocks to be included in the CAA's traffic forecasts.

- BA commented that the CAA's estimate of size of demand shocks was not appropriate. CAA should undertake regression analysis with shock identification data and should focus on post-1991 data, not post-2001. The CAA should consider excluding Desert Storm from its analysis. Given the different NATO/UN attitude towards intervention in foreign conflicts, the chance of such a war repeating itself in Q6 was low. BA believed that some shocks may be insurable. BA disagreed with the underlying assumption that shocks were solely negative. With 1 in 4 seats leaving the airfield empty there is plenty of scope for positive shocks. BA also maintained that when the adverse scale of any shock was amplified by HAL's actions, the airlines should not be held responsible for the operator's failures.
- HAL responded that 2000 to date was the appropriate base period for consideration and inclusion as Heathrow had effectively been capacity constrained since 2000/2001. HAL did not believe that insuring against volume declines was a realistic proposition.
- The LACC commented that the selection of 1991 by the CAA in itself seemed arbitrary and could add a significant negative bias to scale of the shocks.
- Virgin commented that the selection of 1991 by the CAA for the start of the measurement of the annual average of demand shocks seemed arbitrary and added a significant negative bias to the scale of the shocks. Large shocks should be considered in the assessment, but small shocks should be omitted. The CAA had not justified why airlines should cover HAL's demand risk as well as their own.

CAA's final proposals

3.22 Having evaluated the responses received, the CAA considers:

- that the selection of 1991, which was the date at which the data series in the CAA's possession started, as the start date is neither any more, or any less, arbitrary than any other date;
- that excluding Desert Storm from the analysis for no other reason than the magnitude of its effect would itself be arbitrary; and
- that making judgements about the likelihood of overseas intervention in foreign conflicts during Q6 is beyond the expertise of an economic regulator.

3.23 Accordingly, the CAA has decided not to alter its approach and has used post-1991 data in its calculation of the expected magnitude of shocks going forward.

How to combine econometric and capacity forecasts

Issue

3.24 As described above, HAL has developed two models for forecasting traffic at the airport: an econometric model, which predicts demand, and a capacity model which predicts future supply. Although the latest forecasts from these models are fairly similar through Q6, they could vary. It is therefore necessary to have a method for combining the two outputs to produce a single passenger forecast.

3.25 HAL has used the output of the econometric forecast in its January 2013 business plan, on the basis that the outputs of the two models are sufficiently similar over the Q6 period. However, the airlines have commented that, in the short term, an airline is likely to amend its yield to ensure its services operate at around the target load factor. Therefore in the short term, the capacity forecast should be the more accurate, with the econometric forecast taking precedence in the mid to long term as supply is adjusted in line with demand.

CAA's initial proposals

3.26 Given the similarity of the current outputs of the two forecast methods for Q6, the CAA's initial proposals did not decide upon the best way of combining them at this stage. Therefore, the CAA accepted HAL's decision to use the output of the econometric forecast, with the exception of the first year of the quinquennium where it considers that airlines' capacity decisions are likely to reflect the outturn passenger

numbers better than they reflect long term trend of demand.

Stakeholder views

3.27 Four respondents commented on how to combine capacity and econometric forecasts.

- BA considered that using the capacity model for each year of Q6 was more appropriate. It commented that airlines were likely to amend yields in the short term to meet load factor. The capacity model output could introduce variance with the econometric model. The level of occupancy at Heathrow was also important.
- HAL commented that the econometric model was not designed to be used for individual years, and accordingly that the CAA's proposed approach was flawed. The capacity forecast could be impacted by short-term gaming by the airlines. The econometric model was effectively independent and more robust, and also broadly agreed as the basis during CE.
- The LACC commented that multiple models were appropriate, but the capacity model should be preferred when models differed. An unshocked, corrected version of the capacity forecast was most appropriate during the first two years of Q6, adding 0.9 million passengers to the 2014/15 forecast. The CAA should base Q6 forecasts on the most recent data available within the CAA's regulatory decision timeline for Q6.
- Virgin considered that the CAA should give preference to the capacity model as that is based on airlines' actual plans, strategies and aircraft orders. This was especially true in the short term. Virgin noted that this approach has been used by GAL.

CAA's final proposals

3.28 Having considered the responses received, the CAA believes that the approach set out in the initial proposals remains robust. The use of the capacity model in the first year reflects the fact that airline plans are relatively fixed in the short term. The CAA uses the econometric model for the following years, on the other hand, because airlines can adjust their plans in the light of changing demand, which is heavily influenced by economic growth. The CAA has therefore based its traffic forecasts for the final proposals on the approach set out in the initial proposals.

Truncated and non-symmetric input variables

Issue

3.29 Both forecasting models use a Monte Carlo method, with the distribution of each input variable defined by a truncated normal distribution.[12] For many of the input variables, the distribution is not truncated symmetrically, and therefore the mean of the randomly chosen variable will not be equal to the mode (or peak) of the distribution. The airlines have suggested that this could introduce a downside bias into the traffic forecast.

3.30 The CAA asked HAL to undertake sensitivity runs on its FBP forecasts to examine the effect on the central forecast of truncated and/or non-symmetric distributions of input variables. Figure 3.3 shows selected outputs from this sensitivity analysis.

Figure 3.3: Effect of truncated and non-symmetric input variables

Passengers (m)	2014/15	2015/16	2016/17	2017/18	2018/19	Q6
Econometric model						
With input distributions	69.5	70.3	71.0	71.8	72.6	355.2
No input distributions	69.9	70.7	71.5	72.4	73.3	357.8
Difference	0.4	0.4	0.5	0.6	0.7	2.6
Capacity model						
With input distributions	69.8	71.0	71.4	71.4	71.3	355.0
No input distributions	70.4	71.9	72.3	72.3	72.1	358.9
Difference	0.6	0.9	0.9	0.9	0.8	3.9

Source: CAA

CAA's initial proposals

3.31 In its initial proposals, the CAA noted that, of itself, the effect highlighted in figure 3.3 above may not need to be addressed. However, the CAA considered that, for two key input variables, shocks and total passenger ATMs, the bias introduced by the non-symmetric nature of the distributions was unwarranted.[13] The CAA therefore

[12] A distribution is truncated if its upper and lower ends are removed.

[13] For shocks, the CAA considers that the mean should equal the mean annual effect of shocks from the history illustrated in figure 3.3; and for passenger ATMs, that the mean should equal the latest airline schedule information.

amended HAL's central forecast to remove the bias introduced by the non-symmetric nature of these two distributions.

Stakeholder views

3.32 The CAA received four responses commenting on truncated and non-symmetric variables in its initial proposals.

- BA welcomed the removal of some truncations from the forecast model.
- HAL commented that downside risk was much more significant than upside risk and so a symmetric distribution for ATMs was inappropriate. Recently airlines had become more efficient at predicting passenger flows and proactively reduce ATMs to maintain profitability. The CAA should use the models developed during CE.
- The LACC accepted that a regulatory settlement should take account of adverse demand risks. It noted that Heathrow was not completely full. While it might be close to its runway and ATM limit, there were still significant numbers of unfilled seats. It was therefore inappropriate to argue that the distribution was completely asymmetric.
- Virgin commented that there was a strong possibility of double-counting the risk of truncation in the passenger forecasts and the cost of capital.

CAA's final proposals

3.33 The CAA notes that the changes HAL has made to its forecasting methodology in its latest RBP and ABP traffic forecasts address the above issue. Having considered the responses received, the CAA remains of the view that the approach towards correcting for the effect of non-symmetric truncation on the central forecast outlined in the initial proposals is appropriate for passenger ATMs also. Accordingly, it has adjusted HAL's ABP forecasts to remove the bias introduced by the non-symmetric nature of this distribution.

CAA forecasts

3.34 Figure 3.4 shows the derivation of the CAA's proposed Q6 traffic

forecasts from HAL's Q6 traffic forecasts. The CAA's proposed forecasts are based on HAL's capacity model for the first year and its econometric model for the following years. However, in order to correct the bias introduced by the non-symmetric nature of the distribution of total passenger ATMs and the expected magnitude of shocks going forward, the capacity model forecast for the first year was upwardly adjusted by about 0.4 million and 0.2 million respectively. On the other hand, the econometric forecasts for the remaining years were adjusted by about 0.2 million per year to correct for the shock effects only.

Figure 3.4: CAA proposed Q6 passenger forecasts for Heathrow

Passengers (millions)	2014/15	2015/16	2016/17	2017/18	2018/19	Total
Econometric model						
HAL forecast	70.1	70.8	71.5	72.3	73.0	357.8
Shocks from 1990	0.2	0.2	0.2	0.2	0.2	0.8
CAA forecast	70.3	71.0	71.7	72.5	73.2	358.6
Capacity model						
HAL forecast	70.2	71.2	71.9	72.6	72.3	358.2
Shocks from 1990	0.2	0.2	0.2	0.2	0.2	0.8
Passenger ATMs bias	0.4	0.4	0.5	0.5	0.5	2.3
CAA forecast	70.8	71.8	72.6	73.2	72.9	361.3
Combined forecast						
CAA forecast	70.8	71.0	71.7	72.5	73.2	359.2

Source: CAA

3.35 In summary, the CAA proposes to use the traffic forecasts in figure 3.5 for HAL's Q6 price control. The forecast figures indicate a total of 359.2 million passengers over Q6, compared to 358.4 million in the initial proposals, an increase of 0.2%. HAL's estimate, contained in the ABP, of 357.8 million is 0.4% lower than the CAA's forecast.

Figure 3.5: CAA proposed Q6 passenger forecasts for Heathrow

Millions	2014/15	2015/16	2016/17	2017/18	2018/19	Q6 Total
Passengers	70.8	71.0	71.7	72.5	73.2	359.2

Source: CAA

CHAPTER 4

Capital expenditure

4.1 This chapter considers the appropriate level of capex to be taken into account in the Q6 price control calculation. It consists of the following sections.

- Capex process to date: this sets out the process which has led to the CAA's final proposals, including the CAA's initial proposals and the July 2013 updates to HAL's FBP.
- Approach to determining a capex allowance for HAL during Q6: this outlines the methodology the CAA has followed in developing capex projections for HAL in Q6.
- Magnitude of the Q6 investment programme: this section selects the CAA's preferred option for the Q6 investment programme from HAL's and the airlines' projections.
- Issues: this summarises the major issues which the CAA must determine to set a capex allowance, for which, for various reasons, the new capex development process may be unsuited.
- CAA's final proposals: this sets out the CAA's projections for HAL's efficient capex over Q6.

4.2 Consistent with the building block methodology, new capex incurred during Q6 will be added to the RAB. Each year, a contribution to prices is made from a capital charge (i.e. the WACC multiplied by the average RAB) and a depreciation charge. Therefore, although Q6 capex may not have a significant effect on Q6 prices, it will be fully recovered from customers over subsequent quinquennia.

Capital expenditure process to date

CE and the January 2013 FBP

4.3 During CE, HAL and the airlines reached a significant degree of consensus on many high-level aspects of the Q6 capital plan. These included the extent of asset replacement, widening of taxiways to

cope with more large code F aircraft (e.g. A380s), the closure of Terminal 1 and developing Terminal 2 Phase 2 as the next step towards the Masterplan. HAL and the airlines each produced a prioritised list of projects.

4.4 Although it appeared to the CAA that there was considerable common understanding between HAL and the airlines on the scale and nature of the majority of the capex programme, the HAL Q6 capital plan had not been agreed before the publication of the CAA's initial proposals in April 2013. The main factor limiting the scope for agreement was a difference of view on the high level methodology that should determine the overall scale of the programme. HAL tabled a prioritised plan based on £3 billion of capex, which it considered sufficient to address future demands whilst continuing to enhance the passenger experience and ensure an overall competitive package.

4.5 The airline community provided its own prioritised plan[14] but consistently maintained that the finalised capital plan could only be determined, based on affordability, once all aspects of the regulatory settlement had been considered. Besides these points of dispute, there were a number of other areas where there were residual disagreements. However, it seemed likely, at that time, that most of these disagreements could have been overcome and a common plan agreed before the publication of the updated business plan in July 2013.

HAL's June and July 2013 Business Plan updates and airline projections

4.6 Following the publication of the CAA's initial proposals, HAL withdrew from meetings with the airlines on the investment programme for almost one month. In late June 2013, without further consultation with the airlines, HAL submitted a RBP to the CAA based on a £2 billion investment programme. In July 2013, it submitted a brief addendum to the RBP, assuming a £3 billion investment programme and a higher WACC. HAL termed this submission its ABP.

4.7 The airlines operating at Heathrow have not taken an explicit view on the appropriate level of capex at Heathrow. Instead, the LACC has

[14] This includes components for each terminal reflecting the priorities of the airline occupants of those terminals.

sent the CAA a list of capex programmes with a budget for each. The list is prioritised, with the highest priority projects (such as those required by law or safety measures) at the top. The airline proposals are framed in this way so that if the CAA decides that a Q6 capex budget of £3 billion is consistent with its statutory duties, it could include those projects on the list from the highest priority to the point at which the cumulative budget exceeds £3 billion.

4.8 Figure 4.1 shows the differences between HAL's FBP, RBP and ABP projections for capex over Q6. The CAA's initial proposals adopted HAL's FBP projections.

Figure 4.1: HAL and CAA projections for capex over Q6

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
FBP	660	697	591	591	464	3,002
RBP	505	552	424	307	206	1,993
ABP	602	699	639	521	552	3,013
CAA IPs	660	697	591	591	464	3,002

Source: HAL and CAA

Changes in capital expenditure projections between the FBP and the RBP

4.9 The main differences between the aims of the £2 billion investment programme and the aims of the £3 billion plan which HAL had included in its FBP in January 2013 were:

- Airport service quality (ASQ): in the £2 billion plan, HAL sought to attain ASQ ratings of 3.9 out of 5 rather than 4.0 out of 5 in the £3 billion plan.
- Resilience and hub capacity: in the £2 billion plan, HAL sought to protect existing levels of hub capacity, with 70-80% of flights departing within 15 minutes of their scheduled departure time. The £3 billion plan had aspired to approach 90% punctuality.
- Operating efficiency: under the £2 billion plan, HAL aimed to reduce its opex by 9.4% over Q6, compared to 6.8% under the £3 billion plan.

4.10 Figure 4.2 summarises HAL's view of the major differences between the £2 billion RBP and the £3 billion FBP.

Figure 4.2: Changes in programmes between FBP and RBP

Improvement	Major changes between FBP and RBP
Automation of passenger journey	HAL would continue to trial self-bag drop and hosted self-boarding but would not roll out self-bag-drop facilities or self-boarding if the trials are successful. This would have given passengers the choice of using either self-service kiosks or customer service desks if they prefer, as well as giving the airlines an opportunity to reduce operating costs.
Fewer passenger experience improvements	HAL had previously planned to undertake some targeted improvements to the passenger experience in both Terminal 3 and Terminal 4. In the revised capital plan, HAL would no longer undertake these. HAL had also been planning to improve baggage capacity and resilience to enable further improvements in the baggage product. It would no longer do so. HAL could no longer improve way-finding further or adopt new technology to improve the process and the quality of the passenger experience as proven technologies become available.
Asset replacement	HAL would adopt a more reactive maintenance strategy for some systems and reduce some aesthetic maintenance activities in order to reduce investment in asset replacement. In HAL's view, this would have some impact on passenger experience as they would perceive that the airport is less well cared for and there would be a few more unexpected system failures impacting passengers and airlines.
Masterplan	There would be reduced investment in Q6 on projects which move Heathrow towards the Masterplan. In Q6, HAL would not progress with the design and early work on a further phase of Terminal 2, including a new Terminal 2 baggage system for completion late in Q7. This would delay the Masterplan by 2 to 3 years. The projects to improve the Central Terminal Area and significantly to improve the Northern Perimeter would no longer commence in Q6. Passengers would have started to see a new, more efficient CTA as they arrive at Heathrow, with a simplified road system. Neither would the passenger benefit from improved Long Stay car parks and an additional PRT – equivalent to the current Terminal 5 service – running from business parking to Terminal 2 and Terminal 3.
Terminal 2 Phase 1	HAL had previously planned to progress with delivery of the final two stands on Terminal 2B and delivery of the through taxiway following the demolition of Europier. HAL would not now develop these projects, resulting in fewer than anticipated new pier-served stands at Terminal 2.

Source: HAL

Changes in capital expenditure projections between the FBP and the ABP

4.11 The ABP listed changes to the £3 billion investment programme compared to the January FBP. Figure 4.3 shows the changes of more than £10 million to individual programmes.

Figure 4.3: Changes of more than £10 million to individual programmes between the FBP and the ABP

Programme	FBP	ABP
Engineering Asset Replacement	£650 million	£600 million
Baggage Asset Replacement	£192 million	£166 million
Expenditure on Crossrail and the Crossrail Contribution	£100 million	£142 million
Enabling New Generation of Wide Bodied Aircraft – Airfield	£159 million	£183 million
Terminal 3 Refurbishment and Enhancement	£25 million	£78 million
Terminal 4 Infrastructure Improvement	£83 million	£72 million
Terminal 5 Security Capacity	£75 million	£23 million
Automation of the Passenger Journey	£30 million	£60 million
Terminal 2 access to Heathrow Express	£50 million	Not included in ABP
Additional Fuel Infrastructure	£28 million	Not included in ABP
De-icing	Not included in FBP	£48 million
T3IB	£51 million	£82 million
Security SQRB	£31 million	£4 million

Source: HAL

4.12 Given that few of the projects in the ABP are at Gateway 3[15], the CAA considers that further, significant changes are likely in the scope of these capex programmes.

4.13 The CAA commissioned consultants ASA to review HAL's FBP. ASA has updated its findings for the RBP and the ABP. Where the CAA has relied on ASA's report, it has published these findings on its website[16].

[15] Heathrow's project planning framework consists of eight gateways. Gateway 3 is the point at which detailed design of the project (the "Solutions Development" phase) is completed.

[16] www.caa.co.uk

LACC capex plan

4.14 In August 2013, the airlines submitted a proposed list of projects for the Q6 investment programme. Some of the major differences with HAL's ABP are set out in figure 4.4 below.

Figure 4.4: Selected differences of more than £10 million to individual programmes between the ABP and the LACC submission

Programme	ABP	LACC
Rollover Q5 projects (including T3IB and Terminal 2 Part 1 completion)	£453 million	£418 million
IT asset replacement	£121 million	£96 million
Baggage asset replacement	£166 million	£192 million
Rail asset replacement	£62 million	£50 million
Fuel infrastructure	£0 million	£130 million
Pre-conditioned air	£5 million	£20 million
Crossrail contribution	£137 million	£0 million
Terminal 1 baggage system	£220 million	£500 million
Self-drop baggage automation	£60 million	£120 million
Commercial projects	£19.5 million	£50 million
Other baggage enhancements	£29 million	£57 million
CTA Tunnels	£130 million	£0 million
PRT	£20 million	£0 million

Source: HAL and LACC.

NB: LACC's project categorisations do not precisely map to the ABP's in some cases, so the costings in figure 4.4 are not precisely comparable with those in figure 4.3.

Approach to determining a capex allowance for HAL during Q6

4.15 Under the building block approach, in order to determine an appropriate level of prices for HAL, the CAA must project the efficient level of capex which HAL should incur during Q6. There are two ways in which the CAA could forecast the efficient level of capex:

- using a bottom up approach, it could forecast efficient costs for each major project which HAL proposes to undertake, and then aggregate the budget to determine an allowance; or
- using a top down approach, it could assess the appropriate level of capex over Q6, then allow HAL and the airlines to allocate the expenditure to individual projects using the approach to consultation described in the next chapter.

4.16 In practice, it is unlikely that the CAA would project capex over Q6 using only the first, or only the second, approach. While projecting the efficient costs for each project, the CAA would still consider the affordability of the overall package. On the other hand, while considering the overall level of capex, the CAA would be likely to take a view on certain individual projects, especially if it felt that they were likely to jeopardise the fulfilment of its statutory duties.

4.17 For the purposes of the Q6 review, however, the CAA believes that the second approach, in which it assesses the appropriate level of capex over Q6 without taking a view on the efficient cost for each individual project, is likely to be most appropriate for HAL. This is because:

- there appears to be some consensus that a £3 billion programme at Heathrow over Q6 would enable HAL to maintain the passenger experience and improve resilience (see the section of this chapter entitled "Magnitude of the Q6 investment programme" below);
- few of the individual projects proposed for Q6 are at a level of development at which it is possible to form a robust view on whether the cost projections are reasonable. Few of the Q6 programmes (two out of 57 in the ABP excluding Q5 rollover projects) at Heathrow had passed this milestone by July 2013, and four of those six were projects carried over from Q5;
- the size and diversity of the Q6 programme, which includes 61 large projects, means that forming a robust view on each would be a considerable undertaking;
- in addition, there appears to be a considerable degree of consensus between HAL and the airlines about the appropriate scope and cost of many, though by no means all, of the individual projects;

- one of the major lessons from previous quinquennia is that the capex programme undertaken at an airport often varies significantly from that assumed during the price control review;
- the CAA, in taking a view on individual projects, may pre-empt discussions which will take place over Q6 between HAL and the airlines under the new governance arrangements outlined in chapter 5;
- the CAA believes that HAL and the airlines are better-placed than the CAA to determine which investment projects are suitable. Since the introduction of CE, it has seen its role as developing the right incentives to enable HAL and the airlines to come to agreements where possible, as would happen in a normal commercial context. The CAA would only become involved where either the outcomes jeopardised the fulfilment of its statutory duties, or where the parties could not agree; and
- the new framework for disaggregating investment into core and development capex (see chapter 5) ensures that, even if the CAA sets an allowance in excess of the level of capex which HAL incurs, HAL will not receive any financial benefit from failing to undertake investment projects.

4.18 The CAA has undertaken more detailed analysis of individual projects during the Q6 review at Gatwick, compared to Heathrow. However, most of the Q6 projects at Gatwick (21 out of 23) have passed Gateway 2, the stage at which an option is chosen. This is the stage at which detailed analysis of a project's costs and benefits becomes possible. As noted above, few of the Q6 programmes at Heathrow had passed this milestone by July 2013. Therefore different circumstances at the two airports have required different approaches.

Magnitude of the Q6 investment programme

Issue

4.19 In order to set a price control for Q6, the CAA must assess the level of capex which an efficient operator of Heathrow would incur over that period. It must do so in the light of its statutory duties, summarised in chapter 2. HAL is not bound to incur exactly the level of capex which

the CAA proposes. Indeed, the price control for Q5 encouraged the regulated company to underspend as long as it achieved the required outputs. The regulated company could keep the return on any underspend in capex between the time when the expenditure was projected to be incurred and the time when it was incurred. The proposed price control for HAL would remove this incentive but there would still be no requirement on HAL for a particular level of capex.

CAA's initial proposals

4.20 Following successive regulatory settlements of relatively high capex of around £5 billion per quinquennium, the CAA's initial proposals accepted that HAL and the airlines planned to incur a lower level of capex, £3 billion, in Q6. The CAA commented that a programme on this scale would maintain the current level of service at Heathrow. In addition it would improve resilience, which is supported by the airlines given their growth and fleet ambitions. For these reasons, the CAA based its initial proposals on the £3 billion capex programme contained in the January FBP.

Stakeholder views

4.21 The CAA received 15 responses containing substantive comments on the appropriate magnitude of the Q6 investment programme.

- BA concluded that the CAA's proposed capex programme of £3 billion was "eminently financeable". It did not offer an opinion on whether £3 billion was "the appropriate value" for the programme.
- HAL commented that a £2 billion plan would broadly maintain quality of service at Heathrow and would support punctuality and resilience. Work to expand the new Terminal 2 would also be postponed. Opex efficiency and commercial revenues would be the priorities, so automation, pre-conditioned air (PCA) and airfield improvements would no longer be proposed. However, a £3 billion plan would be appropriate for addressing the Q6 priorities, as set out in the FBP, during a period of low passenger growth whilst also recognising airline comments on affordability.
- The LACC commented that a capex programme of around £3 billion in Q6 would provide the improvements in passenger experience and resilience that are necessary at Heathrow. The LACC found it surprising and disappointing that HAL has managed

to prioritise a significant £2 billion capital plan with no input from key customers.

- oneworld's response expressed the view that a £3 billion capex programme was appropriate for Heathrow. In addition, it expressed concern that HAL had proposed a £2 billion capex programme without discussion with key customers.
- Skyteam responded that the revised £2 billion capex programme would result in the removal of several initiatives critical for the passenger experience and operational resilience.
- Slough Borough Council commented that HAL needed to be able to invest to develop Heathrow as a global hub airport.
- Virgin endorsed the LACC's comments. It commented that the exact amount of capital that is affordable and desirable in Q6 would depend on both the strength of the overall business cases presented and, moreover, on the overall affordability of the price path presented by the CAA. It was critical that any capital plan also enhanced airline competition by ensuring access to equivalent airline facilities.
- Seven airlines and one airline alliance (Austrian, China Eastern, Eva Air, Lufthansa, South African Airways, Star Alliance, Swiss and TunisAir) expressed concern that HAL had proposed a £2 billion capex programme without discussion with key customers.

CAA's final proposals

4.22 Since the publication of the initial proposals, the CAA has seen no evidence to revise its initial view that £3 billion of capex during Q6 is both affordable and desirable. Based on its and its consultants' analyses of the capital programme, the CAA believes that such a level of expenditure would, if managed efficiently, lead to improved standards of service and a better passenger experience.

4.23 However, this does not mean that the CAA is compelling HAL to spend £3 billion over Q6, because:

- given the dynamic nature of the airport, the capex programme at Heathrow is likely to change significantly over the quinquennium; and

- as noted above, the CAA expects HAL to achieve efficiencies in the delivery of capex, in addition to those anticipated at the price control review.

4.24 A £2 billion programme as proposed by HAL in its RBP would reduce funding for important investment projects either in part or in whole. While HAL is revising the scope of those programmes, it seems likely, for example, that there would be no or limited expenditure on Automation of the Passenger Journey, Aircraft De-Icing or Enabling the New Generation of Wide Body Aircraft. This could jeopardise improvements to the passenger experience and operational resilience. Most of the respondents to the CAA's consultation seemed to agree with the view that such a level of investment was appropriate. Accordingly, the CAA has based its final proposals on the level of expenditure contained in HAL's ABP, which anticipates expenditure of £3,014 million over Q6. See figure 4.3 above for a breakdown of this total. The CAA considers that this best meets its statutory duties, in particular the primary duty to further the interests of users of air transport services.

4.25 Under previous price controls there was limited protection against over-estimation of the capital programme when the control was set, followed by much lower spending. This meant higher prices than would have been, had the level of capex been known when the price control was set. However, there are four safeguards in place to ensure that this does not happen in Q6.

- HAL's proposed licence will oblige it to follow a protocol, to be developed before the start of Q6. This protocol will require it to undertake thorough consultation and involvement with the airline community about the investment programme.
- The CAA has, since Q4, included triggers on a significant proportion of capex. These triggers remove the return which HAL would expect to incur on late projects while those projects are delayed.
- The new system of core and development capex ensures that projects for which construction is never begun do not receive a rate of return (see chapter 5 of this document).

- At the Q7 and subsequent reviews, the CAA can disallow expenditure from the RAB if it believes that expenditure was incurred inefficiently.

4.26 Accordingly, the CAA does not consider it likely that HAL will make excessive returns during Q6 by deliberately incurring significantly less capex than the CAA anticipates in the settlement.

Issues

4.27 The CAA believes that it is appropriate for HAL and the airlines to continue to develop individual capex programmes within the context of the £3 billion budget discussed above. However, the CAA also believes that it is appropriate for it to take a view on six issues for which the new framework for capex planning is insufficient. These are:

- Crossrail costs. This is governed by a 2008 agreement between BAA and the DfT, and hence is not covered by the proposed capex development framework.
- Western Rail access. This refers to a rail project which is not currently included in the Q6 capex programme.
- Fuel storage. This is an issue where HAL and the airlines appear to have diametrically opposed views as to whether expenditure is necessary or desirable. It is also a resilience issue, which the CAA believes could directly impact the passenger experience.
- The PRT between Terminal 5 and its business car park.
- The use of the Terminal 1 baggage system for the new Terminal 2.
- The allowance for Construction Price Inflation (COPI).
- The appropriate level of on-costs.

Crossrail

Issue

4.28 In 2008, the DfT and HAL agreed that HAL would make a contribution of £180 million (in 2008 prices) to the DfT in exchange for a legally binding contractual obligation on the Crossrail train operators to

operate a given level of services. The agreement was conditional on the approval of the CAA for it to be added to HAL's RAB. The agreement allowed the Secretary of State to make a counterproposal if there were any material conditions and/or a reduction in the contribution proposed by the CAA. It required HAL to put such a counterproposal to the CAA as long as it did not place HAL in an overall materially worse position than the 2008 agreement. The CAA has to consider whether such a contribution is consistent with its statutory duties.

CAA's initial proposals

4.29 HAL's FBP had made an allowance for a £60 million contribution to Crossrail in addition to £40 million for station works at the airport and a further £50 million for access to Crossrail from Terminal 2. While the CAA considered that that there was a case for capex for station works, it did not believe that there was a case for a contribution to Crossrail funding based on the business case developed up to that point by HAL as it indicated a significantly negative net present value (NPV).

4.30 The CAA did, however, note that since HAL had prepared its business case, DfT had commissioned independent research on a wider range of benefits associated with Crossrail to the airport that it considered may be relevant to the CAA's primary duty. The CAA stated that it would consider any revised business case put forward by HAL which would need to be received and approved in time for the CAA's final proposals if any contribution is to be remunerated within Q6.

4.31 The CAA also noted that, should government policy change, enabling substantial traffic growth at Heathrow, HAL and the airlines may stand to receive an unanticipated gain from the extra traffic attracted by the Crossrail link. In this context, the CAA considered that one possible option for further consideration between HAL, DfT and the airlines might involve making the contribution contingent on additional traffic at Heathrow being sufficient to make the business case positive.

Stakeholder views

4.32 The CAA received three responses which commented on Crossrail.

- BA did not support a contribution from airlines to HAL's Crossrail related expenditure, as the business case was negative. It commented that the DfT analysis was flawed.

- In a separate letter to the CAA, HAL requested that Crossrail expenditure be included in the final proposals, as required by its contract with the DfT.
- The LACC was generally supportive of Crossrail coming to Heathrow, but was not prepared to fund any Crossrail development outside of the airport perimeter, including the increase in Stockley Viaduct capacity. Such expenditure should be excluded from the capex plan. However, the LACC accepted the proposed station investment in principle. The airlines had always accepted that the CAA would make the final decision on this issue recognising that the business case was very negative.

4.33 The DfT exercised the counterproposal provision in its agreement by making a proposal to HAL on 27 June 2013 based on the further work and analysis the DfT commissioned earlier in the year.[17] This was provided to the CAA as part of HAL's submission to the CAA.

4.34 The DfT's counterproposal makes the following core proposals.

- an airport contribution to the project of £137 million based on analysis by OXERA and DfT officials.[18]
- flexibility as to the timing of the payment to better link payments with the delivery of Crossrail's benefits.
- all payments to be made in the Q6 period 2014 – 2019.

[17] Crossrail to Heathrow: Supporting evidence for a contribution from Heathrow Airport - Department for Transport and OXERA reports : Phase 1, Phase 2 and Phase 3, available at: www.caa.co.uk.

[18] DfT's analysis estimates the quantified net benefit to HAL of up to £137 million (2012 prices). It identifies a number of additional benefits which could not be robustly quantified and which it argues should be additional to the £137 million. On this basis, the DfT considers that a justified contribution from the airport operator towards the Crossrail project is £137 million. This is based on 2012 prices and the (Q5) Heathrow rate of return of 6.2%. It argues that this would need to be adjusted to reflect the actual date of payment and the eventual rate of return decided upon for Q6.

Figure 4.5: Summary of the quantified financial impact on HAL (net present value, 2019 – 2034)

	NPV
Additional demand	
Aeronautical normal profit	£2 million
Value of scarcity	£128 million
Non aeronautical revenues	£12 million
Surface access	
Surface access (existing passengers and opex)	-£23 million
Surface access (new passengers)	£1 million
Sale of Connect stock	£15 million
Enabling works	-£5 million
Access charges	£3 million
Access charge margins	£4 million
Total	£137 million

Source: DfT

CAA's final proposals

4.35 The CAA considers that it should apply two tests when considering whether the Crossrail contribution should be added to the RAB:

- is it in the interests of passengers and cargo owners? and
- would it be undertaken by an airport owner operating in a competitive market? In other words, does the investment have a positive NPV in terms of the costs and benefits that would accrue to the airport operator if it were operating in a competitive market?

4.36 The second test is applied to reflect the requirement that the CAA's duty to the interests of passengers and cargo owners is limited to the range, availability, continuity, cost and quality of airport operation services rather than those not linked to airport operation. The analysis submitted by the DfT, based on analysis by its consultants and officials, has three significant differences (listed below) in the quantification of costs and benefits compared to the business case put forward by HAL prior to the FBP. The three significant differences are as follows.

1. A revision to the base case against which the costs and benefits of the four train an hour Crossrail service is compared. The HAL analysis was assessed against a two train per hour Crossrail service whereas the DfT analysis is against a continuation of the current two train an hour Heathrow Connect service.
2. The identification of net benefits from a small resulting increase in airport passengers as a consequence of the Crossrail service.
3. An increase in passengers' willingness to pay for air services and the assumption that this increase due to "scarcity" can be captured by airlines by higher fares and by the airport operator in terms of higher airport charges.

4.37 The third of these three differences is by far the most significant. This does, however, present issues in terms of both principle and quantification. The DfT's argument for considering the increase in willingness to pay (WtP) is as follows. For some existing passengers, the provision of a new mode with direct or significantly improved links to new areas not previously well connected to the airport is expected to create time savings in accessing the airport and/or to offer a lower fare alternative. Effectively, these existing passengers are receiving a higher quality product (where the product is the entire end-to-end journey) and consequently their WtP would be expected to increase. Because Heathrow is already operating at near full capacity in terms of air traffic movements and flights from Heathrow are a scarce resource (as the number of flights cannot increase to meet demand), the value of existing flights would be expected to rise as a result.

4.38 In estimating the value in this increase in scarcity the DfT and its consultants have used the best models available but these models are subject to considerable confidence limits around estimates. In this context, it should be noted that OXERA quote a range of the value of scarcity of £72 million to £128 million. Even this range is based on varying only one assumption involved in the modelling.

4.39 It should also be noted that this assumes that 100% of the additional WtP would be captured by airlines from passengers in terms of higher fares and passed on to the airport operator in higher charges. In practice it seems more likely that there would be some "leakage" in both of these transactions. It also assumes that this increase in passenger WtP cannot be captured by the operator of the surface link.

Capturing this value through the fare-box would be the more focused way of testing the case for and funding the additional link in a competitive market generally rather than spreading it across all the air passengers at the airport.

4.40 There are more fundamental issues of principle for an independent regulator taking advantage of scarcity and very low price elasticities to fund projects which have little or no benefit for the majority of customers that would be required to pay higher charges. This is often argued to be contrary to the central role of the regulator of protecting consumers from the extraction of economic rents.

4.41 In this instance, this issue is further exacerbated because the scarcity value appears to be greater than the increase in value that would occur if the airport were not capacity constrained. DfT sought advice from OXERA on the value of additional passengers from Crossrail to the airport in an unconstrained situation. OXERA's analysis suggested a NPV to the airport operator of some £30 million to £109 million. This is significantly lower than the NPV to the airport operator based on a constrained situation and scarcity.

4.42 DfT has as part of its supporting evidence, drawn attention to the wider additional benefits to passengers of Crossrail that could not be captured by the airport operator. While the CAA recognises that additional benefits to surface access passengers generally may exist, it considers that both of the two tests should be satisfied and that some of these further benefits may go beyond "airport operation services" and what an airport in a competitive market would take into account.

4.43 The CAA considers that from the viewpoint of its role as the economic regulator, in the absence of major growth potential, the business case for a major contribution would not be strong. The CAA is, however, minded to allow either a contribution based on the benefits that would arise on a contingent basis if and when there is an addition to capacity and traffic or to take a view on the probability (and timing) of those benefits arising in due course. In its counterproposal, the DfT has made it clear that it wants the full contribution to be made in the Q6 period. If accepted, this seems to preclude a contingent approach given that the lead times for resolution of future capacity and traffic at the airport are likely to be long and may extend beyond Q6.

4.44 The CAA can see major disadvantages to making the contribution conditional on some decision point that further expansion of Heathrow is expected to proceed. Doing so could be a distraction for those making such decisions. In addition, it would be very difficult to specify conditions which could be met prior to the end of Q6 which would mean that expansion would certainly take place. The CAA is therefore inclined not to apply a conditional approach, but to allow a value for the contribution based on an option value for the unconstrained net value.

4.45 Assessing such a value involves the exercise of regulatory judgement. In reaching its proposal, the CAA has weighed up the following factors.

- The CAA does not know whether, or when, additional capacity at Heathrow will be built.
- OXERA advised the DfT that the value of Crossrail to the airport operator if unconstrained would be some £30 million to £109 million.
- HAL was prepared to contribute £180 million in 2008, though this was in the context of a licence to grow and it, at that time, may not have been too mindful of the actual value given that the sum recovered would rely on its addition to the RAB rather than the intrinsic value of Crossrail.
- The flexibility of payment cited by the DfT, which the CAA understands to be matched to the timing of the delivery of benefits and the DfT objective of obtaining all the contribution in Q6. The CAA's interpretation of this is that the contribution would best be allowed at the end of Q6.
- That the contribution should be fixed in 2011/12 prices (consistent with the building block analysis generally) with the final contribution being indexed by RPI to this figure.
- That there is no subsequent adjustment for any changes in the WACC.

4.46 Taking all these factors into account and applying qualitative judgement, the CAA proposes a contribution of £70 million. The CAA does not consider that this decision constitutes a precedent for future

determinations on the allocation of surface access costs, such as for Western Rail access to Heathrow (see the next section). Such determinations are likely to be highly idiosyncratic, and the 2008 Agreement is unlikely to be replicated exactly in future cases.

Western rail access

Issue

4.47 In addition to enabling Crossrail services from Central London, the CAA notes that there is a proposal to modify the rail junction to the north of Heathrow so that services from west of the airport can run directly into the Central Terminal Area. This is known as western rail access. It is not included in any of HAL's business plans as it is an early stage proposal by other parties.

CAA's initial proposals

4.48 The CAA's initial proposals did not comment on the treatment of western rail access in HAL's Q6 price control. Expenditure on this project was not part of HAL's FBP, and therefore, since the CAA's capex allowance was based on HAL's FBP, there was no allowance for it in the CAA's initial proposals.

Stakeholder views

4.49 The CAA received two responses commenting on western rail access:

- Slough Borough Council supported western rail access to Heathrow, arguing that it would be easy to deliver, and enable significant economic and environmental benefits.
- Thames Valley Berkshire Local Enterprise Partnership also supported western rail access to Heathrow.

CAA's final proposals

4.50 In order to consider including any of the costs of a surface access project in HAL's RAB, HAL must provide the CAA with a business case. The CAA has as yet received no business case for western rail access, and accordingly the CAA has not included an allowance in the RAB. It will consider any business case which HAL submits in the light of its published criteria and its statutory duties.

Fuel storage

Issue

4.51 HAL's FBP provided for £28 million to be spent on developing the fuel infrastructure at Heathrow, to increase fuel stocks thereby improving the resilience of the airport's fuel supply. In the past, HAL has funded the enabling works while the fuel companies have paid for the actual storage infrastructure.

CAA's initial proposals

4.52 At Heathrow, infrastructure for the storage of fuel provides only two days' supply. In order to meet additional fuel demand and reduce the risk of any reduction in fuel supply, HAL started to plan a major project to increase the storage capacity at the airport. The operational date for this additional storage was Autumn 2017. The delivery of this project was split between HAL, airlines and third parties, in particular the Heathrow Airport Fuelling Company (HAFCO), a joint venture company owned by BP, Esso, Shell, TotalElfFina, Texaco and Kuwait Petroleum. HAL retains freehold title over the land and fuel assets. HAFCO and the Heathrow Hydrant Operating Company (HHOPCO) are two oil company consortia that have taken out leases with HAL and have responsibility for developing infrastructure as well as managing and controlling the fuel supply at Heathrow. BA has an interest in HHOPCO. The high-level terms of the two leases are:

- The HAFCO lease includes land and existing assets on the land. Assets built by HAFCO will revert back to HAL when the lease expires. Lease commenced in 2005 for a period of 30 years. HAFCO has an automatic right to renew the lease.
- The HHOPCO lease includes land and existing assets on the land. The HHOPCO lease began in 2007 for a period of 23 years.

4.53 In addition, a small number of fuel assets are in the RAB – these either relate to enabling works delivered by HAL (such as water mains, electricity connections and access to the road network) or for Hydrant System related construction.

4.54 The CAA's initial proposals included capex forecasts based on the £3 billion capex programme in the FBP, and hence implicitly supported the £28 million plan for developing fuel infrastructure at Heathrow.

Stakeholder views

4.55 The CAA received two responses which commented on fuel storage expansion at Heathrow.

- HAL commented that it had fully supported airline activities to engage with fuel companies to address fuel storage issues. Much of the fuel infrastructure at Heathrow, including the majority of the fuel hydrant system, receiving stations and storage facilities had been delivered and funded through commercial agreements between airlines and fuel companies. HAL had typically funded site enabling works and the connection of services. However, investment in fuel storage could be delivered through commercial models already in place between the airlines and fuel companies but covering the entire cost of the investment. This would include the enabling and services works previously funded by HAL. In addition, more storage capacity would enable more storage, but stocks would only increase in practice if the oil companies were to choose to retain greater stocks.
- The LACC noted that following the CAA's initial proposals, HAL had withdrawn its support for this project and it no longer appeared in its lead capital plan. It commented that this was a totally unacceptable situation for airlines and their passengers as evidenced by the current low stocks. The LACC's August response to HAL's RBP and ABP commented that the airline community regarded 3.5 days' supply, rather than two days' as at Heathrow at present, to be the minimum level of fuel stocks. The proposed capex programme attached with the submission included expenditure of £135 million on fuel infrastructure. The LACC noted that this would displace other projects in the priority list. However, this project was so critical that the LACC was prepared for this eventuality.

CAA's final proposals

4.56 The CAA sought detailed evidence from HAL and the airlines concerning the level of fuel resilience at Heathrow and the best way to plan going forward. HAL responded that lower levels of projected demand over the next ten years had reduced the urgency to address this issue. HAFCO had asked for unacceptable terms to upgrade the fuel infrastructure as HAL had proposed.

4.57 The airline presentation, however, claimed that Heathrow had only

two days' fuel storage capacity, compared to considerably more at overseas airports. The airlines repeatedly emphasised the importance which they place on resilience and their willingness to fund this project if an appropriate solution could be found. While there could be reasons for this,[19] the airlines felt that an increase was called for, and cited instances in December 2012 where Heathrow's fuel resilience had been inadequate.

4.58 The CAA's capex consultants, ASA, undertook a detailed study of the plans for improving Heathrow's fuel infrastructure. ASA's conclusion was:

- "The business model of the airport providing enabling works and the consortium building the rest is long established and was used for the Terminal 5 Perry Oaks facility; we know of many circumstances where this is used at other airports. We agree with HAL's conclusion that there does not appear good reason to change the business model.
- HAL should seek to progress the project along these lines as quickly as possible though of course subject to good commercial sense."

4.59 The CAA considers that a robust fuel infrastructure at Heathrow is crucial for operational resilience. The current level of resilience seems to be unacceptably low to Heathrow's customers and also to be considerably lower than international norms. Moreover, airlines appear to put sufficient value on more resilience that they are prepared to pay for the capital costs whether through airport charges or otherwise. Accordingly, the CAA strongly encourages HAL and the airlines to work with HAFCO to develop a proposal to increase the resilience from the current low levels towards the level in comparator airports.

4.60 There is currently no agreed way forward for developing fuel infrastructure at Heathrow. This makes setting a capex allowance for this project problematic. After careful consideration, the CAA has included a £28 million allowance for the enabling works to deliver more robust fuel infrastructure at Heathrow. This is lower than the

[19] For example, Heathrow has three fuel intakes from five pipelines, while many airports have only one intake. This increases Heathrow's resilience for a given level of fuel storage.

airlines' proposal of £135 million (which would be for the whole project), but higher than that in HAL's ABP or RBP projections, which did not include any allowance. However, the budget for this project may vary following negotiations with HAFCO, HHOPCO and other parties. If it is necessary to include any capex in the HAL's RAB, the CAA expects HAL and the airlines to take this project through the Gateway process and from development to core capex. If commercial negotiations do not result in agreement, and no alternative solution can be found, the CAA would expect any return on the £28 million allowance already included in prices to be remitted to customers in lower prices, or else reallocated to other projects as appropriate.

PRT system

Issue

4.61 At the Q5 review, the CAA decided not to allow the PRT system between Terminal 5 and the business car park into the RAB, as it was a novel project which did not enjoy airlines' support. The CAA said at that time that it would be open to considering, as part of the Q6 price control review, the inclusion of both the Q4 and Q5 capex on this project within the Q6 opening RAB. In addition to the capex incurred to date, HAL is proposing to spend £8.6 million on the Terminal 5 PRT during Q6. It is also proposing to spend £20 million on a PRT between the car park and the Central Terminal Area (Terminals 1, 2 and 3), hereafter referred to as the CTA PRT, to establish competitive equivalence between Terminal 5 and the other three terminals there.

CAA's initial proposals

4.62 The CAA's initial proposals noted that HAL was planning further spending on the Terminal 5 PRT as part of its FBP. The CAA had not seen support from airlines for this spending. It had not decided whether this spending should be allowed into the RAB or whether there was a case for allowing the expenditure from Q4 and Q5 into the RAB.

Stakeholder views

4.63 The CAA received three responses to its initial proposals which contained substantive comments about the Terminal 5 PRT.

- BA opposed the PRT project. It did not believe that future funding (i.e., for Q6 onwards) should form part of the regulatory settlement or that past expenditure should be allowed into the RAB.
- HAL commented that the commercial, financial and passenger benefits of the PRT meant that £32.5 million of expenditure should be allowed into the RAB. The project had been rated "Green" during CE.
- The LACC did not support the extension of the PRT system in Q6. It commented that the CAA should not include the Q4 and Q5 expenditure in the Q6 opening RAB. The PRT was not a cost effective way of moving passengers around the airport and it was a project which went ahead without airline approval. The LACC removed the £9 million of asset replacement expenditure from priority list.

CAA's final proposals

4.64 HAL included around £8.6 million of capex in the ABP. The CAA's Q5 decision said that the CAA would include expenditure on the PRT if it obtained user support, and if the project was to be delivered efficiently. It is clear from the responses to the CAA's proposals that this has not been forthcoming. The business case has been negative. Accordingly, the CAA has decided to set HAL's price control excluding:

- the capex, both past and future, on the PRT,
- the return on the RAB and depreciation from the PRT expenditure,
- the projected opex on the PRT, and
- the associated revenues which the PRT generates.

4.65 These reductions are shown in figure 4.6 below. As the PRT is removed from the price control, HAL is allowed to charge users for its use. The CAA has not yet seen a business case for the CTA PRT, nor has the project been subjected to airline scrutiny, as the project is at a very early stage of development. Accordingly, the CAA will not make a determination on whether the CTA PRT will be included in the RAB during this review.

Figure 4.6: Changes due to the removal of Terminal 5 PRT expenditure

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
Opex	(2.0)	(1.9)	(1.9)	(1.9)	(1.9)	(9.6)
Capex	–	–	–	(2.3)	(6.3)	(8.6)
Commercial revenues	(1.5)	(1.5)	(1.6)	(1.6)	(1.6)	(7.8)

Source: HAL

Terminal 1 baggage system

Issue

4.66 Terminal 2 is expected to be dependent on the continuing use of the existing Terminal 1 baggage system until a baggage system is built as part of the second phase of Terminal 2. HAL included £220 million for design and enabling works for the second phase of Terminal 2A in its Initial Business Plan (IBP). Some airlines have questioned whether the investment should begin earlier. They consider that the pace of delivery and the capital spend within Q6 should be defined by the results of the risk assessment on the Terminal 1 baggage system and the associated mitigation strategy.

4.67 The CAA supported on-going work to identify and mitigate any risks of the Terminal 1 baggage solution to ensure that there are not risks in this approach that would be unacceptable to future passengers. The CAA committed to reviewing this situation before its final proposals.

Stakeholder views

4.68 The CAA received two responses which commented on the use of the Terminal 1 baggage system for the new Terminal 2.

- HAL responded that there were acceptable contingency plans in place to mitigate the failure of the Terminal 1 baggage system.
- The LACC commented that an acceptable contingency plan for the failure of the Terminal 1 baggage system was critically required. Provided that this contingency plan was forthcoming it might be possible to avoid early capital investment (in Q6) in a Terminal 2 unique baggage system.

CAA's final proposals

4.69 The CAA notes that a consultancy study commissioned by HAL from Suisseplan has concluded that the Terminal 1 baggage system is

broadly fit for use in Terminal 2. However, the CAA encourages HAL and the airlines to continue to work together to develop a robust risk mitigation plan for the failure of the baggage system. The CAA understands that the consultancy study identified the transfer baggage sorter as a particular concern. The CAA therefore believes that any robust mitigation plan must address this issue.

4.70 ASA reviewed HAL's plans for the Terminal 1 baggage system. In its report, it "agreed with HAL that the proposed contingency arrangements for the Terminal 1 transfer sorter appear to be the best option and that no further contingency budget could practicably be spent in Q6 to mitigate this risk." The CAA has included capex on the Terminal 1 baggage system in its projections at the level assumed in HAL's ABP.

Construction price inflation

Issue

4.71 In addition to an allowance for RPI, the CAA has in the past included an extra allowance to provide for the tendency of construction prices to rise faster than RPI.

CAA's initial proposals

4.72 The CAA's initial proposals were based on HAL's capex forecasts, which included an allowance for an increase in construction prices of 1% in addition to the rate of increase in the economy as a whole. The CAA's capex consultants, ASA, recognised this forecast level of COPI over Q5 as reasonable.

Stakeholder views

4.73 The CAA received three responses which commented on the likely level of COPI over Q6.

- HAL welcomed ASA's acceptance of a construction price inflation forecast of RPI+1% over Q6;
- The LACC and Virgin commented that HAL should offset inflation over the first three years of Q6. The airlines continued to offset inflation (except fuel) on an on-going basis. However, an additional allowance in last two years might be appropriate.

CAA's final proposals

4.74 The CAA believes that forecasting COPI over the next few years to the level of tolerance envisaged in the FBP and the responses received requires the exercise of judgement. ASA included an assumption of RPI+1% in its report. However, the CAA's consultants, Davis Langdon, in their review of GAL's capital programme[20], have made detailed forecasts for COPI over Q6. Their projections, and the Office Budget Responsibility (OBR) projections for RPI, are reproduced in figure 4.7 below.

Figure 4.7: COPI and RPI forecasts for Q6

Year	COPI	RPI – OBR forecasts
2014/15	1.0%	3.5%
2015/16	1.4%	3.3%
2016/17	2.6%	3.3%
2017/18	3.3%	3.3%
2018/19	3.7%	n/a

Source: Davis Langdon

4.75 Thus, over Q6, COPI is forecast to increase by 13%. Extrapolating the OBR's 2017/18 RPI assumptions for 2018/19, the RPI is forecast to increase by 18% over the same period. In other words, COPI is forecast to be lower than retail price inflation. After considering the available evidence, the CAA believes that, on balance, setting an allowance for COPI in excess of RPI could enable HAL significantly to over-recover. The CAA has not, therefore, included an allowance for COPI in excess of RPI in its final proposals.

On-costs

Issue

4.76 All project costs are split into base costs, project specific costs, on-costs and a risk allowance. HAL defines on-costs as: "the development, design or project management cost which is expended by BAA in the delivery of a project. Such expenditure would include both internal and external costs including all design costs up to Construction Decision (including concept design prior to the initiation

[20] Available at http://www.caa.co.uk/docs/78/Q6DLangdonCapex.pdf

of a project), planning, project leadership, Managed Service Provider, production management, and other costs that the business may capitalise as part of the project."

4.77 The preliminary costings for the selected construction projects reviewed by ASA showed similar levels of on-costs ranging from 12.2% to 15.0%. A further project, 'Automation of the passenger journey', showed a lower level of on-costs (8.0%) although this included a high proportion of expenditure equipment.

CAA's initial proposals

4.78 The CAA's initial proposals adopted the level of expenditure in HAL's FBP, and hence implicitly endorsed the level of on-costs assumed by HAL.

Stakeholder views

4.79 The CAA received two responses commenting specifically on the appropriate level of on-costs.

- BA had employed consultants Faithful and Gould, who argued that on-costs should represent ✂✂, rather than ✂✂, of project costs. There was a significant amount of on-costs included in the RAB. Adopting the higher assumption could mean that airlines significantly overpay for the capex incurred over Q6. BA's consultants also commented that HAL's contractors earned a profit of ✂✂ of the contract value – a rate significantly in excess of market rates.
- The LACC also reproduced the results of the Faithful and Gould study. The CAA could investigate further to ensure that passengers were not paying for inefficiently incurred costs.

CAA's final proposals

4.80 On behalf of the CAA, ASA investigated HAL's treatment of on-costs. Its findings were:

- HAL targeted on-costs at 15% – 18% project expenditure. A stretch target, incorporated into many Q6 projects, was slightly lower, at 14.5% – 18.5%;

- HAL's level of on-costs appeared comparable with those in other regulated utilities, and considerably lower than some (for example, some rail projects appeared to have on-costs of 25%). It was not clear, however, that these comparisons were like-for-like; and
- reductions in personnel numbers in HAL's capital solutions division would be effected once the level of capex in Q6 was known.

4.81 Given these findings, the CAA has not incorporated any further reductions in HAL's capex into its projections for its final proposals.

Final proposals

4.82 The CAA has adjusted HAL's ABP capex projections based on its decisions above. The adjustments made are shown in figure 4.8 below.

Figure 4.8: Adjustments to ABP capex

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
ABP	602.4	699.0	638.6	521.3	552.2	3,013.5
Crossrail	(33.5)	–	–	–	(33.5)	(67.0)
Fuel storage	15.0	12.0	2.0	–	–	29.0
PRT	–	–	–	(2.3)	(6.3)	(8.6)
COPI	(5.6)	(13.7)	(18.4)	(19.8)	(24.2)	(81.7)

Source: HAL, CAA

4.83 Based on the CAA's decisions above, its projections for HAL's efficient capex over Q6 are set out in figure 4.9 below.

Figure 4.9: CAA's final projections for capex

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
Capex	578.2	697.3	622.2	499.3	488.1	2,885.2

Source: CAA

CHAPTER 5

Capital efficiency

5.1 This chapter consists of the following sections:

- capital efficiency in HAL's price control;
- issues concerning capital efficiency; and
- the CAA's final proposals for a new regulatory framework for promoting capital efficiency.

Capital efficiency in HAL's price control

5.2 During Q5, HAL, the airlines and the CAA recognised that agreeing investment plans at the time of the price review for the next five or six years did not reflect the need for flexibility in the capital investment plan (CIP). With references made to the CAA's 2011 document "Setting the Scene for Q6", HAL presented a concept of classifying Q6 capex as 'fixed' or 'flexible'. The former designation would represent firm investment commitments at the start of the Q6 price control where the scope and cost estimate was reasonably certain. The latter would enable projects that were not sufficiently scoped or costed at the review, to be included over the Q6 price control period.

5.3 HAL and the airlines subsequently agreed on the benefits of a two-tiered approach to capex for Q6, and re-named the two types of investment 'core' and 'development'. The parties made good progress in agreeing the key principles including the method for remunerating development capex in a more flexible way than previously. Specifically:

- The CAA would set an initial capex envelope for Q6 comprising a fixed allowance for core capex and an indicative allowance for development capex.
- Cost allowances for individual development projects would be fixed within period.

- The total allowance within the price cap calculation for development capex would also be revised within period, so that HAL is only remunerated for work that is actually carried out.

Issues

5.4 The CAA has identified the following issues concerning capital efficiency:

- the proposed split between core and development capex,
- the right of appeal in the mechanisms set up to implement the regulatory mechanisms proposed,
- the triggers for Q5 projects uncompleted on 1 April 2014, which will therefore need triggers for Q6,
- the appropriate triggers for projects started during Q6,
- whether HAL should be intertemporally indifferent to the timing of capex, and
- the proposed establishment of an Independent Fund Surveyor (IFS).

Proposed split between core and development capex

Issue

5.5 The high-level definition of the split between core and development capex is described in the previous section. The CAA notes the following features of the approach developed in discussions between HAL and the airlines.

- Development capex projects would be included in the RAB at a P80 level.[21] HAL would not be able to benefit from development capex for projects which were anticipated in the price control, but were not taken forward.
- Projects would move from development capex to core capex once they had passed Gateway 3 of HAL's project management process.

[21] P80 is a level of forecast cost at which there is an 80% probability of the outturn cost being at or below this level, and therefore a 20% chance of the outturn cost being above this level.

- Core capex projects would be included in the RAB at a P50 level.[22]

CAA's initial proposals

5.6 The CAA based its initial proposals on the split as agreed between HAL and the airlines.

Stakeholder views

5.7 Four responses to the CAA's initial proposals contained substantive comments on the split between core and development capex.

- BA welcomed and supported the CAA's proposed split between core and development capex. It commented, however, that it could be appropriate to set allowances for core projects with limited risk, such as runway resurfacing, at lower levels than P50, as a proxy for a lower risk margin. It also suggested that the CAA should consider a "three-pot" approach to capex efficiency, which aims to avoid the problem of cost overruns due to efficient specification changes in capex projects.
- HAL noted the CAA's support for the core and development split. It did not either explicitly endorse or explicitly oppose the proposal in its response, though it had proposed the split during CE and had endorsed it in previous responses to the CAA's consultations during the Q6 process.
- The LACC supported the proposed split between core and development capex.
- Virgin endorsed the LACC's position.

CAA's final proposals

5.8 Given the widespread support for the approach developed by HAL and the airlines and proposed by the CAA in its initial proposals, the CAA will include provisions in the price control which implement the split between core and development capex. The CAA believes that HAL should not receive a rate of return for projects anticipated in the price control allowance but not undertaken. The licence condition which the CAA proposed for HAL in its initial proposals contained mechanisms to ensure that this is the case. The CAA has included

[22] In other words, the value ascribed to the expenditure on these projects in the core phase in HAL's RAB would be such that there was a 50% chance of being at or below this level.

these provisions in its final proposals.

5.9 The CAA will also implement the allowance at a P50 level for core capex. P50 is the point at which the likelihood of the cost being higher is equal to the likelihood of the cost being lower. An allowance at P80 for development capex could result in an over-provision in aggregate. However, the CAA understands that HAL intends to use aggregate over-provision to be available to fund additional pop-up projects. With this assurance, the CAA will allow development capex at P80.[23]

5.10 The CAA notes BA's comment that the proposal to set the core capex allowance at the P50 level could be unduly beneficial for HAL for projects which present little risk. The CAA does not consider that, at this point, an allowance set at P50 is excessively generous, regardless of the risk profile of the project. It is important that HAL's estimation process is robust. The CAA will observe the actual level of expenditure against the P50 level for projects undertaken during Q6, and will reconsider the treatment of core capex in the Q7 review.

5.11 The CAA also notes BA's proposal for the adoption of a "three-pot" approach to capex efficiency. It summarised this as follows:

- Capex that is inefficiently spent or not required would not be allowed in the RAB.
- Capex that is required and efficiently spent would be allowed in the RAB and would earn a full return.
- Capex that is efficient overspend (i.e. efficiently incurred, but due to things like project misspecification) would not be allowed in the RAB for five years, and would be depreciated as normal. After five years, the depreciated asset would be admitted to the RAB.

5.12 The CAA considers that this mechanism suffers from a number of disadvantages.

- Efficient overspend does not seem to constitute a distinct category of expenditure. Where overspend is due to inefficient management, it would be classified as inefficient capex. Where it is due to legitimate changes in specification, it should be considered

[23] The CAA notes that it has included development capex allowances at P50 at Gatwick. However, the CAA considers that GAL, given its smaller capex programme, is likely to require less development work on other projects.

as efficient expenditure, and allowed in full. It is not clear that significant amounts of capex would fall between these two categories.

- Distinguishing between capex spent efficiently and inefficient overspends would be complex and intrusive in practice.
- It could change the focus of HAL's project management from controlling costs to preventing cost overruns from being classified as inefficient.
- Allowing a set number of years' depreciation before the third category of expenditure is included in the RAB seems arbitrary, and it would have considerably different incentives depending on the accounting lives of the asset in question. A terminal building with a life of 60 years would have less effect than a computer with a life of five years, which would never be allowed into the RAB if the expenditure was found to be inefficient.
- It could make HAL's management reluctant to change the specification of projects at all, even where this was clearly justified by changed circumstances or new information and was supported by users. Such changes could result in expenditure being included in the third category, rather than in the first.

5.13 Accordingly, the CAA's final proposals do not include such a mechanism.

Right of appeal in capex governance

Issue

5.14 The CAA, in consultation with HAL and the airline community, is currently developing arrangements to govern the capex consultation process during Q6. A key issue from the CAA's perspective is the extent to which the CAA should become involved if there is no agreement between HAL and the airlines on individual projects within the capex programme.

CAA's initial proposals

5.15 The CAA's initial proposals identified two options for dealing with this.

- The first option was to put HAL on notice now that the CAA reserves the right to exclude from the Q7 RAB any capex that has been taken forward in the face of airline/user opposition or at a cost which causes concern to airlines/users or without adequate triggers. The CAA's assessment would inevitably be backward-looking and take place after the money has been spent.
- The second option was to require HAL to obtain airline sign-off for projects, costings and triggers in advance of the work being carried out, or otherwise to require HAL to submit projects to the CAA for regulatory determination. Where approval is not forthcoming, the CAA could be the decision maker.

5.16 The CAA expressed a preference for the second option, as it seemed to offer a better balance for all stakeholders. That option would lead to a higher level of regulatory certainty for HAL and also enable the airlines to have a more formal role in the process. However, the extra level of involvement in the process required could significantly add to the regulatory burden on the airlines.

Stakeholder views

5.17 The CAA received three responses which commented on the governance of the capital efficiency regulatory arrangements.

- HAL responded that future arrangements for capital efficiency should build on the successful Q5 arrangements. It commented that the CAA should not have a role in managing the transition from development to core capex.
- The LACC supported effective governance arrangements to ensure HAL's accountability. It expressed the view that the Annex G arrangements, which mandate extensive consultation between HAL and its stakeholders, should be continued in HAL's licence. Annex G could also include opex, commercial revenues, and the other building blocks. The LACC requested monthly reports from the IFS, and a clear dialogue between HAL and airlines at an early stage.
- Virgin responded that airline sign-off must be required for investment projects. The definition of airline sign-off needed to be well-defined. Virgin believed that CAA's involvement should be a backstop.

CAA's final proposals

5.18 Following consideration of the responses received, the CAA believes that the second option, requiring HAL to attempt to obtain airline sign-off is more appropriate. The CAA expects HAL and the airlines to negotiate in good faith, as they did during the CE process, and anticipates that most investment projects will be agreed in this way. However, there could be two instances in which the CAA, as an arbiter, must step in:

- HAL and the airlines do not agree on the scope or cost of the projects; or
- HAL and the airlines agree on the projects but the CAA considers that that projects are not in passengers' or cargo owners' interests.

5.19 The CAA notes that the detailed structure and responsibilities of the governance mechanisms are still under development. The CAA does not believe that it is necessary to include detailed provisions for governance arrangements in HAL's licence. Doing so would mean that even relatively minor changes to those arrangements would take months and require public consultations. Accordingly, the CAA has included a provision in HAL's draft licence that will require HAL to follow a governance protocol. That protocol will be agreed between HAL, the airlines and the CAA before the start of Q6.

Q5 triggers

Issue

5.20 The CAA notes that HAL will not complete some projects with capex triggers attached to them during Q5 by the start of Q6. However, as the Q5 price control lapses at the end of March 2014, the triggers will also lapse. These projects are:

- T3IB system. This project was originally scheduled for completion in March 2012. Its triggered scope is expected to be completed in October 2014;
- Terminal 3 – Terminal 1 Baggage Transfer Tunnel. This project was originally included in the Q5 CIP. However, after consultation with the airlines, HAL removed this project from the CIP. The project has not yet started and is not expected to start during Q6. Accordingly, the CAA does not expect to attach a trigger to this

project during Q6;

- Eastern Maintenance Bay Redevelopment (Completion of East Church Road diversion); and
- Completion of Midfield Pier centre.

CAA's initial proposals

5.21 The CAA's initial proposals did not discuss attaching triggers to these legacy Q5 projects.

Stakeholder views

5.22 No stakeholders expressed views specifically on continuing triggers on these projects.

CAA's final proposals

5.23 The CAA considers that it is appropriate to attach triggers to projects triggered in Q5 which are not complete by 1 April 2014, but which are still part of the Q6 plan. The arguments which obtained in applying triggers to those projects in Q5 stand at the start of Q6. Accordingly, the CAA proposes to attach triggers to each of the Q5 projects listed above (apart from Terminal 3 – Terminal 1 Baggage Transfer Tunnel). The details of the triggers will be worked out between the final proposals and the implementation of the Q6 price control on 1 April 2014.

5.24 HAL and the airlines have raised minor issues with the CAA for determination on the Eastern Maintenance Bay Redevelopment and Midfield Pier Centre projects. The CAA will determine these issues before the start of Q6.

Q6 triggers

Issue

5.25 HAL and the airlines agreed that triggers should once again be placed around 'Key Projects'. Triggers would initially be set for core capex, but would subsequently be applied to other projects that move during the period from development to core. It was agreed that there were detailed lessons to take from disputes around triggers during Q5, especially in relation to the definition of milestones.

5.26 The CAA set out its criteria for determining whether to set triggers on

individual projects in its Q5 decision[24]:

- Triggers should be based on the performance of events with demonstrable benefit to users.
- The airport operator should have management control or substantial influence over the determining elements of the success of the projects.
- Performance should be objectively measured with an unequivocal test of success.
- The optimum capital programme (in terms of content, order and phasing) should be reasonably predictable for a sufficient period.
- The existence of an incentive mechanism should not itself distort delivery of the programme away from the best that can be achieved based on all emerging information.
- The additional risk implied by basing reward more on delivery and less on capital spend should be the best use of an airport operator's capacity to bear risk.

5.27 In addition, the CAA believes that a further criterion is appropriate. It believes that triggers should not generally be attached to very small projects, unless these are disproportionately important to users. Q5 triggers applied to 63% of HAL's forecast capex. The airlines proposed that the CAA's Q5 policy of setting trigger dates at a three-month lag to the dates in HAL's project plans should not continue in Q6.

CAA's initial proposals

5.28 The CAA's initial proposals were that triggers should be defined once projects reached Gateway 3, and that the three-month lag should be removed for triggers set during Q6.

Stakeholder views

5.29 Four respondents made substantive comments on the structure of triggers.

[24] CAA, *Economic Regulation of Heathrow and Gatwick Airports 2008-2013 – CAA decision*, available at www.caa.co.uk

- BA supported the CAA's intertemporal indifference proposal. HAL's RAB should be adjusted with an NPV of underspend.
- In principle, HAL accepted that a three-month time lag may not apply to capital triggers in Q6. HAL considers that a removal of the current three-month time lag is conditional on there being no further changes to HAL's integrated proposals on capital efficiency and the WACC being set at an appropriate level.
- The LACC strongly supported triggers based on the delivery of projects/benefits at the agreed time. It commented that the three-month time lag should be removed. Triggers should be developed through the Gateway 1 and 2 process and be agreed for all key projects at Gateway 3.
- Virgin supported the development of triggers for Q6.

CAA's final proposals

5.30 Given the widespread support for triggers, the CAA will include them in HAL's price control for Q6 capex projects that meet its criteria. However, the CAA is proposing a more flexible approach to capital investment over Q6. Therefore, it is not appropriate for the CAA to commit to developing triggers for each project before the start of the quinquennium. This is different from the approach the CAA adopted in the Q5 review, during which the CAA indicated which projects would be triggered in its decision. It also means that the CAA cannot calculate the proportion of capex which triggers will cover.

5.31 HAL and the airlines will develop triggers for individual projects during Gateways 1 and 2. The triggers will be attached formally to the projects once they reach Gateway 3. The triggers will not cover a pre-determined proportion of HAL's capex programme, and will not include a three-month delay. Having reviewed the criteria for imposing triggers set out in the Q5 decision (reproduced above), the CAA considers that these conditions continue to be appropriate for Q6.

5.32 Attaching triggers to such projects would be likely to cause a disproportionate regulatory burden, while failing to concentrate HAL's management on delivering the project on time. While each project is different, and therefore including a fixed threshold is inappropriate, the CAA considers that triggers are unlikely to be appropriate for projects with a total expenditure of less than £15 million, or around 0.5% of

HAL's projected annual capex over Q6.

5.33 By April 2014, a number of Q6 investment projects will have reached Gateway 3. These, with their planned or actual Gateway 3 dates and HAL's ABP cost forecasts, are:

- Enhanced terminal facilities for passengers, August 2013, £20 million;
- Engineering Asset Replacement (Wave 1), September 2013, £96 million;
- Northern Perimeter Road, December 2013, £11 million;
- Commercial Advertising and Sponsorship, December 2013, £32 million;
- Security Fixed Post Modernisation, January 2014, £10 million;
- Noise Compliance, February 2014, £2 million;
- Enabling Wide Body Growth, February 2014, £111 million.

5.34 The CAA has assessed these projects in the light of its criteria for setting triggers (see above). Commercial Advertising and Sponsorship and Noise Compliance do not meet its criteria, as these do not have easily demonstrable, direct benefits to users. The projected size of the Northern Perimeter Road and Security Fixed Post Modernisation seem too small for it to be appropriate to set triggers.

5.35 Therefore, triggers will be set for the remaining three projects if those projects are at Gateway 3:

- Enhanced terminal facilities for passengers;
- Engineering Asset Replacement (Wave 1)[25]; and
- Enabling Wide Body Growth.

[25] The CAA notes that this project consists of a large number of discrete work packages. It may therefore be appropriate to disaggregate this trigger in some way. HAL and the airlines are currently considering how such a mechanism could work in practice.

Intertemporal indifference

Issue

5.36 Airlines noted that, where capex is not subject to triggers, HAL can make profit by delaying actual capex beyond the timescales that the CAA assumes when setting capex allowances. To address this, the airlines proposed that HAL should not be allowed to make cash-flow gains by delaying projects. In other words, HAL should be "intertemporally indifferent" as to when it carries out its capex.

CAA's initial proposals

5.37 In its initial proposals, the CAA agreed that making HAL intertemporally indifferent to the timing of capex would be a desirable refinement to the regulatory framework. The CAA's preferred approach was to amend the calculation of net overspend or underspend within a control period so that the relevant amount includes any financing costs (i.e. the cost of capital) that the airport operator saves by delaying investment. If the CAA were to adjust the RAB so that the NPV of the under-spending over five years comes off the RAB at the start of Q7, the CAA would effectively eliminate the financial benefit of delay.

Stakeholder views

5.38 Two respondents commented on the issue of intertemporal indifference in HAL's price control.

- BA supported the CAA's proposal to make HAL intertemporally indifferent to the timing of capex by adjusting RAB with NPV of underspend. Adjustments should not be symmetrical.
- HAL opposed the CAA's intertemporal indifference proposal. It felt that intertemporal indifference was no longer an issue because of the proposed split between core and development capex and enhanced triggers.

CAA's final proposals

5.39 The CAA considers that, because HAL recovers forecast, rather than actual depreciation in its price control, intertemporal indifference remains an issue. HAL can still make a cashflow gain by delaying or cancelling projects for which expenditure is allowed at the price review, since by doing so, HAL could accumulate forecast

depreciation on those projects and over-recover significantly during Q6. The difference between the depreciation over Q6 in the £2 billion RBP and the £3 billion ABP is £54 million.

5.40 The CAA has identified two options for addressing this issue:

- It could adopt a mechanism to adjust depreciation year by year during Q6.
- Alternatively, it could commit to reconciling forecast depreciation with actual depreciation at the Q7 review.

5.41 The CAA considers that the first option is likely to involve the adoption of a complex mechanism which could have unintended effects. In addition, if the cashflow gain is relatively small over Q6, it could be disproportionate to the magnitude of the problem.

5.42 Accordingly, for its final proposals the CAA favours a commitment to assessing the level of over-recovery of depreciation at the Q7 review. If it has been significant, the CAA will reduce HAL's revenues during Q7 to bring forward the unwinding of any early depreciation.

Independent Fund Surveyor

Issue

5.43 HAL and airlines agreed to create the role of an IFS – effectively a framework panel of independent experts – to provide an ongoing assessment of the reasonableness of all major decisions made on key projects and to give a real-time opinion that capital is being used effectively to deliver the outcomes of the project's business case. A jointly agreed draft overview of services was produced, subject to the successful finalisation of IFS terms and conditions, evaluation criteria, selection process and engagement before the end of December 2012.

CAA's initial proposals

5.44 The CAA agreed with these observations and supported the appointment of the IFS. The CAA proposed to make an allowance for the costs of the IFS within its Q6 opex projections once the size of the investment programme was known.

5.45 The CAA noted and agreed with the proposal that the IFS should be appointed jointly by HAL and the AOC (or other representative body as appropriate) and the IFS should have a duty of care towards HAL,

the airlines and the CAA.

Stakeholder views

5.46 The CAA received four responses containing substantive comments on the establishment of an IFS.

- BA supported the establishment of an IFS. It commented that the IFS process could instil significant discipline and efficiency to the Q6 capex programme.
- HAL "noted" the CAA's support for the establishment of an IFS, but did not either explicitly support or explicitly oppose this step. The role of the IFS was to provide an on-going assessment of the reasonableness of key decisions made on key projects.
- The LACC supported the IFS. It commented that the IFS should be adequately funded and that it should be in place by the end of 2013.
- Virgin supported the establishment of an IFS. It too commented that the IFS should be in place by the end of 2013. It viewed the governance arrangements as important.

CAA's final proposals

5.47 Given widespread support for the establishment of an IFS, the CAA will include provision for such an arrangement in its proposals for HAL's price control. It will include an allowance of 0.5% of the capex programme for the budget of the IFS in HAL's price control. As proposed in the initial proposals, the IFS will be appointed jointly by HAL and the AOC (or other representative body as appropriate) and the IFS will have a duty of care towards HAL, the airlines and the CAA.

Final proposals

5.48 The CAA welcomes the progress made by HAL and the airlines to suggest improvements for capital efficiency in Q6. On the six issues mentioned above, the CAA's final proposals are as follows.

- The proposed split between core and development capex will be adopted.

- HAL will be required to attempt to obtain airline sign-off for investment programmes. Disagreements which cannot be resolved will be referred to the CAA, which will act as an arbiter. The governance mechanisms for capex will be developed before the start of Q6.
- Triggers for Q5 triggered projects incomplete at the end of Q5 will be drafted. These triggers will be in force during Q6.
- Triggers similar to those in place during Q5 will be attached to some capex programmes once those programmes pass Gateway 3.
- The CAA will ensure that HAL is intertemporally indifferent to the timing of capex programmes not covered by triggers by adjusting HAL's RAB at the start of Q7.
- The CAA will include the provision for an IFS in HAL's price control.

CHAPTER 6

Operating expenditure

6.1 This chapter considers the appropriate opex allowance for HAL over Q6. It contains the following sections:

- a summary of the CAA's opex process to date;
- a description of the opex allowance contained in HAL's January 2013 FBP for Q6 and the subsequent RBP and ABP;
- a summary of the main issues of disagreement between HAL and the airlines, and issues being considered further by the CAA;
- a summary of the CAA's initial proposals for the Q6 opex allowance for HAL; and
- the CAA's final proposals for the Q6 opex allowance for HAL.

Opex process to date

6.2 To date, the Q6 opex process has consisted of the following stages:

- HAL published its IBP in July 2012 providing its initial opex forecast allowance of £5,304 million over Q6.
- Between July and December 2012, HAL and the airlines engaged in a process of CE over the forecasts in the IBP, providing a joint report to the CAA highlighting areas of agreement and disagreement.
- Opex forecasts were updated in HAL's FBP in January 2013 to £5,234 million, a 1.3% reduction in total cumulative opex over Q6 compared to the IBP. These forecasts were summarised in chapter 5 of the CAA's initial proposals.
- The CAA commissioned several consultancy studies to test the forecasts contained in the IBP and FBP, to provide analysis of historical trends, the underlying assumptions in the business plans, and the potential scope for further efficiency. The CAA used this

evidence to develop the opex allowance of £5,017 million described in the initial proposals.

- HAL again updated its forecasts in its June 2013 RBP and its July 2013 ABP. The ABP resulted in a further £114 million reduction in opex to £5,120 million over Q6, a 2.2% reduction relative to the FBP. The opex section of the ABP documents are summarised in the next section.

HAL's June 2013 RBP and July 2013 ABP

6.3 In June 2013, HAL published its RBP, an update to its January 2013 FBP. The RBP contained new opex projections over Q6, taking into account new information and the planned reduction in the capex programme from £3 billion to £2 billion.

6.4 In the following month, HAL published its ABP, an addendum to its RBP which set out an alternative opex projection over Q6 given a £3 billion investment programme. Figure 6.1 below shows the differences between the total opex projections for Q6 contained in the FBP, the RBP and the ABP. It includes the opex allowance in the CAA's initial proposals for comparison.

Figure 6.1: HAL and CAA projections for operating expenditure over Q6

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
FBP	1,082	1,050	1,034	1,030	1,038	5,234
RBP	1,072	1,030	1,010	1,000	1,010	5,122
ABP	1,072	1,029	1,010	1,000	1,010	5,120
CAA IPs	1,066	1,030	994	970	957	5,017

Sources: HAL and CAA

Changes in opex projections between the FBP and the RBP

6.5 The RBP reduced forecast opex by £112 million over Q6 compared to the FBP. The main changes between the business plans were:

- a £90 million reduction in facilities management opex, based on retendering of the terminal baggage operations and maintenance contract;

- a £16 million reduction in other costs, based on the adoption of some of the efficiencies proposed in the Steer Davies Gleave (SDG) Other opex report;[26] HAL reviewed the efficiency savings proposed by SDG and incorporated savings related to ground transportation, passengers with reduced mobility (PRM)'s and gas costs;
- a £9 million reduction in rent and rates costs based on the vacation of Heathrow Point West;
- a £3 million reduction in utility costs; and
- a £6 million increase related to commercial operations.

Changes in operating expenditure projections between the RBP and the ABP

6.6 Between the June 2013 RBP and the July 2013 ABP the only change in the opex projections was a £2.7 million reduction in facilities costs to reflect that asset replacement capex has been increased from £575 million to £600 million, offsetting some opex costs.

Issues

6.7 The CAA recognises that HAL's opex allowance is a key component of the calculation of final prices. HAL and the airlines differ greatly on what constitutes an appropriate level of ambition for Q6. The main areas of contention between HAL and the airlines concerning HAL's opex projections have been:

- the analysis and conclusions of the top down benchmarking;
- HAL's performance over Q5;
- the scope for further efficiency in maintenance, 'other' opex and central support costs;
- the scope for further efficiency in employee pay and pensions;
- security process efficiency, including flow rates, roster efficiency and the potential for outsourcing;

[26] HAL has accepted some of the proposed savings but disputed the method of efficiency proposed by SDG and has included the reduction as a further stretch target.

- the scope for greater on-going efficiency savings or frontier shift; and
- the overall opex allowance over Q6.

Top-down benchmarking

Issue

6.8 The CAA is keen to understand how external comparators can be used to inform its judgement about the appropriate level of ambition to apply to HAL's business plan.

CAA's initial proposals

6.9 The CAA reviewed several pieces of benchmarking evidence and undertook its own analysis to understand the relative levels of opex per passenger at Heathrow compared to other airports and airlines. The initial proposals stated that this evidence suggested that HAL had scope for catch-up efficiency.

Stakeholder views

6.10 HAL responded that consideration should be given to the wider context in which the benchmarks are assessed including the regulatory construct, the nature of the ownership, the investment cycle and other factors that could affect comparisons. HAL commented that benchmarking analysis needed to consider service levels and that the analysis should take account of HAL's improvements over Q5. HAL also highlighted that the analysis should consider the relative value provided by HAL in terms of higher average fares achieved by airlines.

6.11 HAL highlighted an error in the CAA's interpretation of the Booz & Co benchmarking evidence, stating that this study indicated that HAL was more efficient than GAL, rather than less. HAL stated that apparent gaps between Heathrow and other airports could be explained by several factors including a higher proportion of full service carriers, that Heathrow operates four terminals from a constrained site which tends to increase costs relative to other comparators such as Amsterdam Schiphol.

6.12 HAL stated that comparisons between HAL and BA were irrelevant due to fundamentally different business models. HAL also stated that BA's cost performance has been driven by changes in capacity and structural changes that were not applicable to Heathrow.

CAA's final proposals

Comparisons with airports

6.13 The CAA accepts that no benchmarking sample can be considered perfectly comparable with Heathrow and that there are uncertainties in the interpretation of top-down benchmarking evidence due to the difficulties of making direct comparisons between airports with different characteristics. Nonetheless, such evidence is helpful to assess the overall level of operating cost at an airport relative to its peers and can provide an indication of relative efficiency.

6.14 The CAA has updated its benchmarking analysis to take account of stakeholder's comments and the latest available research and data including reviewing new benchmarking reports by Leigh Fisher and the Air Transport Research Society (ATRS). [27]

6.15 Updating the analysis to account for the latest available statutory accounts (from 2012 and 2012/13) shows that adjusted opex per passenger at Heathrow has risen by 1% from £11.96 to £12.13, primarily caused by a 11% increase in staff costs and costs associated with the Olympic games.[28] This compares with a reduction of 0.1% in the benchmark sample. HAL's adjusted opex per passenger remains above the average of the sample (£8.14) and above comparators such as Amsterdam Schiphol (£11.43).

6.16 The ATRS report, shows that Heathrow is ranked 25th of European airports in terms of productivity taking account of differing inputs and outputs (Gatwick is ranked 15th). The study estimated an efficiency gap of around 60% for Heathrow relative to the most efficient European airport, this compares to a gap of 55% for Gatwick.

6.17 The Leigh Fisher report shows that between 2009/10 and 2010/11 adjusted opex per passenger at Heathrow fell by around 18%, but remains higher than comparators such as Amsterdam Schiphol.

6.18 The CAA accepts that it incorrectly interpreted the Booz & Co benchmarking evidence commissioned by HAL which stated that GAL

[27] Leigh Fisher, Airport Performance Indicators, 2012 and ATRS, Airport Benchmarking Report, 2013

[28] HAL estimates that the Olympics increased opex by around £25 million in 2012. This is attributed to the costs of Heathrow's temporary Olympic terminal, professional consultants, additional baggage, uniforms, staff bonuses and overtime costs.

was more efficient than HAL taking account of passenger complexity. However, direct comparisons between HAL and GAL show that GAL's adjusted operating costs per passenger is around 40% lower than HAL's and has fallen by 13% since 2008 compared to a 7% reduction in HAL's adjusted operating costs per passenger over the same period.

6.19 Furthermore, bottom up evidence of staff costs, pensions, rostering efficiency, and security flow rates all show that GAL is more efficient than HAL. This and the independent benchmarking evidence from ATRS and Leigh Fisher described above do not support the Booz & Co analysis and suggest that GAL is more efficient than HAL.

Comparisons with airlines

6.20 The CAA accepts that comparisons of opex performance between airports and airlines are imperfect, and that airline operations are more flexible, which can make them more effective at controlling costs.

6.21 However, airlines and airports also have similarities; they operate in the same industry and share many of the same cost drivers, including exposure to similar labour markets and technical and security requirements. One of the main differences is the greater level of competition in the airline industry, which ensures greater efficiency. Airlines have also experienced higher input cost inflation over recent years. BA's fuel costs have risen from 12% to 35% of its total operating costs since 2000, reflecting significant increases in the price of fuel. Despite this, BA has achieved a 7% reduction in opex per available seat kilometre through efficiencies in other areas.

6.22 Some of the cost savings made by airlines are not available to HAL, for example, the utilisation of larger and more fuel efficient aircraft, or the cancelation of routes. However, airlines have also made a number of efficiency savings such as restructuring, pay freezes, and reforms to pension schemes. Such efficiencies could be implemented at Heathrow.

6.23 The CAA accepts that no benchmarking sample can be regarded as a perfectly comparable to Heathrow. However, having considered the responses to its initial proposals, the CAA continues to consider that:

- HAL's opex per passenger is relatively high compared with other airports with similar characteristics;

- HAL's costs have risen faster than that at comparable airports and airlines; and
- there is likely to be scope for catch-up efficiency based on comparisons with more efficient airport operators.

6.24 These conclusions are supported by the bottom-up evidence described in the following sections, and by HAL's own business plan, which includes efficiency savings related to pensions, wages, security costs and other areas.

HAL's performance over Q5

Issue

6.25 HAL has an incentive to operate within its opex allowance during Q5. Its opex performance during Q5 may therefore provide an indication of the airport operator's ability to meet efficiency targets.

6.26 The CAA stated that HAL's opex has been higher than the Q5 allowance despite HAL experiencing lower than expected passenger numbers. HAL's opex has been above the Q5 allowance in every year of Q5. Opex has been 6% higher than the allowance on a cumulative basis over Q5, despite passenger numbers being 9% below the Q5 forecasts.

Stakeholder views

6.27 The CAA received several comments from the LACC, individual airlines and airline alliances. The evidence collected by airlines (and the CAA's own consultants) purported to show that HAL has been operating at significant levels of inefficiencies. HAL provided some analysis which indicated that it has successfully reduced underlying opex to the levels implied by the Q5 determination, after adjusting for factors such as London 2012, winter resilience costs and lower passenger numbers.

CAA's final proposals

6.28 Passenger forecasts were 9% lower than assumed in the Q5 opex allowance. This suggests that HAL had significant headroom to offset unforeseen events that may have increased opex over Q5, such as the Olympics and winter resilience costs.

6.29 HAL's statement that its outturn opex over Q5 was equal to the CAA's

forecasts is based on an assumption that 20% of its opex costs are sensitive to changes in passenger numbers. This implies an elasticity of 0.2, which is lower than the CC's estimate of passenger opex elasticity of 0.3[29] and 0.5 by SDG.[30]

6.30 This suggests that HAL may have underestimated the flexibility of its cost base and the impact of lower passenger numbers by up to £124 million over Q5. Furthermore, in contrast to HAL, GAL and STAL have both outperformed their opex allowance by 6% and 5% respectively with a similar shortfall in passenger numbers.

6.31 Overall, the CAA considers that HAL has exceeded its Q5 opex allowance and has underestimated its potential to reduce costs in response to lower passenger numbers over Q5.

Employee pay

Issue

6.32 The CAA will not dictate HAL's policy on staff pay and reward, but must assess the scope for efficiency at the airport based on appropriate benchmarks and an assessment of reasonable measures that could be implemented to reduce costs.

6.33 The IDS Thomson (IDS) employee reward benchmarking study identified that:

- HAL's total staff reward was between 10% and 21% higher than the benchmarks based on comparisons with general and aviation industry benchmarks;
- rates of wage growth had been higher than the economy wide average between 2005 and 2012 (excluding the pay freeze in 2009);
- there was evidence of grade drift in security and fire service functions;
- there was potential for improvements to rostering efficiency based on the implementation of a more flexible roster system; and

[29] Competition Commission, Stansted Airport Q5 Price Control Review, 2008.

[30] Steer Davies Gleave, Review of operating expenditure and investment consultation – Stansted Mid Term Q5, 2012.

- there was evidence of high reliance on overtime with 93% of staff below senior management level regularly working 5.8 hours of overtime per week.

6.34 The CAA stated that, based on the latest data published in HAL's regulatory accounts in 2011/12, staff costs were £262 million.[31] The CAA estimated that bringing HAL's staff costs in line with the IDS benchmarks could reduce costs by between £16 million and £40 million per year by the end of Q6, taking account of proposed reductions in staff headcount and accounting for the ✂✂% wage efficiency included in the FBP.

6.35 This did not include any savings that could be achieved through changes to rosters, closer matching of labour supply and demand, reductions to overtime, staff grading or changes to pension provision.

CAA's initial proposals

6.36 The CAA's initial proposals were based on a potential staff cost efficiency of between £16 million and £40 million per year by the end of Q6 based on reducing staff cost by between 10% and 21% over Q6. Based on the mid-point benchmark of 16%, this would imply savings of £137 million over Q6.

6.37 The CAA stated that these savings would require time for HAL to implement efficiently. It therefore applied a 20% per year glidepath reducing the efficiency to £80 million over Q6.

Stakeholder views

6.38 The CAA received four responses to its initial proposals which commented on HAL's staff remuneration.

6.39 BA agreed with the CAA's approach to staff cost efficiency, but stated that the proposed efficiency would not bring pay rates in line with market rates by the end of Q6, recognising that this would require nominal pay cuts. BA stated that the CAA should ensure that pay rates were adjusted to market rates ✂✂✂✂ and that new starter contracts should be restructured with immediate effect. BA estimated that these changes could result in ✂✂ higher staff turnover, which

[31] The £262 million figure is based on the Q5 opex allowance. The actual expenditure was £270 million. This has been corrected in the latest estimate in the final proposals. This change increases the efficiency estimate by £1 million.

would reduce costs by up to £25 million over Q6. This point was also made by the LACC and Virgin. Virgin noted that further reductions to salaries would be required in Q7 to reduce costs to competitive levels.

6.40 HAL stated that it had undertaken significant steps to reduce its staff costs, while still meeting safety and regulatory obligations. It expressed concerns about the reliability of the CAA's consultants' studies. It commented that the evidence did not support the level of wage efficiencies proposed and that the study had not taken account of evidence provided by HAL. HAL suggested that the job roles used to benchmark Heathrow were not comparable and provided some benchmarking evidence from EEF and Tower Watson based on a survey of 13 UK airports. This evidence indicated that basic salaries at Heathrow were closer to (although still above) benchmarks than estimated in the IDS study.

6.41 HAL also commented on the achievability of reducing employee costs and stated that it had included efficiencies of £51 million associated with its workforce strategy for Q6.

6.42 HAL also commented that the CAA had double-counted wage and pension efficiency in its analysis and the treatment of maintenance costs (and central service costs) which include staff costs. It stated that it was not for the regulator to determine the specific content of employment and other contracts.

CAA's final proposals

6.43 HAL's benchmarking evidence is based on a limited selection of airport comparators and does not include the wider range of roles included in the IDS study. This may explain the lower estimates of the potential efficiency in the study. Furthermore Gatwick Airport Limited has provided additional staff cost benchmarking evidence which indicates that the potential efficiency estimated by the IDS study is conservative. The CAA therefore considers that the findings of the IDS study are robust.

6.44 The CAA has considered the achievability of the proposed reduction in staff costs.

6.45 There are a number of ways that HAL could attempt to reduce its wage related costs. For example, the CAA notes that given the recent poor economic environment, wage restraint has been applied in other

parts of the economy including throughout the public sector, parts of which have experienced a two year nominal wage freeze from 2010[32] followed by 1% nominal average pay growth from 2013.[33]

6.46 Assuming an average RPI inflation rate of 3.5%[34] per year the CAA estimates that staff costs could be reduced by around 20% in real terms by the end of Q6 by applying a nominal wage freeze. This is a significantly greater reduction than the 16% reduction proposed in the CAA's initial proposals and indicates that the proposal could be achieved with below inflation pay rises over Q6.

6.47 HAL could also seek to cut pay costs by reducing levels of overtime, increasing the proportion of staff on new lower rates of pay and by seeking to reduce and reverse the grade drift identified in the IDS study.[35] HAL is proposing to ✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂ which will gradually reduce average rates of pay.

6.48 Current rates of staff turnover at Heathrow are around 5%, significantly lower than the benchmark of 13% in the wider economy.[36] This may suggest that the current employee reward offer is better than alternatives.

6.49 The latest government forecast indicates that average nominal earnings growth is expected to rise from 1.4% in 2013 to 4% in 2017 as the economy recovers.[37] This compares to forecast RPI growth of 3.9% in 2013 to 4% in 2017,[38] meaning that pay growth in real terms is not expected in the general economy until the end of Q6.

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[32] HM Treasury Budget 2010, page 17.

[33] The 2011 Autumn Statement announced that public sector pay awards will average 1% for the two years following the pay freeze. This guidance was restated in the HM Treasury Civil Service pay guidance 2013-14. The 1% guidance includes all elements of pay including staff progression increments.

[34] Forecasts based on forecasts from Office for Budgetary Responsibility Economic Forecasts – March 2013.

[35] The IDS employment cost study stated that there has been a significant re-grading of security supervisors to the higher Service Team Leader position following the introduction of more complex passenger and baggage security screening requirements with "the virtual de-population of the lower grades".

[36] IDS, Benchmarking Employments Costs – Heathrow, 2012.

[37] Office for Budgetary Responsibility, Economics and Fiscal Outlook March 2013, table 1.1.

[38] Based on forecasts from Office for Budgetary Responsibility Economic Forecasts – March 2013.

6.50 However, there has been a notable improvement in the economic outlook since the initial proposals,[39] which means that wage growth could begin to increase more rapidly than assumed in the latest forecasts. To account for this, the CAA has reduced the wage efficiency from 16% to 15%. Overall, the CAA proposes a total saving of £78 million over Q6 relative to HAL's ABP. This is £2 million less than the CAA's initial proposals.

6.51 The CAA has considered the risk of double-counting staff efficiency savings in central services and maintenance costs. Reductions in wage costs will cut across several areas of HAL's business including security, maintenance and central support. These reductions have implications for the efficiencies proposed in these areas and are discussed in the appropriate sections of this chapter.

6.52 The CAA is satisfied, however, that its proposals for wage efficiencies do not double-count projected efficiencies in specific business units. The CAA has accounted for reduced staff costs in the maintenance efficiency projection and is not proposing any additional efficiency in security or central support functions.

Pensions – future costs

Issue

6.53 In the Q5 November 2007 proposals for Heathrow and Gatwick, the CAA stated that BAA's pension costs should be capped "on the basis of cash contributions to the pension fund each year" but that these should be capped at an appropriate level, to ensure airport users are not disadvantaged by the relative generosity of the scheme. The CAA decided to allow a cap of 25% of pensionable pay in cash contributions on average.

6.54 A study conducted by independent consultants IDS estimated that pension costs will be equivalent to 33% of pensionable pay in 2013 on average (40% for the DB and 10% for the DC scheme). This is significantly higher than the 25% cap and comparative benchmarks of 20% and 7%.

[39] For example, increases in GDP growth forecasts, increases in the employment rate, decreases in the unemployment rates and general improvements in business and consumer sentiment.

CAA's initial proposals

6.55 The CAA estimated that, if HAL were able to reduce pension costs in line with benchmarks, opex costs could be reduced by around £77 million over Q6. HAL had included an efficiency saving of ✂✂ million in its FBP. The initial proposals therefore included a further efficiency of £10 million over the course of Q6, taking account of HAL's existing pension efficiency savings.

Stakeholder views

6.56 The CAA received three responses to its initial proposals which commented on the level of HAL's pension provisions.

6.57 BA commented that a salary sacrifice scheme[40] should be implemented by HAL, and could save an extra £25 million over Q6. This point was also made by the LACC.

6.58 HAL claimed that the CAA's theoretical assumption about HAL's pension costs was not consistent with the assumptions used in the FBP. The IDS analysis estimated that Heathrow's aggregate pensionable salaries are 33% in 2013, which is based on 40% pensionable salaries for DB scheme members. This number was not correct. After the next triennial valuation of the Pension Scheme from 2015/16, HAL was targeting DB pensionable salaries at approximately ✂ and DC at around ✂, giving an average of approximately ✂✂.

6.59 Virgin commented that HAL could make further savings from reducing its pension costs, in line with those made by other private sector companies. Virgin stated that pension accruals should fall from 1/54 to 1/80 of this annual salary. It also stated that £25 million of savings could be made over Q6 by introducing a salary sacrifice scheme.

CAA's final proposals

6.60 The CAA commissioned the Government Actuary Department (GAD) to update the pension benchmarking work to take account of stakeholder's comments. GAD concluded that the benchmarks used in the CAA's analysis of DB scheme costs may not fully reflect differences in scheme valuation assumptions and recent changes to

[40] A salary sacrifice scheme involves reducing an employee's salary in exchange for offsetting contributions to other elements of remuneration such as pension contributions. Reducing the employees' salary reduces both employee and employer national insurance contributions thereby reducing costs.

market conditions and the return on pension assets.

6.61 GAD analysed the potential for pension cost savings based on two changes to the pension scheme: increasing the retirement age from 60 to 65 and reducing the accrual rate from $1/54_{ths}$ to $1/60_{ths}$. These changes were based on an analysis of typical scheme benefits[41] and were the same as those considered by the CC in the Q5 review.

6.62 Based on these changes, GAD concluded that an appropriate contribution rate for HAL would be 23%-24% of pay. GAD also concluded that this was in line with the efficiency savings proposed in HAL's ABP. GAD considered that there could be scope for further stretch savings based on further efficiencies being made in other schemes.[42]

6.63 Based on the responses to the CAA's initial proposals, HAL's July FBP update and further work conducted since April, the CAA concludes that the previous benchmarking analysis has overestimated the potential for efficiency in HAL's pension costs. The CAA has accepted GAD's recommendation that a contribution rate of 23%-24% of pay represents an appropriate level of efficiency, and is consistent with the Q5 allowance.

6.64 However, HAL has assumed that contribution rates will remain at ✂✂ in the first year of Q6. Given the clear expectation that pension costs should have been reduced in Q5, the CAA considers that this allowance should be reduced to 23%-24% of pay. This results in an efficiency of £3.0 million relative to HAL's ABP.

6.65 HAL has assumed DC contribution rates of ✂✂✂✂✂✂✂ ✂✂✂✂✂✂✂✂✂✂✂✂✂✂.[43] The CAA considers that the DC contribution rates are not sufficiently out of line with comparative benchmarks to require further efficiencies.

6.66 Regarding the options proposed by the airlines including the introduction of a salary sacrifice scheme (or SMART pensions), the CAA concludes that such options are viable for HAL, but are likely to

[41] ONS, Occupational Pension Schemes Annual Report 2011.

[42] The IDS study examined the impact of four changes to the pension scheme including increasing the retirement age to 65, linking payments to career averages instead of final salaries, increasing accrual rates to 80th and the combined effect of all of these changes.

[43] Office for National Statistics, Occupational Pension Schemes Survey, 2011.

be required to achieve the proposed pension efficiency savings and should not be considered as an additional saving.

6.67 The airlines are likely to have overestimated the potential saving from the introduction of a salary sacrifice scheme. A saving of £25 million over Q6 would require HAL to reduce its social security contributions by around 25% per year. This would require employees to sacrifice wages by at least 25%, which is unlikely to be achievable. A portion of any saving would also need to be paid back to employees as an incentive for the scheme to be effective. [44]

6.68 The CAA agrees with HAL that there is an interaction between wages, pensions and social security costs and that separate wage and pension efficiency proposals could double-count the potential saving.

6.69 However, pension costs are directly proportional to wages, and a reduction in total staff costs will therefore lead to a proportional reduction in pension costs. The pension efficiency has been reduced from £10 million to £3 million and the CAA considers that the impact of any interaction between the wage pension cost efficiency is unlikely to be significant.

Pensions – deficit contribution

Issue

6.70 In 2010, HAL's actuaries estimated that the BAA pension scheme was in deficit by £378 million. HAL's portion of this deficit is estimated to be £275 million. It has since made annual contributions of £24 million to reduce this deficit. HAL's FBP included pension deficit costs of £129 million over Q6 based on a 10-year recovery plan beginning in 2013.

CAA's initial proposals

6.71 The CAA's initial proposals stated that the CAA might need to give further consideration to the appropriate level of any deficit allowance based on HAL's high pension costs over Q5 relative to the 25% contribution rate limit.

[44] A salary sacrifice scheme will typical reduce an employer's National Insurance Contributions by around 14% of the salary sacrificed by the employee.

Stakeholder views

6.72 The CAA received four responses to its initial proposals which commented on the provisions for HAL's pension deficit costs.

6.73 BA stated that the pension deficit had arisen because of overly generous pension benefits in the past. Therefore, passengers and airlines should not fund the failure of HAL's management to address its pension issues. HAL had been advised in 2007 in the Q5 consultation that their pensions needed to reduce to market rates. BA stated that HAL's scheme had been in surplus at this time, and that the deficit could have been reduced if pension costs had been reduced in Q5.

6.74 The LACC and Virgin commented that airlines should not fund pension deficit costs, because they only occurred because of HAL's inaction in Q5.

6.75 HAL noted that full recovery of all reasonable and efficiently incurred pension costs was consistent with regulatory practice and cited the treatment of pension costs in the NATS price control and other sectors. HAL disputed BA's assertion on the origin of the pension deficit.

CAA's final proposals

6.76 The CAA commissioned GAD to consider the treatment of the pension deficit. GAD considered that economic regulation is typically based on one of two alternative principles:

- Users meet the expected cost of benefit accruals, but the management of the scheme's liabilities is a matter for the company; or
- users meet total pension costs including deficit contributions and therefore also benefit from any surplus (subject to those costs being efficiently incurred).

6.77 Based on the historic treatment of BAA's pension deficit costs, including the reduction of the RAB in Q5 associated with the Q3 pension contribution 'holiday', GAD concluded that the second principle has been and should be applied to HAL. This means that efficient deficit recovery costs should be included in the opex allowance. GAD also concluded that it had no significant concerns

with the estimation of the pension deficit.

6.78 HAL have exceeded the pension allowance over Q5, however the impact of this on the scheme deficit is likely to be small. The deficit is caused by a shortfall on asset returns, accrued over many years. It is very difficult to attribute a portion of the deficit to excessive benefits in specific years and in any case the effect is likely to be small and possibly positive.

6.79 The GAD study also raised the issue of the sale of Stansted, and Edinburgh airports. Each of these airports will make a commutation payment to the BAA pension scheme to remove liabilities associated with former employees (of Stansted and Edinburgh) in the BAA scheme. These payments will reduce the BAA scheme deficit, having no impact on liabilities.

6.80 GAD concluded that deficit costs should be adjusted to account for these payments, which were expected to equal £48.3 million in total. GAD made some approximate calculations and estimated that the payments would reduce HAL's deficit by around £16 million. Based on the 10-year deficit recovery payments beginning in 2015/16, this implies that deficit contributions should be reduced by £6.4 million over Q6 relative to HAL's ABP.

Other opex

Issues

6.81 The CAA commissioned SDG to examine other opex at Heathrow. This includes costs relating to rent and rates, utilities, police, cleaning, Air Navigation Service (ANS), PRM and other items. This study identified the potential for efficiency of between £87 million and £90 million over Q6 relative to the FBP.

CAA's initial proposals

6.82 The CAA's initial proposals were based on core and stretch efficiencies of £87 million to £97 million identified in the SDG report. The CAA based its allowance on the lower core savings and applied a glidepath of 20% per year to catch-up savings that the CAA judged HAL would require time to implement. This resulted in net savings of £78 million over Q6 relative to the FBP.

Stakeholder views

6.83 BA, the LACC and Virgin welcomed the work undertaken by SDG. They stated that the identified efficiencies were in line with their own assessment. They did not agree with the CAA's interpretation of the evidence including the use of a glidepath for some of the efficiency savings.

6.84 HAL stated that the efficiencies in the SDG report were not properly evidenced or substantiated. HAL disputed several of the proposed efficiencies, including those relating to Heathrow Connect, the reduction in Terminal 2 rates costs, and the reduction in the estimate of the rates revaluation. HAL also submitted additional evidence from Gerald Eve to support the rate cost forecast in its FBP. This evidence stated that SDG's original analysis did not take account of forecast changes in construction costs, which are a key factor in the rates revaluation.

6.85 HAL did incorporate several of the efficiency savings proposed by SDG into the ABP. These changes included vacating Heathrow Point West, lower utility ground transport and PRM cost forecasts. These efficiencies total £14 million over Q6.

CAA's final proposals

6.86 The CAA commissioned SDG to update its study and to take account of stakeholders' responses to the initial proposals. SDG reviewed the comments and evidence provided in response to the initial proposals and altered their efficiency proposals in several ways, as follows:

- Acknowledging the efficiency proposals related to ground transport, PRM, utilities and rents, which have effectively been accepted by HAL in its business plans. This is equivalent to £14 million over Q6.
- Updating the analysis of the impact of the 2017 rates revaluation based on the BCIS construction price indices to account for comments from Gerald Eve about the relevance of house prices to the calculation of HAL's rateable value. This resulted in a reduction of the proposed efficiency from £39 million to £31 million over Q6.
- Updating the benchmarking analysis to account for additional evidence from HAL about the airport's terminal areas. This altered the conclusions of the terminal area benchmarking analysis and

reduced the core and stretch efficiency associated with cleaning costs from £14 million and £17 million to £7.5 million and £8.6 million over Q6.

- SDG reconsidered the evidence for the efficiency related to the treatment of Heathrow Connect costs and Terminal 2 rates costs in response to new evidence from HAL. SDG concluded that the original efficiency proposals were based on a misunderstanding of HAL's cost allocation and terminal areas. These changes reduced the overall efficiency savings by £9.5 million over Q6.
- SDG maintained its proposed efficiencies related to rail and ANS costs equal to between £6.0 million and £9.6 million over Q6. SDG considered that the level of Heathrow Express staff was high and could be reduced by between 40 and 72 and that any loss in ticket sale revenue from this reduction could be offset by increased demand from lower ticket prices. SDG did not agree with HAL that the service could not operate without these staff as the service had operated with lower levels of staff in the recent past.

6.87 Based on these changes, SDG concluded that HAL could reduce opex relative to the ABP by between £43.2 million and £49.4 million over Q6.

6.88 The CAA has considered SDG's efficiency proposals on a case by case basis taking account of responses from stakeholders. The CAA considers that HAL may have scope to reduce the level of Heathrow Express staff, for example by introducing ticket barriers at the station. However this could reduce ticket revenues and potentially reduce the service quality of the rail service by causing inconvenience to passengers. This saving has not been included in the final proposals.

6.89 SDG's ANS stretch efficiency proposal is based on benchmarking analysis which shows that ANS costs are higher than benchmarks. This may be explained by the greater complexity of air traffic operations at Heathrow and so there is a high degree of uncertainty associated with this proposal. The CAA has not included this efficiency in the opex allowance.

6.90 The CAA has adopted SDG's remaining core opex efficiency proposals relating to cleaning and the rates revaluation. The treatment of the rates revaluation in 2017 is discussed further in a following

section. Overall these two proposals result in total savings of £38.7 million over Q6 relative to the ABP. The CAA considers that neither efficiency proposal requires a glidepath as the savings are a reduction in cost forecasts.

Maintenance costs

Issue

6.91 The CAA commissioned SDG to assess HAL's Q6 maintenance cost forecasts. SDG's study examined the maintenance costs in the FBP, including benchmarking costs against nine other airports. The study found that maintenance costs were 64% higher than the benchmarks in terms of costs per square metre.

6.92 The study also found that HAL has a very complex array of contractual relationships, which was likely to increase management costs and cause inefficiency in some functions. SDG outlined a range of changes that could improve the airport operator's efficiency including undertaking more outsourcing of mid-tier complexity and reactive maintenance activities. SDG noted that the Highways Agency had been able to reduce overspend from 27% to 12% through the use of such contracts.[45] The study noted that HAL had been able to achieve a saving of 16% through new outsourcing contracts.

6.93 SDG concluded that some efficiency gains were likely to be possible through improvements to the procurement strategy and a reduction in maintenance costs in line with more efficient benchmarks. Overall, the study concluded that HAL's FBP opex projections could be reduced by between £32 million and £90 million over Q6. The upper range was based on HAL meeting more challenging external benchmarks in terms of maintenance cost per terminal area.

6.94 The study also included an alternative core efficiency target of £51.3 million based on a 10% reduction in third party engineering costs, which could be achieved through improvements to HAL's procurement strategy.

CAA's initial proposals

6.95 The CAA based its initial proposals for opex on the core £32 million

[45] NAO: HC 959, Session 2008–2009 - Highways Agency: Contracting for Highways Maintenance.

savings proposed in SDG's study. A glidepath was applied to these savings on the assumption that HAL would require time to implement the changes efficiently. This reduced the overall impact to £28 million over Q6.

Stakeholder views

6.96 The CAA received four responses which commented on the level of maintenance costs over Q6.

6.97 BA, the LACC and Virgin stated that there was no need for a glidepath as maintenance was largely outsourced and that the CAA should apply the higher efficiency target. BA commented that more efficient maintenance costs could be achieved if HAL placed greater focus on evaluating contract scope, price and strategy. BA highlighted the savings achieved in the new baggage system contract as an example. No glidepath would be necessary and higher savings could be achieved. The LACC stated that the SDG analysis was too conservative, stating that HAL should remove 100% of the gap to benchmarks (as opposed to the 50% reduction proposed by SDG). The LACC commented that HAL should close 100% of the maintenance costs gap, which would save £240 million over Q6.

6.98 HAL stated that the efficiencies proposed in the SDG study were based on a flawed approach. For example, adopting a reactive approach to asset maintenance could jeopardise the passenger experience. HAL provided additional evidence related to the maintenance costs benchmarking. It also commented that the CAA had double-counted savings in engineering staff costs by applying both a wage cost efficiency and SDG's maintenance efficiency proposal.

CAA's final proposals

6.99 The CAA commissioned SDG to update its study to account for the new information provided since the publication of its original report, including the ABP and comments and evidence from stakeholders. SDG examined the new data on terminal areas provided by HAL and amended its analysis to remove the efficiency proposals based on maintaining historic performance of cost per square metre.

6.100 SDG also noted the reduction in maintenance costs between the FBP and ABP, which had more than exceeded the original stretch

efficiency target. HAL had achieved this through retendering the contract for passenger baggage operations and maintenance, achieving a cost reduction of 25% by consolidating the contract from two suppliers to one. SDG stated that this provided strong evidence to support its original conclusion that HAL could achieve savings through improvements to its procurement strategy and concluded that HAL is likely to be able to reduce costs by similar amounts in other areas.

6.101 HAL has assumed a 1.4% increase in its non-baggage maintenance costs. Based on the outcome of the recent renegotiation of HAL's baggage maintenance contract, SDG has assumed a 12.5% reduction in costs is achievable. Based on this conclusion, SDG proposed a core efficiency of £33.6 million (relative to the £32 million core efficiency proposed in its original report).

6.102 SDG did not accept the airlines' argument that Heathrow could match the most efficient benchmarks in terms of cost per square metre. SDG argued that Heathrow differed in a number of important ways from the comparator airports meaning that direct comparisons with other airports needed to be treated with caution. HAL's own performance was regarded as a more reliable benchmark.

6.103 The CAA considers that HAL is likely to be able to achieve greater efficiency in maintenance costs over Q6 based on greater efficiency in its outsourced maintenance contracts and has adopted SDG's updated core efficiency proposal.

6.104 The CAA has considered HAL's point that reductions in staff wages would reduce maintenance costs, and that there was a risk of double-counting wage and maintenance efficiencies. This is a valid point, as wage cost efficiencies will also reduce maintenance staff costs. Maintenance staff costs account for 10% of total staff costs, subtracting the impact of the wage cost efficiency proposal on maintenance costs would reduce the proposed efficiency to £20.0 million over Q6.

6.105 The CAA considers that a glidepath should not be applied to maintenance efficiency savings. Maintenance costs consist of both in house and outsourced costs (around 30% and 70% respectively) with a large number of individual outsourced contracts let out in work packages to a framework of companies. HAL is planning to move to a

new framework arrangement from March 2014, which should provide HAL with an opportunity to reduce costs from the first year of Q6. Future contract costs should also be reviewed annually and HAL is therefore likely to have scope to reduce costs on an ongoing basis.

6.106 In summary, the CAA has adopted SDG's updated core efficiency proposal, accounting for the impact of staff cost efficiencies without applying a glidepath. This results in an overall efficiency of £20.0 million over Q6 relative to HAL's RBP.

Central support costs

Issue

6.107 The CAA commissioned Helios to examine HAL's central support costs. This study was not available in time to inform the initial proposals.

CAA's initial proposals

6.108 As Helios had not issued its final report by the publication of the initial proposals, the CAA made no allowance for additional efficiency savings beyond those identified in the FBP in its initial proposals. The CAA committed to reconsider this issue once the final report was available.

Summary of the Helios Central Support Report

6.109 The Helios study examined HAL's historic and forecast central support costs and collected a range of benchmarks based on airports, airlines and bespoke Hackett and Gartner benchmarks tailored to companies with similar characteristics to HAL. HAL's costs were compared against these benchmarks to estimate the potential for greater efficiency in the business plan.

6.110 The study concluded that HAL could potentially reduce central service costs in several areas including Finance, HR and IT. Overall the study estimated that HAL could reduce central support costs by between £11 million and £77 million over Q6. The lower 'core' target was based on HAL maintaining current levels of cost over Q6 and removing unjustified increases in the business plan. The higher 'stretch' target was based on bringing costs into line with more ambitious external benchmarks.

Stakeholder views

6.111 The CAA received four responses commenting on forecasts of central service costs over Q6.

6.112 BA, the LACC and ✂✂✂✂ stated that there were several opportunities for cost reduction in central support costs amounting to £90 million in total, including through; reducing the number of managers and senior staff from 70% to 50%, reducing insurance costs to account for lower levels of construction activity, and reducing consultancy costs. The airlines stated that they were disappointed that the Helios study was not available for them to refer to in response to the initial proposals.

6.113 HAL responded that Helios had misunderstood the complexity and construction of central support costs and that the efficiencies proposed by the study were inconsistent with the analysis.

CAA's final proposals

6.114 In considering how to interpret this evidence the CAA has considered several factors including:

- the wide range of benchmarks, which sometimes provide conflicting assessments of efficiency in central support activities;
- the lack of detailed understanding of the drivers of central support cost provided by the report and specific proposals for the achievement of cost efficiency;
- the impact of proposed staff cost efficiency on central service costs and the potential for double-counting staff wage efficiencies based on the IDS evidence;
- the efficiency savings included in the ABP, which include a 7% reduction in headcount; and
- further responses from the airlines and airport operators since the publication of the final report.

6.115 On balance, the CAA considers that it would be appropriate to incorporate the 'core' efficiencies proposed by the report into the range of efficiency savings for HAL after subtracting the reduction in central support staff costs linked to the wage cost efficiency described above. Many of the efficiency proposals in the report were based on a

reduction in staff costs, which could double-count the CAA's proposed wage efficiency.

6.116 The total wage efficiency included in the CAA's final proposals is £78 million, and central support staff account for around 20% of total staff costs. This implies that the wage cost efficiency will reduce central support costs by around £15.3 million over Q6. This is more than the total core efficiency proposed by Helios, therefore the CAA does not propose further efficiencies in this area.

Efficiency frontier

Issue

6.117 In calculating the level of efficient operating costs over Q6, the CAA has to make an assumption as to how the "efficiency frontier" (the level of costs that a hypothetical efficient operator might incur) might move over time. The CAA commissioned independent consultants CEPA to examine this question.

6.118 CEPA estimated that, based on the historic adjusted Total Factor Productivity (TFP) range for comparator businesses, an efficient organisation with a cost structure similar to HAL should expect to see net frontier efficiency shift of between 0.9% and 1.0%.

CAA's initial proposals

6.119 The CAA's initial proposals assumed a 1% per annum improvement in the efficiency frontier. This is equivalent to a stretch target of £155.4 million over Q6. The FBP included a stretch efficiency target of £139 million over the course of Q6. The CAA therefore included a further stretch efficiencies equal to £21 million over Q6.[46]

Stakeholder views

6.120 The CAA received responses from four parties commenting on the efficiency frontier.

6.121 BA commented that savings associated with frontier shift should be based on the performance frontier, rather than at HAL's existing inefficient performance. Therefore, the full £158 million of frontier shift should be included in the Q6 opex allowance. BA also stated that HAL had existing plans to achieve its stretch target including

[46] The figures do not match due to the compounding effect in the calculation.

achieving early closure of Terminal 1, which it estimated would reduce opex by up to £50 million.

6.122 The LACC supported the 1% ongoing efficiency factor proposed by CEPA stating that this was similar to the level of stretch efficiency they had proposed. They stated that the CAA had not interpreted this evidence correctly and that the CAA had been misinformed that HAL have a further £138 million of unknown expenditure remaining in the FBP (referring to movements between the IBP and FBP). The LACC highlighted that in the IBP HAL had a £200 million stretch target in its IBP and that these savings have been achieved through a variety of identified efficiencies in the FBP. Therefore the full 1% frontier shift should be applied to HAL in addition to the other savings. Virgin and BA made similar points.

6.123 HAL commented that the CAA erred when it suggested that a stretch would be possible in relation to unidentified efficiencies: there was no evidence that such separate treatment was possible or appropriate. HAL stated that whether efficiencies were identified or unidentified is irrelevant and that this view was supported by the CAA's comments at the time of the Q5 price control decision. HAL stated that BA's position was unclear and incorrect.

6.124 GAL also responded to the CEPA report making several points, which are also relevant to HAL including that:

- CEPA's analysis did not account for changes in the economic climate;
- the TFP estimates did not control for possible transaction costs or structural inefficiencies and was based on inappropriate comparators; and
- frontier shift estimates are not toward the bottom end of the regulatory precedents as stated in the report.

CAA's final proposals

6.125 The CAA commissioned CEPA to update its work in response to these points (including points raised separately by GAL). CEPA stated that:

- it had adopted a standard practise approach to the estimation of TFP and did not consider that an adjustment for the current economic climate is required. CEPA stated that this was consistent

with regulatory precedent;

- it considered that its choice of comparators was appropriate. CEPA had discussed the selection of comparators with the airport operators during the study and their comments were taken into account; and
- GAL's comments on the choice of the frontier shift target were based on a draft version of the report and were not relevant to the final version.

6.126 CEPA confirmed that a frontier shift target of between 0.9% and 1% was an appropriate target for HAL.

6.127 The CAA considers that stretch savings are possible in relation to unidentified efficiencies. This is clear from the inclusion of such a target in HAL's business plan. It is true that such efficiencies must eventually be identified, planned and developed by a business. However, it is likely that, over the course of Q6, opportunities for cost saving will arise that were not anticipated in the ABP, for example as a result of new technology. The CEPA evidence suggests that such savings are likely to be around 1% per year on average, which is higher than the target implied by the savings in the ABP (which are equivalent to 0.87% per year).

6.128 The airlines have questioned the basis of the stretch savings included in HAL's business plan and stated that HAL has defined plans for achieving the stretch savings through the early closure of T1. The CAA does not agree that HAL has plans for achieving its stretch savings. It may be possible for HAL to implement a more rapid closure of Terminal 1; however the latest business plan is based on achieving closure in December 2016.

6.129 The CAA has adopted the 1% per year frontier shift saving estimated by CEPA. After taking account of HAL's stretch efficiencies, this results in a further efficiency relative to HAL's ABP of £20.4 million over Q6.

Security – flow rates

Issue

6.130 Peak hour security processing flow rates at Heathrow are typically between 120 and 160 passengers per lane per hour depending on the

terminal and time of year. These are below the rates achieved at other airports, which can reach up to 250 passengers per lane per hour.[47]

6.131 HAL has stated that the differences between flow rates at Heathrow and other airports is explained by several factors including:

- Heathrow's largest airline, BA, has a more generous hand baggage allowance than airlines such as easyJet and Ryanair which account for the majority of flights from Gatwick and Stansted;
- Heathrow has a high proportion of long haul and premium passengers who are likely to carry more items through security; and
- Heathrow has a high proportion of long haul passengers who tend to be less familiar with security processes at Heathrow due to language differences and/or expectations based on different security arrangements in other countries.

6.132 Flow rates have also declined over recent years. This has increased the number of security staff required to deal with peak period passenger flows, resulting in an increase in security costs per passenger at Heathrow. HAL has stated that the decrease in flow rates is attributable to an increase in security requirements and an increase in the proportion of passengers carrying electronic items such as laptops and tablets. The CAA has been provided with some evidence from HAL which tends to suggest that this is an important explanatory factor.

6.133 However, the CAA understands that other airports such as Gatwick have been able to maintain higher flow rates despite the same pressures from higher levels of electronic devices. This suggests that other airports have been able to manage the impact of this factor more effectively than HAL.

CAA's initial proposals

6.134 The CAA's initial proposals did not explicitly include an assumption on the efficient flow rates at Heathrow.

Stakeholder views

6.135 The CAA received four responses commenting on security flow rates.

[47] Figures are based on confidential benchmarking evidence from Copenhagen Airport.

6.136 BA, the LACC and Virgin made similar points. The airlines commented that:

- HAL's flow rates could be increased from 120-160 to 175 per hour and cited Gatwick's flow rates of between ✂✂✂✂ passengers per hour;
- Gatwick's passengers also have characteristics which make them difficult to screen, including that they are less likely to take hold luggage and therefore more likely to carry large amounts of hand luggage through security;
- Gatwick has a higher proportion of leisure travellers, including families and children. This would slow processing rates at Gatwick; and
- Heathrow also has a higher proportion of business travellers familiar with security processes. This would increase flow rates at Heathrow.

6.137 HAL acknowledged that the CAA had recognised the correlation between security flow rates, higher proportions of passengers carrying electronic items and increased security requirements. It claimed that its flow rates were at benchmark levels. The CAA and HAL had both included significant efficiencies in their projections.

CAA's final proposals

6.138 The CAA has considered the responses to the initial proposals. Based on the evidence and opinions presented, the CAA concludes that HAL's current flow rates are relatively low in comparison with other airports, but this is likely to be partially caused by uncontrollable factors.

6.139 The CAA has evaluated the points raised by airlines regarding the nature of passengers at Heathrow and Gatwick. Various factors are likely to affect flow rates including passenger types, baggage allowances, and the prevailing weather which tends to affect the amounts of clothing taken through security. It is difficult to determine with certainty which airport faces higher levels of pressure on security services. However, the CAA considers that BA's more generous baggage allowance at Heathrow (two cabin bags as opposed to one for most other airlines) is likely to mean that the level of images per passenger is typically higher at Heathrow than other airports, which

would tend to reduce flow rates.

6.140 The ABP includes significant reduction in security costs. This is based on a ✂✂% improvement on current flow rates (depending on the terminal) and ✂✂% reductions in overall security headcount by the end of Q6. These efficiencies, in combination with other initiatives will result in an 18% reduction in overall security costs by the end of Q6 and imply a 23% reduction in security costs per passenger from £1.93 in 2012/13 to £1.48.

6.141 In addition to this saving in security costs, the CAA has proposed wage efficiencies, which will further reduce security staff costs by around 15% by the end of Q6. Security staff costs account for 38% of total staff costs, meaning that security costs will be reduced by a further £29.6 million accounting for the CAA's wage cost efficiency.

6.142 The airlines have proposed much higher savings in security costs based on cancelling the alignment of transfer and non-transfer passengers, reducing the direct passenger security queue standard, increasing flow rates, reducing direct passenger SQRB standards and outsourcing.

6.143 Generally, these savings are either already included in the proposed staff cost efficiencies, or are not consistent with the CAA's proposals for service quality and outsourcing.

6.144 The airlines are likely to have underestimated the cumulative and interactive impact of their proposals and overestimated the potential savings. For example, efficiencies from outsourcing are likely to double-count the impact of wage cost efficiencies and improvements in flow rates as an outsourced contractor would presumably need to achieve these efficiencies. HAL's business plan includes efficiencies of £51 million over Q6 associated with a workforce strategy, which includes efficiencies associated with reducing absenteeism, improving roster efficiency and changes to staff breaks, etc.

6.145 On balance, taking account of the efficiencies included in HAL's ABP and the CAA's wage efficiency proposals, further security efficiencies based on security flow rates are likely to be difficult to achieve and could jeopardise service quality. The CAA does not propose further efficiencies related to flow rates.

Security – rostering

Issue

6.146 The IDS study described above undertook some analysis of security staff rostering efficiency and determined that there may be some inefficiency related to:

- overlapping rosters;
- excess staff capacity at some points of the day and high rates of overtime payments; and
- a fixed roster pattern system which limits the ability of HAL to change staff supply in response to changes in demand leading to higher overtime payments.

6.147 The study concluded that there may be some cost savings from the introduction of more flexible rosters, although this conclusion required further validation as the analysis was based on a limited sample of rostering data.

CAA's initial proposals

6.148 The CAA's initial proposals noted IDS's finding that that there was some evidence that security rostering processes could be improved through reducing overlaps between early and late shifts, reducing incidences of excess staff capacity and introducing flexible rostering. However, the CAA's initial proposals did not explicitly make any assumptions on improvements in security rostering.

Stakeholder views

6.149 The CAA received four responses commenting on the rostering of security queues over Q6.

6.150 BA responded that 70 minutes of paid breaks at Heathrow per shift was excessive, and that ✂✂ minutes of such breaks would be more appropriate, saving £63 million over Q6. In addition, more dynamic shift patterns could save £96 million over Q6.

6.151 HAL commented that it had achieved considerable efficiencies in its rostering including the introduction of the "new line model"[48] and

[48] The new line model is a system of organising security lanes and includes the introduction of shared archway metal detectors, body scanners and automated ticket presentation.

greater automation. HAL planned to build on these measures in Q6. Further measures could include additional automation and increased speed of implementation. Finally, it noted the CAA's point that the recommendations by IDS on rostering required further validation.

6.152 The LACC responded that further rostering efficiencies were possible. It considered that the 70 minutes of paid breaks per shift at Heathrow was excessive, and that 30 minutes of such breaks would be more appropriate, saving £63 million over Q6.

6.153 Virgin made similar points to the LACC and also stated that there could be reductions in security costs associated with seasonal variation and flexible manning. A key factor in security costs was the unit cost of an officer.

CAA's final proposals

6.154 HAL's workforce strategy includes savings of £51 million over Q6, including efficiencies related to improved rostering, reductions in absenteeism, paid breaks and other areas of staff organisation.

6.155 The airlines have made similar proposals, but with higher estimates of the potential efficiency. The key disagreement appears to be related to the level of saving that could be achieved by each initiative.

6.156 BA estimates that HAL could reduce costs by £24 million per year based on an assumed 15% improvement in roster efficiency. HAL state that around 60% of security posts are fixed (for staff security search and mobile patrols for example) and are not affected by passenger demand and roster efficiency. The airlines proposed efficiency is equivalent to 20% of annual security staff costs and is therefore very likely to overestimate the potential saving.

6.157 Overall, the CAA considers that the savings included in HAL's ABP workforce strategy provide a reasonable estimate of the potential for efficiency savings to rosters and other areas. Bearing in mind the proposed efficiency to staff wages, reductions in headcount and the overall reduction in security cost, the CAA does not propose further efficiencies in this area.

Security – outsourcing

Issue

6.158 Security outsourcing has been introduced at several European

airports, including Birmingham Airport and Oslo Airport. The airlines have proposed this measure for HAL. Outsourced security staff are also used by the AOC to operate baggage security at Heathrow. The airlines consider baggage security to be an activity analogous to passenger security in scale, complexity and the level of skill required.

6.159 Security outsourcing could reduce costs and improve efficiency through enabling a competitive bidding process for at least part of the airport security function. The CAA recognises that it may not be straightforward to outsource security search at Heathrow, given its size and complexity and the potential for transition risks. On the other hand, airlines have stated that the opening of Terminal 2 may provide an opportunity to trial outsourced security processes.

CAA's initial proposals

6.160 The CAA's initial proposals did not make any explicit assumptions on the potential for efficiencies from outsourcing security and stated that the CAA would not dictate to HAL that outsourcing should be introduced.

Stakeholder views

6.161 The CAA received four responses commenting on the level of security outsourcing.

6.162 BA commented that ✂✂✂✂✂✂✂✂✂✂✂✂ should be considered as it could contribute to savings of more than £250 million. An expert provider would have the experience in implementing cost reduction initiatives as well as appropriate training. This would also ensure that all Key Performance Indicators (KPIs) were achieved as the operator would be penalised for poor performance.

6.163 HAL agreed that it was not for the regulator to decide how it should deliver its security function. It stated that it was not opposed to outsourcing in principle and sought to outsource activities where it considered appropriate. It made no comment on the potential for efficiency savings that could be achieved by implementing this option.

6.164 The LACC stated that security outsourcing could be the best option for HAL and commented that an expert provider would have the experience in implementing necessary initiatives as well as the correct training to ensure improved compliance and customer service. The LACC stated that the airline community had successfully outsourced

many areas of its business to achieve significant cost savings without industrial action or degradation of services.

6.165 ✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂ ✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂ ✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂ ✂✂✂✂✂✂✂✂✂✂✂.

CAA's final proposals

6.166 It is not for the CAA to dictate to HAL how its security function should be organised but if the CAA were confident that a different way of organising work would deliver incremental savings it would be likely to seek to capture these within the price control. However, the CAA has considered HAL's security efficiency in the preceding sections and is satisfied that the proposed reductions in wage and pension costs and the process efficiencies proposed in the HAL workforce strategy will improve the efficiency of HAL's security function. The means by which an outsourced provider would achieve efficiency do not appear to be different in kind, and treating outsourcing as providing incremental savings could mean double-counting the scope for efficiency. The judgement comes down to whether the proposed levels of efficiency are sufficient. This was discussed in the previous section. Nevertheless, the CAA would expect HAL to carefully review all its options for improving its opex efficiency when it is faced with major decisions such as opening or closing terminals.

Impact of 2017 rates revaluation

Issue

6.167 A national revaluation of commercial property for the purpose of calculating business rates is expected in 2017. HAL's January 2013 FBP assumed that the revaluation would increase national business rates by £35 million (equivalent to 26% increase[49]). The CAA's consultants, SDG, commented in its report on other opex that this was likely to be an overestimate and considered that a 7% increase was more likely. This resulted in a reduction in forecast opex of £38.9 million over Q6.

[49] SDG, Review of other operating expenditure at Heathrow Airport, page 12, 2012, available at www.caa.co.uk

CAA's initial proposals

6.168 The CAA adopted SDG's core efficiency proposals to estimate the opex allowance for HAL. This reduced total opex by £38.9 million relative to the FBP.

Stakeholder views

6.169 BA commented that forecast rates costs could be reduced by £35 million by a delay of the 2015 revaluation to 2017.

6.170 HAL noted that SDG's forecasts of the impact of the revaluation on its costs were significantly different from those of its advisors Gerald Eve. HAL provided further evidence from Gerald Eve to support its rates costs forecasts. HAL also proposed a rates revaluation passthrough mechanism for Q6, given the uncontrollable nature of the impact. It cited examples of such mechanisms used by the ORR and Ofgem.

CAA's final proposals

6.171 For its final proposals, the CAA has adopted HAL's suggestion of a passthrough term for the variance of the impact of the 2017 rates revaluation on its costs from the forecast impact, recognising that rates (revaluation) costs are largely uncontrollable.

6.172 For the purposes of setting the Q6 price control, however, the CAA needs to set a forecast level of costs. SDG has considered the impact of the rates revaluation on HAL's forecast costs in the light of HAL's comments. Its revised opinion is that the rates revaluation will result in a 9% increase in rates costs compared to HAL's assumption of ✂✂. This results in an efficiency of £31.2 million over the course of Q6 compared to HAL's ABP. If this assumption turns out to be incorrect, costs will be passed through to users. See chapter 2 for a discussion of the proposed passthrough mechanism.

6.173 The CAA has decided to adopt SDG's forecast in its final proposals. The impact of the rates revaluation depends upon the relative changes to national rateable value between 2008 and 2015[50] and factors that determine HAL's rateable value which include construction costs, the choice of the depreciation rate set by Central Government and negotiations between HAL and the Valuation Office Agency. Any estimate of rates costs beyond 2017 is therefore uncertain.

[50] 2008 and 2015 are the valuation dates used for the rate revaluations in 2010 and 2017.

6.174 However HAL's forecast of the impact of the revaluation is significantly higher than that forecast by other airport operators, and is also much higher than the previous 2010 revaluation. This is based on an assumption that construction cost will increase by 30% between 2008 and 2015. SDG found that construction cost have only increased by 4.6% between 2008 Q1 and 2013 Q3, meaning that a 30% increase by 2015 is very unlikely. SDG estimate that the impact is more likely to be around 14% based on the historic relationship between construction prices and GDP growth.

6.175 BA's proposal that there could be savings from the delay to the rates revaluation has been included in HAL's business plan.

Other Issues

6.176 Several other issues were raised by stakeholder responses, which were not directly addressed in the CAA's initial proposals. These issues are summarised below.

GAL's pension commutation payments

6.177 Responses to the CAA's initial proposals on GAL raised the issue of the commutation payment made by GAL to the BAA pension scheme upon the sale of the airport. This payment removed GAL's pension liabilities associated with former employees in the BAA group pension scheme. GAL stated that this payment should be included in the RAB. Similar payments are expected to be made from the sale of Edinburgh and Stansted airports.

6.178 The CAA commissioned GAD to provide advice on the treatment of the commutation payments. GAD concluded that the commutation payment reduced GAL's pension costs and therefore should be treated as part of its RAB.

6.179 This conclusion has no direct impact on HAL as the GAL commutation payment has been factored into HAL's pension cost forecasts. However, the commutation payments for Stansted and Edinburgh will have an impact as discussed above.

Closure of Terminal 1/opening of Terminal 2

6.180 The LACC, Virgin and BA commented that early closure of Terminal 1 in June 2015 could save £50 million. On the costs of the new Terminal 2, the LACC welcomed the reduction of £20 million, but did not agree with the £10 million operational readiness budget. This

point was also made by Virgin.

6.181 The CAA considers that it is not generally appropriate to retrospectively adjust the allowance for Q6 based on unforeseen events in Q5. Operational resilience costs are one of many factors different than assumed in Q5, and removing such costs in Q6 would require the CAA to grant allowances for other unforeseen costs such as winter resilience, the Olympics and the costs of delaying the closure of Terminal 2.

6.182 The CAA considers that there is some uncertainty over the earliest achievable date of closure for Terminal 1. The IBP assumed a closure date in late 2016. The latest business case for the closure of Terminal 1 assumes a date of December 2016 which is consistent with the ABP. Assuming an earlier date would place risks on HAL and could have impacts on the relocation of airlines, which are currently expected to be completed in mid 2016.

IBP/FBP utilities costs

6.183 The LACC stated that forecast utilities and other operational costs had risen by £90 million without explanation between the IBP and FBP.

6.184 Utility costs have been analysed by SDG in the Other opex study. SDG proposed efficiencies in their initial report, which HAL have incorporated in the ABP. SDG has not forecast any further savings in this area and the CAA does not propose any further efficiency relative to the ABP.

Passenger Rapid Transit

6.185 The CAA has excluded the PRT from the RAB (see chapter 4), therefore the costs of operating this project should not be included in the opex allowance. HAL has provided the CAA with estimates of the opex costs of this project, which amount to £9.6 million[51] over Q6. The CAA has removed this amount from the opex allowance.

6.186 Passengers are not required to use the PRT and HAL may charge a fee to passengers should it wish to do so. As the capital costs are outside the RAB and the operational costs are outside the calculation

[51] The figure of £9.6 million savings is net of the estimated costs of a busing operation to replace the PRT at £0.7 million per annum. The gross opex savings of removing the PRT are around £13 million over Q6.

of regulated charges, any commercial revenues which HAL derives from the PRT should be excluded from the single-till (see chapter 7).

Other Costs

6.187 BA stated that Carbon Reduction Commitment costs could have been overstated by £10 million; and that the policing cost projections did not seem to take into account £10 million of savings from a new agreement. It was unclear whether the new settlement, which reduced those costs by £3 million, had been factored into the CAA's opex projections.

6.188 SDG has reviewed HAL's other costs including policing costs. The CAA has considered SDG's efficiency proposals on a case by case basis as discussed in an earlier section.

Overall level of opex over Q6

Issue

6.189 The CAA's statutory duties require it to further passengers' interests and also to have regard to the need to promote HAL's (and other licence holders') efficiency. As there is some uncertainty over the scope for efficiency savings, and factors that will affect costs over Q6, judgement is required. This judgement has been informed by extensive consultation with stakeholders, independent expert advice and the CAA's own analysis. The CAA's role is not to direct specific changes to practises and measures but to forecast a reasonable opex allowance for HAL for Q6.

CAA's initial proposals

6.190 The Q6 opex forecast set out in the CAA's initial proposals is reproduced in figure 6.2 below. This allowance is £217 million lower than the projection in HAL's FBP and implies a 1.8% reduction in HAL's total opex over Q6 relative to the FBP.

Figure 6.2: CAA's initial projections for opex

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
FBP	1,082	1,050	1,034	1,030	1,038	5,234
CAA IPs	1,066	1,030	994	970	957	5,017
Difference	16	20	40	59	81	217

Source: CAA

Stakeholder views

6.191 The CAA received four responses which made detailed comments on its projections for the overall level of opex during Q6.

6.192 BA and the airline community identified £1.5 billion of opex efficiency savings relative to the RBP stating that the CAA's own independent consultants had found this level of potential opex savings. BA commented that these were in line with the CAA's consultants' findings. The airlines stated that CAA's efficiency target of £350 million over Q6 would "mean that we and our passengers will pay over £1 billion more over Q6 than we should, simply to pay for HAL's inefficiency".

6.193 HAL responded that it intended to achieve a 1.4% reduction per annum in opex over Q6 (on underlying opex, excluding structural factors) creating savings of £248 million. HAL stated that the CAA's proposals implied a total reduction of 3.2% per year on the underlying cost base, or £532 million including pension efficiency. The CAA proposal overestimated the scope for possible savings. HAL commented that the CAA's choice of a point above the middle of its consultants' range of efficiency was not appropriate. The airlines' claims for potential reductions in opex at Heathrow were exaggerated and contained material errors, and the proposed efficiencies could impact service quality at Heathrow.

6.194 The LACC commented that CAA had "given HAL an insufficiently challenging opex task against the evidence supplied by the airline community, and furthermore supported by numerous consultancy studies" and "compounded the problem by also giving HAL an excessively generous period of time to make the savings." In the LACC's view, "£969 million of cost efficiencies not included in the initial settlement" had been endorsed by the CAA's consultants. The CAA should "get tough" on HAL's performance on operating efficiency.

6.195 [redacted].

6.196 In addition, the CAA received two letters from airline alliances (oneworld and Star) and five letters from airlines or airline groups

(Lufthansa/Swiss/Austrian, Eva Air, China Eastern, South African Airways and TunisAir). These letters all expressed the view that the CAA's final proposals should embody efficiency projections which went beyond those achieved over Q5 or identified in the initial proposals.

CAA's final proposals

6.197 The CAA welcomes HAL's initiatives since its FBP to scrutinise its opex projections further and seek efficiencies including reducing maintenance costs and incorporating some of the consultant's efficiency proposals. This has resulted in cost savings in the ABP relative to the FBP amounting to £114 million over the course of Q6. HAL's ABP forecasts include year-on-year improvements in operating efficiencies equivalent to 0.8% per year compared to 0.2% per year in the FBP.

6.198 The CAA's studies have been discussed with HAL and the airlines and the consultants have taken account of the points raised. The CAA has considered the opex efficiency proposals on a case-by-case basis as described throughout this chapter and has disregarded proposals where it considers the evidence to be weak or the proposal to have an adverse effect on service quality. The CAA continues to consider that HAL has scope to make further savings relative to the ABP.

6.199 The CAA does not agree with HAL's view that the initial proposals overestimated the scope for efficiency. HAL's statement that the CAA's opex allowance is equivalent to a 3.2% per annum efficiency assumption is based on a selective interpretation of HAL's cost base. In each case, the efficiency savings are based on evidence supported by a coherent argument for how the saving could be achieved. None of the savings adopted by the CAA requires HAL to reduce the quality of the services it provides.

6.200 HAL has adopted some of the consultant's efficiency proposals, having argued against them at earlier stages, including for example the vacation of Heathrow Point West. In the case of maintenance costs, HAL's performance between the publication of the FBP and ABP has exceeded SDG's original stretch efficiency proposals. This suggests that a similar level of savings could be made in other areas of maintenance costs.

6.201 On the other hand, there are areas where updates to the evidence

suggest that the scope for efficiency may be less than estimated in the initial proposals.

- The emerging economic recovery means that earnings growth may increase in the later years of Q6, meaning that the 16% wage efficiency may be difficult to achieve.
- The pension benchmarking evidence used in the initial proposals did not account for differences in pension scheme valuation and funding. Overall, HAL's business plan is likely to bring costs into line with benchmarks by the end of Q6.
- The impact of the rates revaluation may be slightly higher than estimated in the initial proposals.
- Updates to the benchmarking evidence suggest that savings to cleaning costs may be lower than estimated in the initial proposals.

6.202 The CAA has considered the points raised by airlines. Overall, most of the efficiency proposals made by airlines have been considered by the CAA directly, or through the consultancy studies. The CAA tends to agree with the airlines that HAL has further scope for efficiency savings but considers that the airlines have overestimated the impact of many of their proposals and have not considered the savings already factored into HAL's ABP and the CAA's initial proposals.

6.203 Many of the efficiencies proposed by the airlines cut across and are not additional to efficiencies proposed by HAL or the CAA. For example, reductions in absenteeism and the introduction of a salary sacrifice scheme are likely to be introduced through HAL's workforce strategy and pension efficiency savings included in the ABP. HAL has also included significant savings in security costs and central support functions through reductions in headcount and limited wage growth.

6.204 As described in earlier sections, the CAA has reconsidered the use of a glidepath. It concludes that it is appropriate to apply a glide path to the staff cost efficiency proposal. It is not appropriate to apply a glide path to other efficiency proposals such as maintenance and cleaning costs where HAL is likely to be able to reduce costs rapidly through retendering and annual reviews in outsource contracts.

6.205 Given its statutory duties, the CAA has based its final proposals on consultant's evidence and efficiency proposals described above. This

results in a reduction in opex over Q6 relative to HAL's ABP of £176 million. Should the 2017 rates revaluation conclude as per HAL's expectation, the reduction would decline to £151 million.

CAA's final proposals

6.206 A breakdown of the efficiency savings associated with each piece of evidence described above is shown in figure 6.3 below.

Figure 6.3: Breakdown of CAA's final opex efficiency savings

£m	Q6					Q6 Total
	2014/15	2015/16	2016/17	2017/18	2018/19	
ABP	1,072	1,029	1,010	1,000	1,010	5,120
Other Opex	(1)	(1)	(2)	(13)	(22)	(39)
Maintenance	(1)	(5)	(5)	(4)	(4)	(20)
Central Services	–	–	–	–	–	–
Wage efficiency	(6)	(11)	(16)	(20)	(25)	(78)
Pensions	(3)	(2)	(2)	(2)	(2)	(9)
Frontier shift	(1)	(3)	(4)	(5)	(7)	(20)
PRT	(2)	(2)	(2)	(2)	(2)	(10)
Total	(14)	(23)	(30)	(46)	(62)	(176)
CAA	1,057	1,006	980	953	947	4,944

Sources: HAL and CAA

6.207 Based on the CAA's final proposals, its projections for HAL's efficient opex over Q6 are set out in figure 6.4 below. Overall, the CAA proposes that HAL should reduce its opex allowance by £176 million (3.4%) relative to the ABP. This would reduce opex by 2.0% per year over Q6 (equivalent to a 1.6% reduction from 2012/13). This compares to an equivalent per year reduction of 1.8% in the initial proposals.

Figure 6.4: CAA's final projections for opex

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
ABP	1,072	1,029	1,010	1,000	1,010	5,120
CAA IPs	1,066	1,030	994	971	957	5,017
CAA FPs	1,057	1,006	980	953	947	4,944

Sources: HAL and CAA

CHAPTER 7

Commercial revenues

7.1 The forecasts for HAL's commercial revenues are an important element of the price control as they are deducted from its forecast costs to arrive at the regulated revenue requirement under the single-till approach. This chapter outlines:

- the process in deriving commercial revenues forecasts to date,
- the key issues between the airport operator and the airlines, and
- the CAA's initial and final proposals for commercial revenues to be taken into account in calculating the Q6 price cap.

Process to date

7.2 Projections for HAL's commercial revenues have been the subject of extensive consultation between HAL and the airlines. In its January 2013 FBP, HAL projected commercial revenues to be £2,827 million in Q6. HAL's revised projections from its June RBP and its July ABP are set out in figure 7.1 below.

Figure 7.1: HAL and CAA projections for commercial revenues over Q6

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
FBP	532	553	571	580	591	2,827
RBP	518	553	572	580	584	2,807
ABP	518	553	574	583	586	2,814
CAA IPs	549	567	586	596	613	2,886

Source: HAL, SDG, and CAA

Changes in commercial revenues projections between the FBP, RBP and ABP

7.3 The key changes in HAL's commercial revenues forecasts since the FBP include the following.

- Base growth. HAL updated its passenger and economic forecasts. HAL pointed out however, that the effects of passenger forecasts alone were minimal and that the change was mostly driven by GDP forecasts.
- Changes in capex plans. Removal of the Northern Perimeter Project, the extension of the Terminal 5 central search area, removing retail space and a lower impact of the Terminal 4 International Departures Lounge plan reduced the previous forecasts (approximately minus £31 million in nominal terms).
- Changes in trading conditions for retail concessions and airline moves could reduce commercial revenues (approximately minus £20 million in nominal terms).
- ✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂ ✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂ ✂✂✂✂.
- ✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂ ✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂✂ ✂✂✂✂.

7.4 The only changes to HAL's commercial revenues projections between the RBP and the ABP were from the impacts of the £1 billion of additional capex in the ABP.

- The Terminal 5 PRT. This will generate £8 million of commercial revenue during Q6. Consistent with the CAA's proposal of disallowing all revenue and expenditure attributable to the PRT (see chapter 4), the CAA has removed this change from the projections.
- The VIP strategy in the ABP is forecast to provide an extra £1 million over Q6.
- The Terminal 5 CIP. No revenue is attributed to this project in the ABP.

Issues

Overall projections

Issue

7.5 The level of HAL's commercial revenues projections is over Q6. Since, under the single-till system, HAL's revenues are deducted from its total costs, higher projected commercial revenues are associated with lower prices.

CAA's initial proposals

7.6 The CAA's initial proposals were based on projections of commercial revenues contained in a report by independent consultants SDG. SDG's forecasts of commercial revenues per passenger were then uplifted with the CAA's own passenger forecasts. The total Q6 difference between HAL's FBP and the CAA's initial proposals forecasts for commercial revenues was £59 million (see figure 7.1).

Stakeholder views

7.7 Four respondents commented on the CAA's initial proposals for the overall level of commercial revenues over Q6.

- BA commissioned consultants, Nyras, to review HAL's projections. Nyras found potential for more stretch in the projections (up to £3,016 million). BA commented that the correct level of commercial revenue in the Q6 settlement should be around £180 million more than HAL FBP. BA believed that HAL should be more responsive to an improving economic outlook and push the commercial boundaries in core areas.
- HAL responded that SDG's forecasts, which it assumed the CAA had used in deriving its projections, had been based on errors and misunderstandings. In addition, the CAA's forecasts had been calculated using CAA traffic forecasts multiplied by SDG per passenger revenue. HAL believed this oversimplified a complicated relationship.
- The LACC responded that it was pleased that the CAA's commercial revenues targets exceed HAL's, though it commented that more stretch was required in some areas. The LACC pointed out that the retail challenge only amounted to 1.2% once tobacco

effect had been stripped out.

- Virgin supported the points made by the LACC.

CAA's final proposals

7.8 The CAA requested that SDG update its projections for HAL's commercial revenues following HAL's publication of its RBP and ABP. The CAA has also forwarded to SDG HAL's and the airlines' comments on the SDG study. SDG has taken those comments into account where appropriate in its final report.[52]

7.9 The CAA believes that the SDG study provided a balanced argument on the key issues concerning HAL's commercial revenues forecasts. In the March report, SDG pointed out that the econometric model used by HAL to forecast revenues demonstrated acceptable forecast accuracy but also operated within tolerances. SDG further explained that the model at the time of the March report:

- did not have universal coverage (providing projections covering 85% of HAL's net retail revenues);
- dealt with underlying growth but not impacts or capital solutions; and
- provided sales rather than revenue projections.

7.10 After making some changes to SDG's updated revenue forecasts per passenger, the CAA decided to maintain the methodology of calculating total revenue by uplifting adjusted SDG per passenger forecasts with its own passenger traffic forecasts.

7.11 SDG's projections for HAL's commercial revenues per passenger over Q6 are shown in figure 7.2 below.

Figure 7.2: SDG's projections for per passenger commercial revenues

£ per passenger	2014/15	2015/16	2016/17	2017/18	2018/19
Initial report	7.76	8.02	8.20	8.24	8.39
Final report	7.49	7.97	8.19	8.22	8.27
Difference	(0.27)	(0.05)	(0.01)	(0.02)	(0.12)

Source: SDG

[52] www.caa.co.uk

7.12 The CAA's final proposals for commercial revenues, based on its decisions on the detailed issues discussed in this chapter, and on its traffic forecasts, are shown in figure 7.9 at the end of this chapter.

Retail

Tobacco sales

Issue

7.13 The main issue concerning the projections for HAL's duty free sales is the impact of the Tobacco Display Act (TDA). SDG agreed with HAL and the airlines that a decline in tobacco duty free sales was likely to arise as a result of the TDA. However, SDG's discussions with another UK airport operator that undertook trials suggested that the impact is likely to be lower than that advocated by HAL and this view is reinforced by analysis of published results from the Dublin trial. HAL forecast a 40% impact (which assumed a tobacco ban in 2018/19) while BA suggested an impact of 8%. SDG presented two impacts of 12% and 20% using the 12% impact for their total revenues forecasts. SDG also did not believe that there was evidence that a tobacco ban will be implemented in Q6.

7.14 In addition, SDG considered that HAL could mitigate some of the effects of lost tobacco sales from 2015/16, but the mitigation may not be fully reflected in HAL's FBP. Using space for other activities or entering into contractual negotiations to develop concession margins further could improve HAL's projections of commercial revenues after the tobacco ban is implemented.

CAA's initial proposals

7.15 Based on SDG's views, the CAA assumed a 12% impact of the TDA on duty free revenues.

Stakeholder views

7.16 Three stakeholders commented on the prospects for HAL's duty free revenues over Q6.

- BA noted that other operators have reported improving market conditions in duty free. There could be many niche opportunities for HAL. The impact of tobacco law changes could be around 8% rather than HAL's projection of 40%. BA commented that the 35% fall in 2009 had been caused by 24% traffic reduction and poor

location of tobacco products. BA also agreed with SDG's position that there is no evidence that a tobacco ban will be implemented in Q6.

- HAL acknowledged that forecasting the timing of the tobacco ban required judgement. It also commented that SDG had not taken into account the examples of declining tobacco revenues in Birmingham and Dublin following changes in advertising rules. HAL's estimates were based upon World Duty Free (WDF)'s information and data, which appeared to have been overlooked by SDG and the airlines. The additional £18 million of income proposed by SDG (12% decline), was based upon a misunderstanding of the benchmarks and incorrect assumptions. SDG's view also failed to reflect the additional data supplied by GAL.
- The LACC agreed with SDG's forecasts, and commented that the CAA should adjust revenues for changes in the timing of legislation.

CAA's final proposals

7.17 SDG attempted to clarify WDF's data. It noted, however, that WDF's responses to its data requests had been incomplete. While the introduction of the TDA could make it more difficult for passengers to buy tobacco, it would not reduce the size of the market. While there should be some mitigation for lost tobacco sales, SDG did not believe that it had overemphasised this possibility in its report. Overall, SDG believed that the likely negative impact on HAL's tobacco revenues would be between 12% and 20% and for the purpose of their report, a 12% impact was assumed. In its final proposals, the CAA maintained the 12% impact assumed in its initial proposal.

7.18 SDG reviewed the case made by HAL that a ban on duty free sales of tobacco will come into effect in 2018/19. SDG's view is that whilst such a ban is likely (as it is a probable outcome of a WHO-led study that is due to commence at some point in the next few years), the timing of the study and any subsequent ban are uncertain. SDG also pointed out that given the fact that the study had not yet begun, assuming that the study would give adverse results, the probability of introducing the ban through a full legislative process was unlikely to occur in Q6. The CAA accepted SDG's reasoning and hence did not include a reduction of commercial revenues due to a ban on duty free

tobacco sales in the final forecasts.

7.19 The CAA accepts SDG's projections for the impact of the TDA, because:

- WDF has not been able to completely justify its arguments with data;
- SDG's projections have taken detailed account of projections at other airports; and
- the airlines agreed with SDG's forecasts.

7.20 SDG suggested that the CAA consider introducing a 'tobacco factor' to adjust for the impact of changes in legislation from 2015. However, the CAA does not believe that the inclusion of a tobacco factor in HAL's price control is appropriate. The CAA has set out its criteria for including passthrough factors in chapter 2. The CAA considers that, while HAL may have no control over legislative changes, it does have significant control over the impact of the ban on its business. Accordingly, the CAA has not included a tobacco factor in its final proposals. Figure 7.3 below presents a comparison of HAL's ABP and CAA's final proposal on duty free forecasts for Q6.

Figure 7.3: Comparison of duty free revenues forecasts per passenger

£ per passenger	2014/15	2015/16	2016/17	2017/18	2018/19
HAL's ABP	✂✂	✂✂	✂✂	✂✂	✂✂
CAA FPs	✂✂	✂✂	✂✂	✂✂	✂✂
Difference	0.06	0.10	0.10	0.10	0.18
% difference	3.4%	5.6%	5.6%	5.3%	10.2%

Source: HAL, SDG, CAA

Advertising

Issue

7.21 The SDG report commented, in agreement with the airlines' view, that there might be an opportunity for further growth in revenue from advertising. It identified potential stretch to HAL's FBP forecasts in this category. SDG identified opportunities for further income from sponsorship.

CAA's initial proposals

7.22 The CAA's initial proposals are based on SDG's forecasts.

Stakeholder views

7.23 One respondent commented directly on the level of advertising income and capital overlays over Q6. BA/Nyras agreed with SDG's forecasts at approximately £172 million. BA/Nyras also suggested that this is an area where forecasts could well be exceeded through opportunities in improving market conditions from 2014 onwards, innovation (digital advertising within terminal baggage halls), and new content to brand and scope suitability of content for customers.

CAA's final proposals

7.24 SDG argued that Zenith Optimedia's projection of future advertising market growth was driven by internet advertising, which was unlikely to be of material benefit to HAL. In addition, SDG favoured HAL's approach of emphasising quality of advertising over quantity. Finally, SDG was unsure of the relevance of the example of Chicago airport's new contract, cited by Nyras.

7.25 The CAA's final proposals are based on the SDG's per passenger projections, given the lack of additional comments from consultees. Once the projections for advertising revenues are uplifted with CAA's traffic forecasts they will amount to ✂✂✂✂ over Q6.

Other retail issues

Issues

7.26 There were three other components of HAL's commercial revenues about which respondents raised substantive points:

- e-business revenues;
- food and beverage sales; and
- specialist shops.

CAA's initial proposals

7.27 The CAA's initial proposals are based on SDG's forecasts.

Stakeholder views

7.28 BA made points in relation to each of the above components of HAL's

commercial revenues.

- On e-business revenues, BA commented that changes in consumer behaviour are creating opportunities in this area. It cited examples from Frankfurt, Delhi and Dublin. Therefore, e-business development could be faster than what SDG envisaged.
- For food and beverages, improved margins and yield and more niche brands could drive an revenue improvement of ✂✂ per annum.
- Nyras assumed that underlying spend at specialist shops could increase by ✂✂ per annum over Q6. BA commented that HAL should outperform peer airport operators and exploit new opportunities.

CAA's final proposals

7.29 SDG responded to BA's views on commercial revenues.

- While the speed of development of e-business revenues was uncertain, HAL's £8 million investment was more likely to yield meaningful revenues in Q7 rather than Q6.
- HAL had developed its catering portfolio. Most niche brands could not afford the high turnover rents paid by the larger catering companies, therefore SDG's views on its forecasts remained unchanged.
- SDG agreed with Nyras that there should be opportunities for developing specialist shops, but space constraints in some Terminals, and especially the new Terminal 2 could severely limit possibilities for growth.

7.30 The CAA considers that, while there are reasons to believe that SDG's projections for revenues in each of these areas could be pessimistic, there are also a number of reasons for assuming that they could be optimistic. This could especially be the case if exchange rates moved in certain ways, or if the economic recovery is slower than expected. Accordingly, having reviewed all the arguments, the CAA is minded to use SDG's projections in this area in its final report.

7.31 Given the findings and decisions mentioned above, the CAA has adopted SDG’s retail projections in its final proposals. A comparison of HAL’s forecasts with CAA's initial and final proposals for retail

revenues is presented in figure 7.4 below.

Figure 7.4 Comparison of forecasts of retail revenues per passenger

£ per passenger	2014/15	2015/16	2016/17	2017/18	2018/19
HAL ABP	5.08	5.42	5.61	5.62	5.58
CAA IPs	5.37	5.59	5.76	5.78	5.91
CAA FPs	5.15	5.52	5.72	5.74	5.77
IPs higher than ABP by (%)	5.6%	3.2%	2.8%	2.9%	5.8%
FPs higher than ABP by (%)	1.3%	1.9%	2.0%	2.2%	3.3%

Source: HAL, SDG, CAA

Car parking

Issue

7.32 As with advertising, the SDG report commented that there could be an opportunity for further growth in HAL's car parking revenues. It also identified potential stretch to HAL's FBP forecasts in this category. SDG pointed out that some additional opportunities may be possible from a combination of restructuring of short stay parking tariffs along with growth from pre-book parking categories.

CAA's initial proposals

7.33 The CAA based its initial proposals on SDG's forecasts.

Stakeholder views

7.34 Four respondents to the CAA's initial proposals commented on the CAA's forecasts for HAL's car parking revenues over Q6.

- BA and the LACC accepted SDG's forecasts for revenues from car parking. The LACC responded that it was satisfied that SDG had identified additional efficiencies in this area.
- HAL commented that SDG's forecasts were based on misrepresentation and incomplete analysis. HAL disagreed that there was opportunity for sub-15-minute pricing. HAL included the potential benefits from pricing reviews and assumed marketing activities in its respective business plans. HAL believed that additional marketing costs might not deliver SDG's assumed benefits. HAL also believed that the stretch which SDG had identified within pre-book would lead to margin dilution as it cannot

be accommodated within the existing space capacity.

- LB Hounslow responded that HAL should consider reducing the number of car parking spaces at Heathrow to promote surface access using public transport.

CAA's final proposals

7.35 In its updated report, SDG analysed the points made by HAL and answered HAL's criticisms of its forecasts.

- SDG cited examples from the short stay parking strategy of foreign airports such as Charles de Gaulle and Schiphol to demonstrate that its proposed strategy was reasonable.
- SDG took into account the additional marketing expenditure of approximately £120,000 per year required to increase revenue and improve overall utilisation.
- Renegotiation✂✂✂✂✂✂✂✂✂✂✂✂✂ could lead to additional benefits of ✂✂✂✂ over Q6.

7.36 The CAA has placed some weight on SDG's responses to HAL's criticisms. The extent of the market for a short stay product is uncertain, but the CAA considers that the examples of Paris and Amsterdam airports show that such a market is likely to exist. Accordingly, the CAA has based its final proposals on SDG's projections. Figure 7.5 below presents a comparison of forecasts of car parking revenues in the initial and final proposals.

Figure 7.5: Comparison of CAA's initial and final proposal for car parking revenues per passenger

£ per passenger	2014/15	2015/16	2016/17	2017/18	2018/19
CAA IPs	0.94	0.96	0.98	1.03	1.05
CAA FPs	0.89	0.96	1.00	1.04	1.07
Difference	(5.4%)	(0.1)%	1.8%	0.8%	1.7%

Source: SDG and CAA

Property

Issue

7.37 SDG assumed an additional £11.5 million for HAL's property revenues during Q6 based on a combination of:

- further income from re-letting of office voids;
- recalculation of Guide Prices to reflect most property price indices; and
- stretch to the revenues deliverable from the enhanced terminal facilities project (included in HAL's FBP).

CAA's initial proposals

7.38 The CAA based its initial proposals on SDG's forecasts.

Stakeholder views

7.39 Two respondents to the CAA's initial proposals made substantive comments on the level of HAL's property revenues over Q6.

- BA and its consultants, Nyras, made a number of recommendations to increase property revenues. In particular, they commented that HAL and the airlines should cooperate to seek to change the ✂✂✂✂✂✂✂✂✂✂✂✂. They considered that ✂✂✂✂✂✂✂✂✂✂ should lead to higher revenue for HAL, contrary to SDG's forecasts. They also commented that the CAA and SDG should use the latest CBRE figures for forecasting property revenue. BA/Nyras commented that SDG should check that a material error in the IBP calculations had been corrected in the FBP. Regarding property projects, BA/Nyras believed that a two-year rather than a four-year payoff period is appropriate.
- HAL commented that the three stretch assumptions made by SDG were unrealistic and should be reconsidered. HAL believed that the Investment Property Databank (IPD) metric seemed to have been cherry-picked. HAL also commented that the property stretch assumed an unrealistically quick rate of releasing empty commercial space and it would be necessary to improve the quality of the accommodation. Furthermore, in HAL's belief, the proposed revenues attributed to the Enhanced Terminal Facilities project were too high.

CAA's final proposals

7.40 In response to HAL's comments, SDG noted that:

- it was surprising that HAL had used the July 2012 forecasts when the outturn numbers for 2012/13 were available. The outturn

numbers showed a substantial improvement over the forecasts;

- it should be possible to let property rather than retain it as void, incurring rates liabilities throughout Q6. Tenants could choose a rent free period or rent reduction in order to bring a facility up to standard if necessary. SDG therefore assumed occupation of currently void space, which would increase HAL's property revenues by 1% over Q6;
- increased revenues would be available for an independent lounge operator using a turnover-related element during Q6;
- additional sponsorship revenues could be achievable for lounge facilities during Q6 so no adjustments have been made to previous assumptions especially given the increase in passenger forecasts; and
- the individual hurdle rate for Flexipot projects should remain at 20%, lower than the 32% achieved by some but higher than the 10% which HAL assumed. It should also be noted that BA/Nyras concur on the higher hurdle rate.

7.41 In response to BA's comments, SDG considered that:

- benefits from working with local authorities were unquantifiable;
- SDG had taken the miscalculation of IPD data into account in calculating its guide price data; and
- HAL acknowledged that the impact on property revenues of the BA/bmi merger had been clarified, and resulted in a £0.7 million uplift over Q6.

7.42 The CAA notes Nyras's comments on the SDG report. The CAA considers that, while HAL should be encouraged to work with local authorities on planning, the benefits of doing so are difficult to quantify. However, should HAL achieve efficiencies in this way over Q6, the CAA can consider ongoing savings from this source in setting price controls for Q7 and beyond. In addition, SDG has allowed for the miscalculation of IPD data and the impact of the BA/bmi merger. Accordingly, the CAA has based its final proposals on SDG's forecasts for property revenues. Figure 7.6 below presents a comparison of CAA's initial and final proposals for property revenues forecasts.

Figure 7.6: Comparison of CAA's initial and final proposal for property revenues per passenger

£ per pax	2014/15	2015/16	2016/17	2017/18	2018/19
CAA IPs	1.45	1.48	1.46	1.45	1.43
CAA FPs	1.44	1.47	1.45	1.44	1.42
Difference	(0.7%)	(0.7%)	(0.7%)	(0.7%)	(0.7%)

Source: SDG and CAA

CAA's final proposals

7.43 The CAA notes that SDG's and HAL's ABP's projections for commercial revenues over Q6 do not significantly differ. HAL has projected total commercial revenues of £2,814 million, while SDG has forecast total commercial revenues of £2,885 million, which is higher than HAL's projections by £71 million, or 2.5%. Two factors should be noted.

- The CAA's adjustment removing £8 million of revenues attributable to the PRT reduces the difference to £63 million.
- Higher traffic forecasts account for around £12 million, or approximately one-fifth, of the remainder of this difference.

7.44 Allowing for these factors narrows the difference between HAL's and the CAA's projections to £51 million, or less than 2% of forecast commercial revenues.

7.45 Figure 7.7 below illustrates the stretch that was been made to HAL's ABP commercial revenue forecasts.

Figure 7.7: Reconciliation between HAL's ABP forecasts and the CAA's final proposals

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total Q6
HAL ABP	518.0	553.0	573.6	583.0	586.4	2,814.0
Retail	4.6	7.4	8.2	8.8	13.6	42.6
Car parking*	0.2	0.5	0.2	(0.8)	(0.1)	0.0
Property	1.3	2.0	2.0	3.0	3.1	11.4
CAA passenger traffic	5.3	1.5	1.6	1.7	1.5	11.6
Total	11.4	11.3	12.0	12.8	18.1	65.6
CAA's final proposals	**529.5**	**564.4**	**585.6**	**595.8**	**604.5**	**2,879.8**

Note: Numbers might not add up due to rounding.
* This is due to the PRT adjustment in CAA's final proposals.
Source: HAL, SDG, CAA

7.46 Figure 7.8 below presents a breakdown of CAA's final projections for commercial revenues less PRT revenues.

Figure 7.8: CAA's projections for commercial revenues

	2014/15	2015/16	2016/17	2017/18	2018/19
£ per passenger					
Retail	5.15	5.52	5.72	5.74	5.77
Car parking	0.89	0.96	1.00	1.04	1.07
Property	1.44	1.47	1.45	1.44	1.42
Total	7.48	7.95	8.17	8.22	8.26
CAA passenger forecasts (millions)	70.8	71.0	71.7	72.5	73.2
£ millions					
Retail	364.6	391.9	410.1	416.2	422.4
Car parking	62.9	68.1	71.5	75.3	78.2
Property	102.0	104.4	104.0	104.4	103.9
Total	529.5	564.4	585.6	595.8	604.5

Source: SDG and CAA

7.47 The CAA's final proposals on HAL's commercial revenues are presented in figure 7.9 below.

Figure 7.9: CAA's final proposals for commercial revenues

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
Commercial revenues	529.5	564.4	585.6	595.8	604.5	2,879.8

Source: CAA

CHAPTER 8

Other revenues and charges

8.1 This chapter sets out the CAA's final proposals for other revenues (ORs) and other regulated charges (ORCs) at Heathrow. This is relevant to the calculation of the price cap as the forecast contribution made by other revenues is a component of the single-till approach to price regulation. This chapter also discusses the background on the regulation of these charges and revenues as this will change under the Act.

Other revenues and charges process to date

8.2 ORs includes the following activities:

- rail income,
- inter-company income, and
- other commercial income.

8.3 ORCs were agreed by CE to include the following activities:

- airside licences;
- check-in desks;
- baggage systems;
- staff car parking;
- services for PRMs;
- electricity;
- fixed electrical ground power (FEGP);
- pre-conditioned air (PCA);
- gas;
- heating;

- water and sewerage;
- waste, recycling and refuse collection;
- staff ID cards;
- taxi feeder park;
- bus and coach facilities;
- apron passes and driver training;
- common IT infrastructure; and
- HAL's contribution to the funding of the AOC.

8.4 Previously, other charges (the Specified Activities) have been referred to as non-regulated (aeronautical) charges. For these activities, HAL has provided information under a transparency condition for each year since it was imposed in 1991.[53] For Q6, under the Act, unlike AA86, the charges that the CAA can regulate are not restricted, so it could regulate these charges if it thought this was warranted. Conversely, the CAA could decide not to have a licence condition requiring transparency.

8.5 In Q5 HAL's forecasts for these charges were generated according to the following principles:

- full cost recovery for each of the non-regulated charges to airlines during Q5;
- no offsetting or subsidising of such charges from one source with income from non-regulated charges from another source;
- under-recovery of non-regulated charge revenue against prior projections limited to recovery during the respective year or first subsequent year;
- in recognition of the fact that a number of the services provided, being based upon costs of services provided by outside suppliers to

[53] The transparency condition covers a slightly different list of activities to those listed as ORCs above. The condition covers check-in desks (including facilities for self service check-in), baggage systems, other desk licences, staff car parking, staff ID cards, FEGP, hydrant refuelling, airside parking, airside licences, cable routing, maintenance, heating and utility services, and facilities for bus and coach operators.

HAL, may inevitably change during the course of Q5, HAL would reflect such changes in its charges to airlines; and

- HAL would provide an annual update of estimates for the costs associated with non-regulated charges to the airlines for the Q5 price review period, at least three months prior to the commencement of any revised charges.

8.6 Other charges were considered by a sub-group of the 'Opex, opex efficiency and other regulated charges' CE workstream. The sub-group agreed that the transparency arrangements should continue through Q6. It also agreed that the principles on the basis on which the charges are calculated set out in Q5 should continue for Q6.

8.7 The sub-group did not produce agreed forecasts for revenue from the other charges in Q6, but it did agree the apportionment mechanism for allocated costs. This mechanism includes the principle that annuity and allocated costs should be fixed (subject to RPI) for the duration of Q6, and some changes to the list of costs that should be recovered from the specified services in Q6.

8.8 Car parking in the CTA is currently included as part of 'airside parking'. The sub-group agreed that this activity should no longer be included as the associated costs would no longer be recovered on a cost recovery basis. The sub-group also agreed that PRM charges, the provision of common IT infrastructure and HAL's contribution to the funding of the AOC should be subject to the provisions for other charges.

CAA's initial proposals

8.9 The CAA adopted HAL's forecasts for ORCs for its calculation of HAL's allowed revenues in its initial proposals. Given the lack of complaints in Q5 from users about HAL's other charges, the support for continuing with the transparency condition in the Q5+1 consultation, and the lack of appetite for changes during CE, the CAA proposed to include the condition in HAL's licence. The CAA proposed two relatively minor changes to the condition to reflect its powers under the Act and other legislation. These are discussed later in this chapter.

HAL's June 2013 and July 2013 BP updates

8.10 In June 2013, HAL published its RBP, an update to its January 2013 FBP. This contained new projections for its ORCs and ORs over Q6, taking into account the reduction in the capex programme from £3 billion to £2 billion. The following month, HAL published its ABP, an addendum to its RBP which set out projections for its ORCs and ORs over Q6 given a £3 billion investment programme. Figures 8.1 and 8.2 below show the differences between the ORCs and ORs projections for Q6 contained in the FBP, the RBP and the ABP. The CAA's initial proposals are included for comparison.

Figure 8.1: HAL and CAA projections for ORCs over Q6

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
FBP	253	249	240	241	239	1,221
RBP	229	217	210	207	206	1,069
ABP	235	223	215	212	211	1,096
CAA IPs	253	249	240	241	239	1,221

Sources: HAL and CAA

Figure 8.2: HAL and CAA projections for ORs over Q6

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
FBP	140	138	141	144	143	705
RBP	140	138	141	144	144	707
ABP	140	139	141	144	144	708
CAA IPs	140	138	141	144	143	705

Sources: HAL and CAA

Changes in ORCs and ORs projections between the FBP and the RBP

8.11 The OR projections did not change significantly between the FBP and the RBP. There was a difference of £152 million between the FBP and the RBP for ORC revenue over Q6. The main change between the FBP and the RBP, accounting for £115 million of this difference, is greater projected efficiency within the check-in, connections and baggage activity.

8.12 According to HAL's RBP: "since issuing our Full Business Plan, we

have been able to forecast greater efficiencies within the connections and baggage activity than previously forecast, representing a further improvement equivalent to £20 million per annum during Q6. This has been achieved through a review of the operations and maintenance strategy and a review of the scope of service required ... This combined with a decision to offer Heathrow wide scope allowed bidders the opportunity to consolidate and innovate, driving a beneficial outcome from the competitive tender process. The restructuring of the provision of baggage services at Heathrow will result in streamlining the provision of service and strengthen the airport's operational resilience in the longer term".

8.13 In addition, there were three smaller differences in the projections.

- revised cost projections in the staff car parking activity, yielding £6 million in savings;
- reduced PRM cost projections leading to lower forecast revenues of £5 million over Q6; and.
- recovery of PCA through aeronautical charges rather than ORCs, reducing ORCs by £26 million.

Changes in ORCs and ORs projections between the RBP and the ABP

8.14 The only change in ORCs and ORs projections between the RBP and the ABP was moving charges for PCA from aeronautical charges back to ORCs. These charges are projected to be approximately £26 million over Q6.

Issues

8.15 In its initial proposals, the CAA identified the following issues:

- scope of ORCs;
- reconciliation with Profit Centre Reports (PCRs); and
- forecasts of ORCs that should be included in the Q6 price control calculation.

Scope of ORCs

Issue

8.16 Whether check-in desks, baggage facilities and hydrant refuelling should be removed from the list of activities in the transparency condition.

CAA's initial proposals

8.17 Charges for these items are already required to be transparent under the Airports (Groundhandling) Regulations 1997.[54] In its initial proposals, therefore, the CAA proposed to make this change.

Stakeholder views

8.18 HAL noted the CAA's initial proposals. LACC and BA did not object to their removal from the Condition. They considered that baggage and Common User Self Service (CUSS), and PRM costs should be recovered from price controlled airport charges. They considered these charges as being significantly driven by passenger numbers, with baggage systems a key part of airport infrastructure to meet passenger requirements of service levels.

CAA's final proposals

8.19 The CAA considers value in retaining separate charges for baggage, check-in/CUSS and PRMs. It notes that European legislation sets out that charges for groundhandling infrastructure should be set according to 'relevant, objective, transparent and non-discriminatory criteria', whilst PRM charges should be 'reasonable, cost-related and transparent'. The CAA considers this legislation as providing sufficient protection for airlines without the need for these charges to be price controlled. The CAA also considers that retaining separate charges for baggage and check-in/CUSS will reward airlines (and passengers) that make less use of the baggage and check-in infrastructure, whilst the current structure of the PRM charge rewards airlines that achieve a high level of pre-notification of their passengers' needs for assistance.

8.20 The CAA considers that baggage, check-in/CUSS and PRM charges

[54] Regulation 16(d) requires that any fee charged for airport installations necessary for suppliers of groundhandling services has to be determined according to ‘relevant, objective, transparent and non-discriminatory criteria’.

should be included within price capped airport charges. In line with its initial proposals the CAA proposes that baggage and check-in/CUSS charges are not included in the licence condition on transparency.

Reconciliation with Profit Centre Reports

Issue

8.21 The reconciliation of differences with the PCRs could create an unnecessary regulatory burden.

CAA's initial proposals

8.22 In its initial proposals, the CAA proposed to remove the requirement to reconcile any differences with the PCRs supplied to the CAA. The CAA commented that it could seek further information or clarification concerning possible differences if necessary.

Stakeholder views

8.23 HAL supported the proposal to remove the requirement for a reconciliation with PCRs. Virgin did not support the proposals which it considered as providing an important safeguard and, given that it was already required, did not regard it as an unnecessary additional burden on HAL.

CAA's final proposals

8.24 The CAA notes Virgin's views, but considers that it should not set out HAL's accounts systems in the Licence. In line with its initial proposals, the CAA proposes that the requirement to reconcile any differences with the PCRs should not be included in a licence condition.

Q6 forecast of ORCs and ORs

Issue

8.25 The CAA needs to decide what the forecasts for ORCs and ORs should be in the calculation of the Q6 price control.

CAA's initial proposals

8.26 The CAA proposed using HAL's forecasts for ORCs in its initial proposals.

Stakeholder views

8.27 HAL, BA and LACC were content with the proposal to use HAL's forecasts for the calculation of the Q6 price control. HAL noted that the forecasts may be updated as further information becomes available.

8.28 The LACC and BA mentioned that the agreement that CTA staff car parking charges should be charged at a commercial rate was not shown in the forecasts for the initial proposals. They wanted either the forecasts for staff car parking to be amended to reflect this agreement (with additional income of about £4 million per annum) or the CAA to rule that the current cost is fixed for the duration of Q6. HAL commented that revenue from CTA staff car parking charges was included in its forecast commercial revenues. HAL mentioned that as with previous price increases (for example in 2010/11) a significant increase in price would be offset by a reduction in the number of passes in issue.

8.29 The LACC and BA were concerned that there appeared to be some double-counting where the costs of some baggage projects had been included in HAL's FBP, but there had been no allowance made for the corresponding revenue. HAL said it had included revenue in the FBP in connection with these baggage projects.

CAA's final proposals

8.30 The CAA accepts HAL's clarifications in response to the specific points raised by BA and the LACC. Consequently, the CAA includes HAL's ABP forecasts for ORs and ORCs in its final proposals, with one adjustment. As ORC revenue largely involves cost recovery, the CAA has adjusted HAL's ORC revenue forecasts downwards to take account of its proposed opex efficiencies. As the opex forecasts vary according to traffic and the other charges are largely based on cost recovery, this adjustment also takes into account the effects of the CAA's amended traffic forecasts.

8.31 The CAA notes the size of changes in forecast ORCs between the FBP and the ABP. Most of these parallel forecast efficiencies in opex identified by the CAA and its consultants (see chapter 6). The CAA notes that, given that there is a reconciliation between actual and forecast ORCs at the end of a quinquennium, the overall impact on passengers and other users of any forecast error in this area is likely

to be small.

8.32 The CAA welcomes the collaborative working between HAL and airlines during Q5. The LACC response mentioned "the significant improvements that have been made during Q5 in understanding and controlling ORCs". The CAA encourages this joint working to continue during Q6 and expects the principles mentioned earlier in this chapter to continue to be used during Q6.

8.33 Figure 8.3 below reconciles HAL's ABP ORC forecasts with the CAA's forecasts. Besides making the efficiency adjustment highlighted, the CAA has adopted HAL's ABP forecasts for ORCs unamended.

Figure 8.3: Derivation of CAA's final proposals for ORCs

	2014/15	2015/16	2016/17	2017/18	2018/19	Total
ABP	235	223	215	212	211	1,096
Efficiency adjustment	(8)	(7)	(6)	(6)	(7)	(34)
CAA FPs	227	216	209	206	204	1,062

Source: CAA

CAA forecasts

8.34 Based on the forecasts in the ABP and its opex efficiency assumptions, the CAA's proposals for the level of ORCs during Q6 are contained in figure 8.4 below. There has been a significant reduction in projected ORCs between the initial and final proposals, from £1,221 million to £1,062 million. This will result in a significant increase in the per-passenger yield. However, this increase will be offset by a reduction in ORCs, so the overall effect on HAL's revenues will be neutral.

Figure 8.4: Forecast revenue for other charges in Q6

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
ORCs	227	216	209	206	204	1,062
ORs	140	139	141	144	144	708
Total	367	355	350	350	348	1,770

Source: CAA

CHAPTER 9

Q6 Regulatory Asset Base

9.1 This chapter:

- summarises the CAA's analysis and its initial proposals with respect to HAL's RAB, and
- concludes with the CAA's proposal for the RAB, which is then incorporated in the CAA's financial modelling of its final price control proposals.

Deriving the opening RAB for Q6

CAA's initial proposals

9.2 The CAA's initial proposals reduced HAL's estimate for the opening RAB by £61 million to reflect:

- the CAA's conclusion of the Q5 capital efficiency assessment (£30 million); and
- the CAA's view on Q5+1 depreciation higher than that estimated in HAL's FBP (£31 million).

Issues

Q5 capex inefficiency

Issue

9.3 HAL's capex during Q5 totalled around £5 billion. The CAA must determine the extent to which that expenditure was efficiently incurred in setting the opening Q6 RAB. The CAA's consultants, ASA, conducted a review of HAL's capex during Q5.

CAA's initial proposals

9.4 The CAA proposed to disallow £29.6 million of expenditure incurred during Q5. This was in addition to the expenditure on the PRT disallowed at the Q5 review and never allowed into the RAB.

Figure 9.1: ASA's estimate of inefficient costs incurred in Q5

Activity	Nominal prices
Procurement	(£ millions)
T3IB	4.5
PT5 TBS	3.3
Associated add-on costs	1.3
Sub-total	**9.1**
T5C	1.0
T3IB (excl Procurement)	
Pause 1	9.0
Pause 2	6.0
Load file errors	1.5
Poor cost estimating	2.0
Staff turnover	1.0
Sub-total	**19.5**
Total	**29.6**

Source: ASA

Stakeholder views

9.5 The CAA received three responses which commented on the CAA's proposals to disallow some expenditure incurred during Q5.

- BA and the LACC commented that the full amount of capex allowed in the Q5+1 settlement (£180 million) for 2013/14 was unlikely to be incurred in that year. They also claimed that there was a danger of double-counting the RAB throughout Q6, with the same costs being in the opening RAB and the capital plan. BA and LACC's positions were that the amount that should be disallowed from the opening RAB due to inefficient spend was £895 million and £515 million respectively.

- HAL commented that the CAA's proposals to disallow £30 million due to capital inefficiency demonstrated a flawed understanding of best practice portfolio management and the P50 approach to risk. The PRT expenditure should be allowed as there was evidence to demonstrate that passengers, airlines and the wider community were benefiting from the transit.
- The LACC commented that there was a need to validate the amount spent in the Q5+1 settlement and the rollover into Q6 to avoid a risk of double-counting the RAB through Q6 and the capital plan. They also claimed that there was a danger of double-counting the RAB throughout Q6, with the same costs being in the opening RAB and the capital plan. BA and LACC's positions were that the amount should be disallowed from the opening RAB due to inefficient spend was £895 million and £515 million respectively.

CAA's final proposals

9.6 The CAA remains of the view that it should disallow £30 million from the RAB due to capital inefficiency. The test it used is whether the expenditure would have been incurred by an efficient operator, and for the reasons stated in the ASA report and in the initial proposals, the CAA considers that this expenditure was inefficiently incurred.

9.7 The CAA notes that airlines have argued that some of the T3IB costs falling in Q6 should be disallowed. However, the CAA does not consider that it is necessary to disallow more than £30 million from the RAB. The CAA considers that disallowing a significant amount of expenditure on a project that began with airline support and included in the RAB is inadvisable unless "exceptional circumstances" can be demonstrated. This is consistent with the CC's decision on the PNG reference in 2012.[55] No party has demonstrated such circumstances in this case. In addition:

- a significant proportion of the increase in budget was due to changes in specification rather than inefficiency; and
- as HAL has argued, in a diverse capex portfolio such as HAL's, it is likely that at least one project will exceed its budgeted costs

[55] See paragraph 9.26 of the final report, available at http://www.competition-commission.org.uk/assets/competitioncommission/docs/2012/phoenix-natural-gas-limited/provisional_determination.pdf

significantly.

9.8 Accordingly, the CAA has not made any additional deduction to T3IB costs for Q6 in its final proposals. However, given the concerns expressed by stakeholders, the CAA will keep future expenditure increases on this project under review.

Q5+1 regulatory depreciation

Issue

9.9 When the CAA extended the Q5 price control by one year, it did so without making explicit allowances for each of the building blocks, including regulatory depreciation. To calculate the opening RAB for Q6 requires an estimate of depreciation in 2013/14.

CAA's initial proposals

9.10 The CAA's initial proposals identified two possible approaches. The CAA could adopt HAL's estimate of £555 million depreciation in 2013/14. This was the level of depreciation in 2012/13. The alternative approach was to take into account depreciation charges over Q5 and Q6, depreciation as a percentage of the RAB, the annual change in depreciation and the fact that the price cap increased by RPI+7.5% during Q5+1. This would result in a depreciation charge of £587 million in Q5+1.

9.11 The second approach would result in the opening RAB for Q6 being £32 million lower than if the CAA adopted the first approach.

Stakeholder views

9.12 The CAA received one response which commented on the level of regulatory depreciation in Q5+1. HAL commented that the CAA's implicit assumption that there was no agreement or policy as to the depreciation to be included in the RAB for 2013/14 was incorrect. HAL noted that there was agreement between HAL and the airline community as to the level of regulatory depreciation in 2013/14. It would be wholly inappropriate for the CAA to now retrospectively "unpick" the Q5+1 settlement. HAL commented that if the CAA were now minded to reassess the regulatory depreciation, this would establish a principle which might then also be applied to the other building blocks.

CAA's final proposals

9.13 The CAA has carefully reconsidered the regulatory depreciation allowance. It considers that it is appropriate to revert to HAL's proposals for depreciation for Q5+1, for the following two reasons:

- the CAA considers that the agreement between HAL and the airline community is a considerable factor in favour of HAL's proposals. While the CAA might overturn such an agreement if it clearly operated against passengers' interests, it is not clear that this agreement does so; and
- in addition, as argued in the previous section, the CAA considers that retrospective changes to these elements of the price control should be undertaken only in exceptional circumstances. The CAA does not consider that such circumstances exist in this case.

9.14 Accordingly, the CAA has reverted to HAL's proposals for regulatory depreciation in Q5+1.

CAA's final proposals

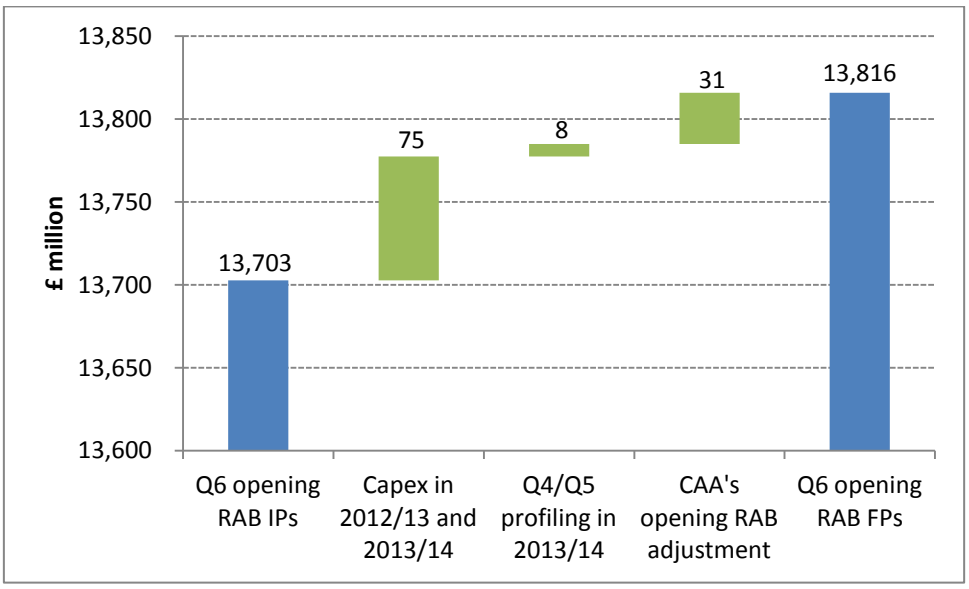
9.15 The CAA's final proposals for the Q6 opening RAB are based on the capex in Q5 and Q5+1, proceeds from sales/transfers, regulatory depreciation, Q4/Q5 profiling, and the CAA's adjustments to HAL's opening RAB. Figures 9.2 and figure 9.3 show the differences between the CAA's initial proposals and the final proposals.

Figure 9.2 Q6 opening RAB – CAA's final proposals compared to initial proposals

	HAL's FBP	HAL's ABP	Difference
Opening RAB in 2011/12	12,018	12,018	–
Capital expenditure	3,358	3,433	75
Proceeds from sales/transfers	(5)	(5)	–
Regulatory depreciation	(1,628)	(1,628)	–
Q4/Q5 profiling	20	28	8
CAA's adjustments to Q6 opening RAB	**IPs**	**FPs**	
Q5 capex inefficiency	(30)	(30)	–
Regulatory depreciation	(31)	–	31
Opening RAB in 2014/15	**13,703**	**13,816**	**113**

Source: CAA

Figure 9.3 Q6 opening RAB – CAA's final proposals compared to initial proposals



Source: CAA

Rolling forward the RAB for Q6

CAA's initial proposals

9.16 The CAA's initial projections for the RAB throughout Q6 were based on HAL's forecast net capex, depreciation of the existing assets and depreciation of forecast capex in Q6. HAL's policy for its depreciation of existing assets is set out in HAL's regulatory accounts, and HAL's asset lives and depreciation policy are consistent with those in the Q5 determination. The depreciation of new capex for Q6 is calculated on a straight-line basis. The CAA's initial proposals for HAL's RAB throughout Q6 are set out in figure 9.4.

Figure 9.4: CAA initial forecast RAB for Q6

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
Opening RAB	13,703	13,738	13,789	13,720	13,633	13,703
Net capex	660	697	591	591	464	3,002
Depreciation	(625)	(646)	(659)	(678)	(680)	(3,288)
Closing RAB	13,738	13,789	13,720	13,633	13,417	13,417
Average RAB	13,720	13,763	13,755	13,677	13,525	n/a

Source: CAA

CAA's final proposals

9.17 The CAA's final proposals for the Q6 RAB are set out in figure 9.5 below.

Figure 9.5: CAA final forecast RAB for Q6

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
Opening RAB	13,816	13,765	13,817	13,782	13,605	13,816
Net capex	578	697	622	499	488	2,885
Depreciation	(629)	(646)	(657)	(676)	(676)	(3,284)
Closing RAB	13,765	13,817	13,782	13,605	13,417	13,417
Average RAB	13,791	13,791	13,799	13,693	13,511	n/a

Source: CAA

CHAPTER 10

WACC, calculation of a price cap and financeability

10.1 This chapter sets out:

- the CAA's proposal for HAL's WACC;
- the CAA's analysis and its initial proposals for HAL's price cap;
- the responses which the CAA received to its initial proposals;
- maximum limits on airport charges for HAL for Q6, derived using the building blocks forecast in the preceding chapters; and
- the extent to which the price cap would enable HAL to finance its projected investment in Q6.

10.2 The CAA has published alongside this document a Technical Appendix setting out its analysis of the WACC. [56] The detail is not reproduced in this chapter.

WACC

CAA's initial proposals

10.3 The CAA's initial proposal for HAL's WACC was 5.35% on a pre-tax real basis. This equated to a vanilla WACC[57] of 4.62%.

CAA's final proposals

10.4 Based on the analysis contained in the CAA's Technical Appendix on WACC, the CAA's final proposal for HAL's WACC is 5.60% on a pre-

[56] Estimating the cost of capital: a technical Appendix to the CAA's Final Proposals for economic regulation of Heathrow and Gatwick after April 2014, October 2013, available at www.caa.co.uk

[57] The vanilla WACC is the pre-tax cost of debt and the post tax cost of equity weighted by gearing. It therefore excludes any adjustments for tax.

tax real basis. This equates to a vanilla WACC of 4.85%. The main reason for the change from the initial proposals as set out in the WACC Technical Appendix (published alongside this document) is an increase in the cost of debt arising from amendments to PwC's calculation methodology in response to points raised by HAL and greater emphasis on longer-run market data and averages. Combined with the forecast RAB derived in chapter 9 of this document, the forecast WACC charge for HAL over Q6 is shown in figure 10.1 below.

Figure 10.1: WACC charge included within the final projections for HAL's Q6 price cap

£ million	2014/15	2015/16	2016/17	2017/18	2018/19	Total
Mid-year RAB	13,791	13,791	13,799	13,693	13,511	n/a
Allowed return	772	772	773	767	757	3,841

Source: CAA

Level of the price cap

CAA's initial proposals

10.5 The CAA's initial proposals for HAL were to set a price cap equivalent to a maximum increase in average airport charges of RPI-1.3% per year. Figure 10.2 shows each building block component which contributed to the CAA's initial price cap proposal.

Figure 10.2: CAA's initial proposals for HAL's Q6 price control

£ million	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Total
Operating costs		1,066	1,030	994	970	957	5,017
Depreciation		625	646	659	678	680	3,288
Cost of capital		734	736	736	732	724	3,662
Total revenue requirement		2,424	2,412	2,389	2,381	2,361	11,966
Commercial revenues		(549)	(567)	(586)	(596)	(613)	(2,912)
Other regulated charges		(253)	(249)	(240)	(241)	(239)	(1,221)
Other revenues		(139)	(138)	(141)	(143)	(143)	(705)
Net revenue requirement		1,482	1,458	1,422	1,401	1,365	7,128

£ million	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Total
Passengers (in millions)		70.8	70.7	71.5	72.3	73.1	358.4
Unprofiled yield per pax (£)	**20.71**	**20.93**	**20.61**	**19.88**	**19.38**	**18.68**	**n/a**
Year-on-year change		1.1%	-1.6%	-3.5%	-2.5%	-3.6%	
Profiled yield per pax (£)	**20.71**	**20.50**	**20.25**	**19.92**	**19.59**	**19.34**	**na**
Year-on-year change		-1.0%	-1.2%	-1.6%	-1.7%	-1.3%	

Source: CAA

10.6 The CAA profiled the resulting yield per passenger in figure 10.2 across the Q6 period. It equated to a price change of RPI-1.3% per year. This compares to HAL's FBP of RPI+5.9% and BA's proposed RPI-9.8%.

Stakeholder views

10.7 The CAA received 11 responses commenting on its initial proposals for the level of prices at Heathrow during Q6.

- BA commented that HAL would start Q6 "over-rewarded, over-priced and inefficient". The CAA's proposal of RPI-1.3% was "simply inadequate, as it would not address the issue of HAL over-pricing compared to other hubs". A settlement of RPI-9.8% was achievable, would restore some price comparability and would set HAL on the path to efficiency. BA failed to see how HAL's settlement of RPI-1.3% is consistent with the evidence placed before the CAA or its statutory duties. The current Q5 settlement had consistently over-rewarded HAL and that the CAA's proposals for Q6 would continue to do so. Out of free cash alone, on current gearing, HAL's shareholders could expect dividend yields of as much as 9% per year, whereas the FTSE average is currently 3.95%.
- HAL commented that the CAA's proposals seemed inconsistent with its statutory duties. They would severely blunt any incentive on HAL to invest, against passengers' interests. The CAA had not taken account of HAL's WtP analysis, which indicated that customers would be willing to pay significantly more for improved facilities at Heathrow.
- The LACC was glad that CAA had not adopted HAL's proposals. High projected dividend payments and free cashflow mean that

Under RPI-9.8%, HAL could still return £750 million to shareholders in Q6. The CAA's initial proposals did not go far enough to address the steep price rises seen in HAL's charges in the last few years. The CAA's proposals offered an over-generous return to HAL's shareholders and significant further efficiency savings are necessary over Q6. The LACC maintained that a price cap as low as RPI-9.8% could be appropriate.

- Virgin commented that the proposals put forward by the CAA would only compound the huge increases of recent years with prices at Heathrow already triple the level they were ten years ago. Under the CAA's proposals, the amount of charges paid by passengers over Q6 would increase by around £600 million, taking Heathrow's charges even further out of line compared to its comparators.

10.8 In addition, six airlines and airline alliances (China Eastern, Lufthansa (also on behalf of Swiss and Austrian), Skyteam, South African Airways, Star Alliance and Tunisair) wrote to the CAA arguing that HAL's prices were currently too high and that the CAA's proposals were insufficient to address this.

CAA's final proposals

10.9 The CAA has carefully considered both HAL's view that the initial proposals were too tight, and the airlines' and airline alliances' view that the initial proposals were too loose. On balance, the CAA can accept neither criticism, for the following reasons.

- The initial proposals would have enabled HAL to cover its efficient costs and earn a reasonable rate of return on its capex over Q6, consistent with UK regulatory practice. The CAA also conducted analysis to make sure that HAL remained financeable over Q6.
- While the CAA has some sympathy for the argument that HAL's prices are significantly higher than most comparable hubs, this reflects to a large extent the costs of providing new terminal infrastructure. The reduction in real terms proposed for Q6 in April 2013 seemed to the CAA to begin to address this difference.
- While the CAA acknowledges HAL's WtP analysis provided useful insights into passengers' preferences, price controls for companies with substantial market power are based on efficient costs rather than WtP. An unregulated company with substantial market power

than WtP. An unregulated company with substantial market power will wish to base its prices on passengers' WtP. However, price regulation as developed in the UK has ensured that customers pay no more than the efficient costs of the service provided. The CAA's building block calculation has followed this approach.

10.10 On the basis of the revised building blocks forecast in the preceding chapters, the CAA has derived the yield per passenger for HAL over Q6 as set out in figure 10.3 below.

Figure 10.3: CAA's final proposals for HAL's Q6 price control

£ million	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Total
Operating costs		1,057	1,006	980	953	947	4,944
Depreciation		629	646	657	676	676	3,284
Cost of capital		772	772	773	767	757	3,841
Total revenue requirement		2,458	2,424	2,410	2,396	2,380	12,069
Commercial revenues		(530)	(564)	(586)	(596)	(604)	(2,880)
Other regulated charges (ORCs)		(227)	(216)	(209)	(206)	(204)	(1,062)
Other revenues		(140)	(139)	(141)	(144)	(144)	(708)
Net revenue requirement		**1,561**	**1,505**	**1,474**	**1,450**	**1,428**	**7,419**
Passengers (in millions)		70.8	71.0	71.7	72.5	73.2	359.2
Unprofiled yield per pax (£)	**20.71**	**22.05**	**21.20**	**20.56**	**20.00**	**19.51**	**n/a**
Year-on-year change		6.5%	(3.9%)	(3.0%)	(2.7%)	(2.5%)	n/a
Profiled yield per pax (£)	**20.71**	**20.71**	**20.77**	**20.76**	**20.62**	**20.75**	**n/a**
Year-on-year change		0.0%	0.3%	(0.1%)	(0.7%)	0.7%	n/a

Source: CAA

10.11 The CAA profiled the resulting yield per passenger in figure 10.3 across the Q6 period. It equated to a price change of RPI+0.07% per year. The CAA has rounded this to RPI+0%, to avoid any suggestion of undue or spurious precision given the number of fine judgements that were made during the compilation of the final proposals and the inevitable range of uncertainty in some forecasts. This outcome compares to HAL's ABP proposal of RPI+4.6% and BA's proposed RPI-9.8% (figure 10.4). The CAA considers this judgement is best calculated to further its general duty.

10.12 Under the CAA's final proposal of RPI+0%, prices are expected to be

£20.75 in 2018/19, which is 19.3% lower than HAL's FBP and 65.2% higher than BA's position paper. Furthermore, the price by the end of Q6 would be £0.04 higher than the price in Q5+1.

10.13 The CAA will consider profiling revenues, including the introduction of an increase in prices in the first year (a so-called P0 change). However, the CAA will only do so if HAL is neutral to this change in NPV terms and only if the CAA is convinced that it will facilitate HAL in financing its licensed activities by better matching HAL's revenues to its costs.

10.14 The X in the formula RPI±X is not the same as the year-on-year change in the real price cap for two reasons.

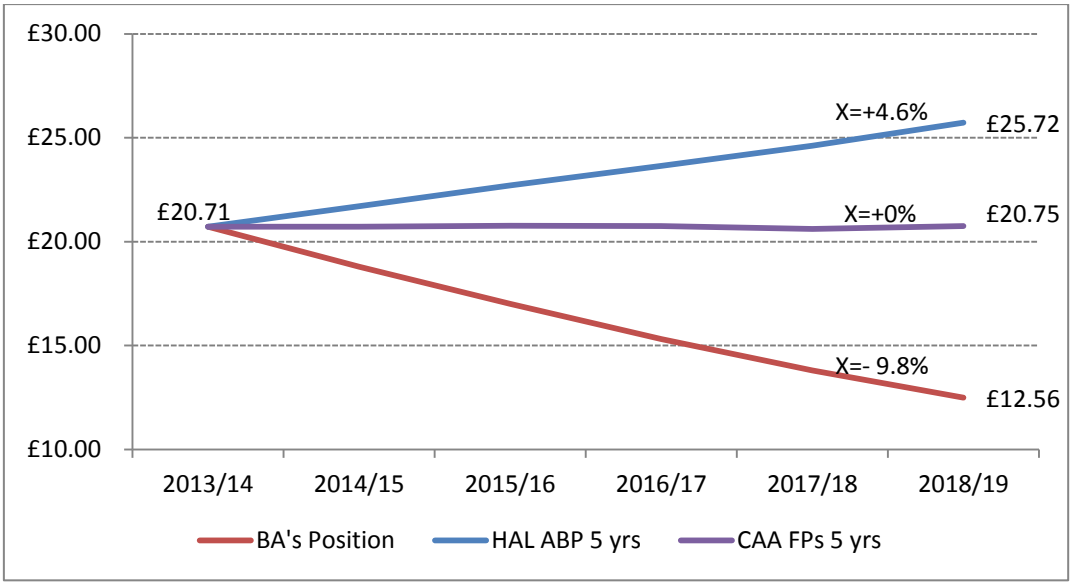
- In simple terms the price cap formulae in previous years has been $P_2 = P_1.(\Delta RPI+X+1)$, where P_1 is the price in year 1, P_2 is the price in year 2, ΔRPI is the change in the value of the retail prices index and X captures the 'change'. However, this formula, where X is a constant does not give a smooth year-on-year change in real prices. A constant change in real prices is $P_2 = P_1.(1+\Delta RPI).(1+Y)$, where Y is the constant change. It can be seen that, for the same change in prices X and Y are related but not equal.[58] This means that if the formula $P_2 = P_1.(\Delta RPI+X+1)$ is used and X is to be the same in each year of the quinquennium then the annual year-on-year change in real prices will not necessary equally X and furthermore will be different in each year. However, the average year-on-year change (Y) will approximate to X.
- The RPI used in the price cap formula is the index as at 31 August each year, while our modelling uses average index for the year ending/ended 31 March each year. So, if forecast inflation based on these slightly different time periods is different, then even using $P_2 = P_1.(1+\Delta RPI_{AUG}).(1+Y)$ will give a price change in real prices (year ending/ended 31 March) which is not equal to Y.

10.15 In this document, where an X has been quoted it is the X to be used in a RPI+X formula, and is a constant value over the quinquennium. The profiles (in this case no profiling and a constant X) give the same expected net present value of the revenue requirement (at the regulatory WACC), and the airport is not expected to gain or lose from

[58] X=Y where ΔRPI = 0, ΔRPI = ∞, or $P_2 = P_1.(\Delta RPI+1)$

the CAA's choice of profile.

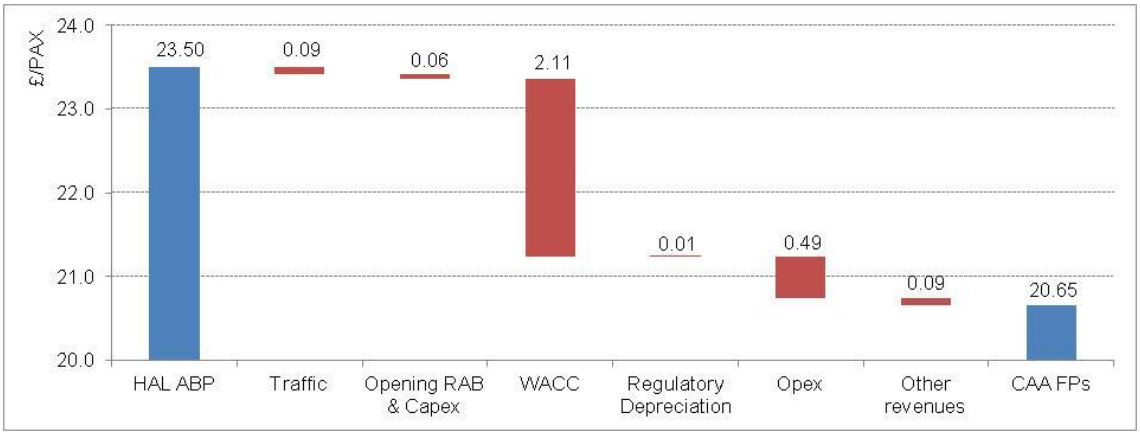
Figure 10.4: Smoothed yield per passenger



Source: CAA

10.16 Figure 10.5 shows how the CAA's final proposal compares to HAL's views by comparing a simple average of the yield in each of the five years.

Figure 10.5: Average yield per passenger – HAL compared to CAA



Source: CAA

10.17 Figure 10.5 shows that the main differences in the resulting price profiles arise from different assumptions for the WACC and opex.

Financeability

10.18 In addition to proposing maximum levels of airport charges, the CAA has assessed the financeability of its Q6 final proposals. The CAA must have regard to the need to secure that licence holders, such as HAL, can finance their provision of airport operation services when it comes to the exercise of the CAA's functions such as setting price caps. This cannot override the CAA's primary duty. However, the CAA considers that setting a price control condition that is aligned with an efficient operator being able to finance its business is consistent with, and is not in conflict with, present and future passengers' interests or with the need to promote efficiency and economy.

10.19 The CAA therefore considers it appropriate to establish whether the Q6 final proposals would enable an efficient HAL to finance its operations, including its capex programme, in Q6 on reasonable terms in the banking and capital markets through some combination of debt and equity.

Stakeholder views

10.20 The CAA's financeability analysis in the initial proposals suggests that HAL should be able to finance the initial proposals and retain a solid investment grade credit rating.

10.21 HAL commented that the CAA's financiability tests:

- are inconsistent with the cost of debt. The cost of debt is estimated based on HAL's A- and BBB+ bonds, whereas the financeability analysis uses BBB and BBB+ bonds as benchmarks;
- fail to provide sufficient safety margin for debt investors, and ignore the impact of volatility on credit profile; and
- focus only on HAL's ability to service debt, and do not adequately consider shareholder returns.

10.22 Both Fitch and Moody's indicated that the CAA's initial proposals were unfavourable to HAL, but if the initial proposals were implemented in the final determination, there would not be a downgrade for HAL, although there would be limited scope for HAL to absorb any downside risks. After the CAA published its initial proposals, both

Moody's[59] and Fitch Ratings[60] released their credit rating reports in June 2013, and affirmed the credit ratings as unchanged with a stable rating outlook.

Maintaining a solid investment grade credit rating

10.23 A key assumption in determining the appropriate level of gearing in the CAA's estimation of the WACC is that HAL should be able to obtain and maintain a solid (sometimes known as 'comfortable') investment grade rating at an assumed gearing level of 60%. A solid investment grade rating is interpreted as in the region of BBB/BBB+ (using S&P's and Fitch's terminology) and Baa2/Baa1 (using Moody's terminology). This is a couple of 'notches' above the bottom of investment grade of BBB– or Baa3. The aim of the financeability assessment is for HAL to be in a position to absorb reasonable unanticipated downside risk and still retain an investment grade credit rating.

10.24 The CAA has gathered evidence directly from three credit rating agencies: Fitch Ratings Limited, Moody's Investor Service and Standard & Poor's (S&P).In determining a credit rating, an agency typically considers both qualitative evidence (e.g., business risk and corporate governance) and quantitative evidence (e.g., financial risk and credit ratios). In forming a view on the business risk of an airport operator, an agency will consider, among other things:

a) the competitive position of the airport compared with airports owned by competitors, which in turn may include:

   i) location (catchment area, local transport links); and

   ii) customer airlines and the passenger mix, (hub airlines, alliances, destinations of those airlines);

b) the regulatory regime, and in particular the rigour and predictability of the regime;

[59] Moody's Investors Service, *Credit opinion: Heathrow Finance plc*, 11 June 2013.

[60] Fitch Ratings, *Fitch affirms Heathrow Funding's bonds & Heathrow Finance's high-yield bonds*, 26 June 2013.

c) the diversity of the airports owned or operated by the company;[61] and

d) charges (for example landing, passenger and security charges).

10.25 Compared to other airports, Heathrow would appear to have a very strong position from a credit perspective. Heathrow is the world's busiest airport and one of Europe's main hubs for full service airlines. It has a very strong market position owing to excess demand and has a favourable location near London, good transport links, and attractive catchment area. Heathrow is the hub airport for BA, which is a member of oneworld, one of the world's three global airline alliances. Heathrow has also proven more resilient to economic slowdowns than other major UK airports.

10.26 Before 28 February 2013, BAA SP Limited was the holding company that owned Heathrow and Stansted. Heathrow accounted for 92% of BAA SP's EBITDA and Stansted accounted for 8%. BAA had been required to sell Stansted following a ruling originally made by the CC in March 2009. Manchester Airports Group bought Stansted from BAA and the sale was completed on 28 February 2013. Based on discussions with the credit rating agencies, the CAA does not expect the sale of Stansted to have an adverse effect on HAL's credit profile.

10.27 The CAA's final proposals for Q6, do not propose fundamental changes to the form of regulation for HAL and hence are not expected to weaken the credit strength of HAL. However, the ability of a licensing regime to revisit the price control if key assumptions, such as traffic, are significantly at odds with the forecast, could be a credit strength.

10.28 One of the key assumptions of the CAA's financeability assessment is that the CAA's price review will not affect HAL's business risk; therefore, the CAA assumes that the regulatory risk of HAL is unchanged from credit rating agencies' current views. However, the CAA recognises that the proposed building blocks of the price cap could affect HAL's financial risk.

[61] The CAA considers the airports on a standalone basis, so while this factor might be important for the credit rating agencies, the CAA's analysis ignores other airports in the same corporate group of companies.

10.29 In forming a view on the financial risk of a business it is rating, an agency may consider matters such as:

a) historical and forecast financial performance, including:

i) cashflow and profitability;

ii) revenue diversity and stability;

iii) liquidity and financial flexibility;

iv) capital structure of the company (including gearing);

v) covenants and security including securitisation; and

b) financial policy and strategy of management, including merger & acquisition activity, dividend policy, etc.

10.30 The rating agencies place different emphasis on the various ratios. Some of the agencies also differ in their benchmarks (e.g. the value the ratio needs to be for a certain credit rating).

CAA analysis of credit ratios

10.31 The CAA has considered whether the forecast performance of HAL under the CAA's Q6 final proposals is consistent with a solid investment grade based on assumed gearing of 60% and has considered six ratios used by the various agencies:[62]

- interest cover;[63]
- funds from operations (FFO[64]) interest cover;[65]
- post-maintenance interest cover ratio (PMICR);[66]
- adjusted interest cover (adjusted ICR);[67]

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62 These ratios and some of the terms used in them do not have agreed definitions.

63 ICR = (EBITDA – tax paid – 2% of total RAB)/interest paid. NB: the rating agencies using – this metric assume that 2% of total RAB is required to maintain the regulatory assets.

64 FFO= Net income from continuing operations adding back depreciation, amortisation, deferred income taxes and other non-cash items, less any changes to operating components of working capital.

65 FFO/interest expense = FFO (as above) + gross interest paid on debt/gross interest expense on debt.

66 PMICR = (EBITDA – corporation tax paid – regulatory depreciation)/interest paid.

67 Adjusted ICR is FFO + interest expense – regulatory depreciation + profiling adjustment

- FFO to debt;[68] and
- regulatory asset ratio (RAR[69] or gearing).

10.32 The CAA has used a separate section in HAL's financial model, which was created to provide illustrative calculations of the above financial ratios. These are set out in nominal terms[70] as this tends to be the basis used by rating agencies. The CAA has undertaken the analysis on the basis of the notional capital structure consistent with the CAA's cost of capital proposals. This assumes:

- a constant gearing level of 60%, with the level of dividends being the balancing item used to keep gearing at this level;[71]
- a nominal cost of debt of 5.75%;
- index-linked debt making up 35%[72] of the total debt balance; and
- a cost of index-linked debt of 2.95%.[73]

10.33 The CAA has had to make some additional assumptions and adjustments in order to derive the financial ratios in figure 10.6. Based on these results, the CAA considers that a notionally financed and efficient HAL would be likely to achieve and maintain a solid investment grade credit rating.

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divided by interest expense.

68 FFO/net debt, where FFO is as defined above and net debt = closing RAB x gearing ratio.

69 RAR = debt less cash and authorised Investments/total RAB.

70 In contrast, the rest of the HAL model used for the price control was specified in real terms.

71 The CAA relaxed this assumption and after allowing for a modest dividend yield, gearing was in the range of 56% to 60%.

72 Ofgem assumes 25% of each network company's debt is index-linked. Fitch considers that by the end of 2011 about 65% of BAA (SP)'s net debt exposure was in the form of index-linked debt or hedged using index-linked swaps. In the Q5 price control review, the CAA assumed that the proportion of index-linked debt was 25%. Taking in to account all the available evidence, the CAA takes the conservative point of 35% in the range of 25% to 65%.

Fitch Ratings, '*BAA (SH) plc and BAA Funding Limited – Full ratings report*', 23 August 2012, p. 7.

73 The cost of index-linked debt of 2.95% is consistent with the top of the range of PwC's recommendation (excluding fees). The nominal cost of debt includes inflation of 2.8%.

Figure 10.6: CAA financial ratios for HAL in Q6

Key financial ratios: benchmarks and calculations					
Key financial ratios	**Benchmark**		**Calculation by CAA (Q6)**		
	Moody's (Baa2)	**Fitch (BBB+)**	**Average**	**Min**	**Max**
PMICR		1.5 – 1.6	1.6	1.4	1.8
ICR	1.4 – 1.6	n/a	2.6	2.3	2.8
RAR – Net debt/RAB	68% – 75%	n/a	60%	60%	60%
Other financial ratios					
FFO interest coverage	2.25 – 3.0	n/a	2.7	2.5	2.9
FFO to net debt	6 – 10%	n/a	16%	14%	17%

Source: CAA analysis

10.34 The CAA notes that its ratio analysis suggests that the notionally financed airport operator would meet a solid investment grade credit rating. From discussion with the rating agencies, the CAA understands that the ratios do not need to meet all benchmarks in all years of the price control period to achieve the credit rating. The credit rating agencies also take into account the magnitude of the shortfall on average over the control period and whether the ratios are increasing or decreasing. The CAA notes that:

- the notionally financed company fails to meet one ratio (PMICR) in the first year of the price control period;
- the magnitude of the shortfall is small;
- the ratios steadily increase over Q6; and
- the average ratios for Q6 are above benchmark.
- Furthermore, the CAA has taken a conservative assumption in respect of the proportion of debt which is index-linked. If the CAA were to assume its notionally financed company had index-linked debt representing 45%[74] of the total debt, then the PMICR benchmark would be met in all years over the Q6 control period.[75]

[74] HAL indicates that two thirds of its class A debt is index-linked, which equates to approximately 45% of the RAB. The equivalent index-linked debt to total debt proportion is 55%.

[75] In the Q6 initial proposals, the CAA assumed that the proportion of index-linked debt was 35%.

10.35 The CAA has used HAL's financial model to calculate the Q6 price cap proposals and analyse price cap profiling and financeability. HAL's model for the Q5 price review, including assumptions, logic, internal consistency and formulae had been externally audited. Since the Q5 price review, HAL has made a number of changes in the functionalities of the model. The purpose of those changes was to make the model more user-friendly and transparent. HAL indicated that the core functionality of the model remains unchanged. The CAA has internally checked the core functionality of the model for the Q6 price review and verified the price cap calculations by using alternative models.

CAA's final proposals

10.36 The CAA proposes to set a price cap equivalent to a maximum increase in average airport charges of RPI+0% per year. The CAA considers that, given efficiency and economy on its part, HAL should be able to finance these proposals and retain a solid investment grade credit rating. Based on the latest Consensus Forecasts, the CAA estimates that the CHAW RPI price base will increase from 237.3 in 2011/12 to 257.5 in 2014/15. This means that the 2014/15 price cap will equal £22.47 (£20.71 x 257.5/237.3) when expressed in nominal prices.

10.37 HAL has proposed using a different price control duration to enable alignment of the calendar and financial years, by reducing the first year of the price control period to nine months. Using the same methodology as before, the resulting profiled price cap would be equivalent to RPI-0.2% per year. Given the risk of undue or spurious precision, the inevitable uncertainty in the forecasts and the fine judgements in the compilation of the final proposals, the CAA proposes rounding this to RPI+0% per year. It considers this judgement best calculated to further its general duty.

Fitch considered that the proportion of index-linked debt was 65%.

CHAPTER 11

Service quality

11.1 This chapter sets out the CAA's final proposals for the SQRB[76] scheme for HAL for Q6. It sets out the process to date, the issues that have been raised by stakeholders and the final proposals for the licence condition of the SQRB scheme.

11.2 The licence condition proposed consists of two parts: the licence condition itself, and the Statement of Standards, Rebates and Bonuses (the Statement), which is included as Schedule 1 to the licence. The draft licence, including Schedule 1, is set out in Appendix A to this document.

Service quality process to date

11.3 The SQR scheme was introduced by the CAA in Q4 to identify the service standards that airlines could expect from HAL in return for the regulated charges they paid. Economic regulators often set minimum service quality standards as part of price control determinations in recognition that price cap incentives alone may lead to efficiency improvements at the expense of service quality. Where performance falls below certain pre-determined standards, HAL must repay a portion of the charges levied back to the airlines.

11.4 The SQR scheme in Q5 captures five areas of HAL's service quality:

- passenger satisfaction – with metrics taken from HAL's Quality of Service Monitor (QSM) survey and covering flight information, cleanliness, way-finding, and departure lounge seating availability;
- security queue times – with metrics based on queue times for central search, transfer search, staff search and control posts;
- passenger operational elements – with metrics based on the availability of passenger-sensitive equipment (PSE), track transit

[76] 'Service quality rebate' (SQR) in Q5 is changed to 'service quality rebate and bonuses' (SQRB) in Q6 to reflect the nature of the scheme better.

system, and arrivals reclaim (baggage carousels);

- airline operational elements – with metrics covering pier service, stands, jetties, fixed electrical ground power (FEGP), pre-conditioned air (PCA), and stand entry guidance. Metrics are generally based on the availability of these elements; and
- an aerodrome congestion term (ACT).

11.5 For each of these elements, the CAA sets a standard for HAL to meet. Generally, the elements are split by terminal to incentivise consistent service quality across terminals and to discourage HAL from putting airlines and their passengers in one or more terminals at a disadvantage.

11.6 The standards are subject to financial incentives. For Q5, the total amount of HAL's airport charges at risk per year is around 7%, spread across the various elements as described above. HAL also has the opportunity to earn bonuses where certain elements outperform the CAA's targets. The maximum aggregate bonus HAL can earn per year in Q5 is just over 2% of total airport charges.

11.7 Figure 11.1 shows the total rebates paid out by HAL and bonuses received by HAL during Q5 as at June 2013.

Figure 11.1: Rebates paid and bonuses earned by HAL in Q5

Regulatory year	Total airport charges £m	Rebates		Bonuses	
		£m	% of airport charges	£m	% of airport charges
2008/09	866.16	7.67	0.89%	0.80	0.09%
2009/10	868.84	4.24	0.49%	2.34	0.27%
2010/11	975.29	3.80	0.39%	4.61	0.47%
2011/12	1,098.23	3.92	0.36%	5.72	0.52%
2012/13	1,236.12	12.40	1.00%	8.85	0.72%
Apr – Jun13*	1,413.63	1.85	0.13%	2.72	0.19%

* Provisional figures for Apr – Jun 13

Source: HAL

HAL's June 2013 Revised Business Plan

11.8 In its RBP, HAL proposed a Q6 service quality scheme as follows.

- CAA Scheme, which is comprised of cleanliness, way-finding (QSM metrics), and central security and transfer search;
- service charter, which is comprised of control posts, staff search, ACT, and availability of PSE (priority), pier-served stands, jetty, arrivals reclaim, transit system Terminal 5, FEGP, stand entry guidance and PCA; and
- third party measures, which are composed of border force queuing, baggage performance and punctuality.

11.9 HAL presented the results of a WtP study it commissioned. It was found that, for the full suite of improvements presented in the FBP, the WtP on top of the current airport charge are £44.27 (average) and £23 (median) for all passengers. As noted in chapter 10 above, the CAA does not believe that this type of research should be used directly to determine the level of prices for HAL. However, the CAA acknowledges the value of research of this kind in gauging consumer preferences and relative priorities.

11.10 Other main points in the RBP include:

- measures that are less relevant to passengers should be removed;
- selected third party measures important to the passenger journey should be reported;
- queuing standards for direct and transfer passengers should be harmonised, and a per passenger measure should be used; and
- part of any rebate or bonus payments should be allocated to a joint fund for passenger improvements.

11.11 Other arguments in the RBP are consistent with HAL's response to the CAA's initial proposals, and therefore are covered below.

The LACC's response to HAL's RBP

11.12 The LACC submitted a response to HAL's RBP and ABP. The main points are as follows.

- the results of the HAL's WtP study were unreliable and cannot be used as evidence;
- the SQR should continue to be focussed only on the services and facilities provided by HAL, which has SMP rather than including

third-party providers;

- it was disappointing that HAL emphasised achieving passenger perception of quality rather than actually delivering quality;
- on security queues, the CAA should ensure that the HAL resources and flow rates associated with its modelling be thoroughly reviewed, so that HAL would achieve efficiency;
- it was not appropriate to allocate any rebate monies to a discretionary pot, because this could make the rebate money available as another source of funding for RAB-enhancing developments; and
- for Q6, the CAA should, in the SQR scheme, establish a new requirement for HAL to maintain a minimum of three days' fuel supply at Heathrow.

11.13 Other arguments in the LACC's response to HAL's RBP are broadly in line with the LACC's response to the CAA's initial proposals, and therefore are covered below.

CAA's Consumer Panel feedback

11.14 The CAA's Consumer Panel was established in October 2012. The Panel has internal independence from the CAA and acts as a 'critical friend', scrutinising and challenging all of the CAA's work. The main aim of the Panel is to be a champion for the interests of consumers, and help the CAA to take account of these in its policy development and decisions.

General comments on airport services

11.15 The Consumer Panel agreed that the CAA's overall approach to understanding passengers' interests for the purposes of HAL's price cap, through both CE and the use of passenger research, was robust.

11.16 The Panel considered that, in the delivery of airport operation services at Heathrow, there is generally a reasonable alignment of airline and passengers' interests. However, it does not accept that there should be an automatic presumption of alignment. It has also asked the CAA to consider further the areas in which this does not hold (for example, passenger welfare in times of disruption). The Panel also encouraged the CAA to consider different passenger sub-groups, for example PRMs in its surveys.

11.17 The Panel noted the importance of performance in times of disruption, and encouraged the CAA to consider how this might be addressed. The CAA is developing licence conditions on HAL relating to operational resilience (see chapter 12), as well as considering how it can develop its future passenger research in this area.

11.18 The Panel felt that it was necessary for the CAA to ask HAL to articulate properly the consumer impact of its proposed reduction in capex over Q6 from £3 billion to £2 billion. The Panel commented that the CAA must make sure that the WtP research provided by HAL is credible.

Comments on SQR

11.19 The Panel broadly supported using the Q5 SQR as the basis for developing service quality regulation in Q6. It felt that the targeted use of bonuses could be effective, and suggested the CAA consider some flexibility in the elements to which they applied.

11.20 The Panel suggested the use of reputational incentives as well as financial incentives, and suggested the CAA look at whether there are some metrics where publication and monitoring of performance would act as a sufficient incentive without the need for a rebate or bonus. With this in mind, the CAA has proposed the publication of a measure of passenger satisfaction with security and with Wi-fi provision at the airport. These measures would not be subject to financial incentives.

11.21 The Panel expressed the following views on security queuing standards:

- The CAA's research results showed that passengers were largely content with their queuing times.[77] However, the CAA should note that passengers may base their responses on their experience rather than what is acceptable, and that survey-based approaches could be influenced by how the airport operator manages queues;
- the airlines' proposals of reducing the target from 10 minutes to 8 minutes may not bring overall net benefit to consumers; and
- an alternative measure was worth exploring, as the average queuing time metric may mask unacceptably long queuing times at

[77] CAA, May 2013, CAA passenger research: satisfaction with the airport experience, Heathrow, Gatwick and Stansted, www.caa.co.uk/cap1044

certain points in the day.

11.22 The Panel had the following views on Wi-fi provision:

- access to free Wi-fi has become the norm in major world airports; and
- Wi-fi is important for passengers in times of disruption, and the interests of passengers, the airport operators and airlines might not align on this issue.

Discussion of the issues

11.23 The CAA considers that the issues concerning service quality regulation for Q6 that it needs to resolve are shown in figure 11.2 and figure 11.3 below.

Figure 11.2 Service quality issues discussed in this chapter

Nature of issue	Issue
Licence condition	The licence condition including a self-modification mechanism
General issues on the SQRB scheme	Rebates
	Bonuses
Specific elements in the SQRB scheme	Passenger satisfaction – Wi-fi
	Central and transfer search – design of interim and automated measurement metrics
	Central and transfer search – service standards
	Central and transfer search – definition of queues
	Central and transfer search – other issues
Issues outside of the SQRB scheme	Performance of third parties
	HAL/airline service charter

Source: CAA

Figure 11.3 Service quality issues discussed in Appendix C

Nature of issue	Issue
General issues on the SQRB scheme	Publication of results and record keeping
	Definitions
	Averaging and precision of measurements
	Subjective and objective measures
Specific elements in the SQRB scheme	Passenger satisfaction – removal/retention of standards
	Passenger satisfaction – service standards and bonus arrangements
	Staff search
	Control posts
	Passenger operational elements
	Airline operational elements – pier service
	Airline operational elements – others
	Aerodrome congestion term

Source: CAA

11.24 The most significant issues as set out in figure 11.2 are covered in this chapter. The remainder are in Appendix C.

The licence condition including a self-modification mechanism

Issue

11.25 The service quality condition set out in the initial proposals consisted of the condition itself which would give effect to a schedule containing the Statement. This section deals with the condition itself, with the remainder of the chapter devoted to the contents of the Statement and other issues outside of the SQRB scheme.

11.26 The SQRB scheme consists of the following components:

- elements;
- metrics;
- service standards;
- levels of rebates; and
- levels of bonuses.

11.27 The CAA, in its initial proposals, fixed the SQRB scheme for the five-year period. However, the CAA saw merit in having the ability to adjust the scheme within the price control period to reflect changing passenger priorities.

11.28 Subsequent to the publication of the initial proposals, the CAA issued a letter to stakeholders dated 31 May 2013. The letter stated that the Act allows the CAA to include provisions for making specified types of modifications to a condition in specified circumstances and at specified times during Q6, without having to follow the more formal process for modification set out in section 22 of the Act. The service quality condition therefore includes such a self-modification condition that allows which included the draft licence condition. This required HAL to pay the rebates specified in the Statement and also included a self modification provision to allow immediate changes to be made to certain parts of the tables where HAL, a representative proportion of airlines and the CAA agreed to the change.[78] There could also be scope for the CAA to direct changes if one party did not agree.

11.29 Service standards and levels of rebates are potentially areas subject to self-modification, whereas changes to elements and levels of bonuses would be made only through the more formal process for modification set out in section 22 of the Act. The CAA sought views on these issues regarding the self-modification mechanism.

- Whether to limit the times that such modifications could be made, for example considering only one set of changes every six months. This would prevent a drip-feed of changes but would not be too restrictive for the effective application of the condition.
- Whether to include in the self-modification mechanism a provision whereby the CAA could act as arbiter if HAL and the airlines could not reach agreement. It would speed up changes in cases where there was poor engagement by some and may incentivise better engagement.
- Whether it was necessary to include a provision within the licence condition or the schedule that would allow the CAA to intervene if it

[78] Section 21 (3) of the Act allows the CAA to include provisions for making specified types of modifications to a condition in specified circumstances and at specified times, without having to follow the more formal process for modification set out in section 22 of the Act.

considered the agreement was not in the interests of passengers and cargo owners.

Stakeholder views

11.30 The CAA received the following responses on modifications to the SQRB scheme.

- BA supported a provision for the CAA acting as arbiter and intervening where agreement cannot be reached, however it considered that the CAA should specify the requirements of the consultation to ensure that sufficient time and effort has been made to engage fully with stakeholders. BA also suggested a quarterly cycle to make modifications to enable positive changes as quickly as possible.
- HAL supported quick modifications where parties consent, but considered that limiting modifications to every six months reduced flexibility. HAL agreed to the CAA acting as arbiter, but was concerned that the licence should not be unilaterally modified by the CAA, HAL or other stakeholders. HAL also expressed concern over using asymmetric regulation in the proposed condition 5.7 as it was inequitable for the AOC to have a power of veto over changes to SQR metrics if HAL did not have the same rights. It commented that this clause should be removed or HAL should be given reciprocal rights.
- The LACC welcomed the inclusion of a service quality condition in the licence. It considered that alterations to the substance of the SQR scheme should be subject to a licence modification procedure. However, the weightings of rebate payments should be adjusted through a mechanism in the licence, subject to agreement by all stakeholders. The LACC suggested that a six-month cycle may prove to be too long between reviews and advocated a more frequent cycle which could be extended by agreement. It welcomed the CAA's proposal to act as arbiter if agreement could not be reached on proposed modifications, but was circumspect on the result of such engagements if insufficient airlines engaged in the proceedings. It also considered that the CAA should establish guidelines on how it expects consultation to be undertaken and what outputs are expected.
- Virgin considered that it might be appropriate to adjust the SQR

scheme in the interests of the passengers, and supported the inclusion of such as mechanism. It would like to see how these conditions would be developed to reflect its concerns.

CAA's final proposals

11.31 The CAA has reviewed the drafting of the condition. This obligation now requires HAL to comply with the Statement in its entirety, which includes other requirements such as carrying out the QSM, bonuses and publication.

11.32 The CAA notes the general support for the self-modification provisions for agreed changes to the SQRB scheme and it has included these provisions in the proposed licence.

11.33 The CAA has noted the comments on the provision for the CAA to act as an arbiter in some cases. It considers that it would be appropriate to have a more symmetric requirement where parties could seek arbitration from the CAA, rather than requiring HAL to gain a minimum level of agreement. The CAA would always consider the number of airlines seeking arbitration, and the proportion of passengers they represent when deciding whether to allow the change through this mechanism.

11.34 The CAA would normally use this determination mechanism where it could be shown that too few airlines had engaged with the development of the proposal to meet the criteria for automatic change, but a significant number of those who had engaged were in agreement and the CAA considered it would be in the interests of end users to make the change. In some cases, such as significant changes or where there was little support from the airline community, the CAA may choose to use the process in section 22 of the Act to make modifications which may take longer but would allow the right of appeal.

11.35 The CAA also considers that its proposal to limit the period in which self-modification can be made to every six months does not give enough flexibility and is therefore revising its proposal to once every three months.

Rebates

Issue

11.36 For Q5, HAL was required to pay rebates to the airlines for performance lower than the SQR standards. The proportion of airport charges liable to be rebated to the airlines was around 7% per year in total. HAL and the airlines agreed that this was broadly the right level. However, the airlines' view was based on the removal of bonuses payable to HAL when it attained a certain level of service.

11.37 The Q5 rebates are 'knife-edge' rather than 'sliding scale'. To support a focus by HAL on continuous improvement, the CAA sees merit in a sliding scale approach, especially if per passenger metrics are adopted for security queues. However, amongst other factors, this must be balanced with the added complexity this would introduce.

CAA's initial proposals

11.38 For the purpose of the initial proposals, the CAA maintained a similar approach to Q5, which was to put 7% of airport charges at risk per year as rebates, albeit with potentially different weightings of rebates within the terminals where different services are provided (e.g. PCA and track transit). The CAA intended to consider the merits of a sliding scale approach further before its final proposals, and invited stakeholders' comments in that respect.

Stakeholder views

11.39 The CAA received three responses commenting on the proportion of airport charges to be at risk.

- BA was in favour of the current structure of the scheme and the current rebate level (7%), with the proviso that bonuses were not included in the scheme. It opposed the sliding scale approach to rebates as this would introduce the concept of 'acceptable failure', create uncertainty in the delivery of service levels that airline operations require, and cause regulatory complexity. A sliding scale approach would allow HAL to self-determine a trade-off between cost and service delivery to the potential detriment of the passenger experience. The full rebate amount should be payable when the service standard was not met.

- HAL supported the CAA's proposal to maintain the total amount of airport charges at risk at 7%, and broadly concurred with allocations proposed. However, it did not agree with the CAA proposal that rebates should apply to the first six months of service failure in a regulatory year, and believed that annual rebates should be divided equally across all the months in a year (i.e. at a lower level per month of failure). It proposed that a sliding scale mechanism for rebates should be applied to passenger security queuing.
- The LACC considered that rebates were an important feature in the SQR scheme. The level of 7% of airport charges at risk for Q5 was broadly correct. The airlines strongly opposed the sliding scale mechanism as this would add complexity without benefiting passengers, and would allow HAL to trade off between the cost of service and level of rebates. The airlines stated that the CAA should ensure that HAL is not making provision for rebate payments within cost projections, and agreed that the six-monthly payment schedule in Q5 is appropriate. The airlines expressed that they did not want to receive rebates, but would rather receive the level the service they expected, because the levels of the rebates were not enough to compensate for the costs airlines would incur in making up for HAL's service failures.

CAA's final proposals

11.40 Given the success of the scheme over Q5 and agreement amongst stakeholders, the CAA proposes that the proportion of airport charges at risk should be maintained at 7% for Q6, and that rebates should apply to the first six months of service failure in any element in a regulatory year. The amount of rebate for each service failure is thus one-sixth of the maximum annual rebate, rather than one-twelfth if they were spread evenly.

11.41 After considering the responses it received, the CAA notes the possibility of an undesirable trade-off of service quality and cost if a sliding scale approach is put in place, and proposes to maintain the Q5 arrangement on rebate calculation.

Bonuses

Issue

11.42 Bonuses were introduced by the CAA in Q5 as an incentive to encourage HAL to make ongoing service quality improvements, but particularly focused on encouraging a common minimum baseline standard across all terminals. Bonuses take the form of increased airport charges to the airlines if service levels exceed the target standard across all terminals in the airport. Therefore, bonuses cannot be earned if one or more terminals do not meet the standard. Bonuses take the form of a sliding scale up to a limit on the relevant metric. Figure 11.4 shows the bonus elements and their respective bonus potentials in the SQR. Over Q5, HAL has earned an increased amount of bonuses as its performance has improved.

Figure 11.4 SQR bonus elements in Q5

Bonus element		% of airport charges
Passenger satisfaction elements (QSM)	Departure lounge seating availability	0.36%
	Cleanliness	0.36%
	Way-finding	0.36%
	Flight information	0.36%
Passenger operational elements	PSE (general)	0.40%
	Arrivals reclaim (baggage carousels)	0.40%
Total		2.24%

Source: CAA

CAA's initial proposals

11.43 The CAA proposed to remove bonuses in Q6 on PSE (general) and arrivals reclaim (baggage carousels). Both of these measures had a Q5 target of 99% time availability, which HAL has consistently been able to attain. The CAA did not consider that bonuses are appropriate to incentivise even higher levels of service delivery, given the potential costs that could be involved in a standard approaching 100%.

11.44 The effect of removing bonuses from these two elements would be to reduce the bonus pot from 2.24% to 1.44%. The CAA did not reallocate this bonus potential to other elements, but noted it had a number of options:

- at the start of Q6, reallocate bonuses to security standards, once performance achieved exceeds, for example, 99% of passengers processed within 5 minutes for both central and transfer search;
- at the start of Q6, apply this bonus potential to other elements;
- remove the bonus potential entirely (perhaps by making an equivalent reduction in the level of rebates available to result in a similar balance in the package of incentives to Q5); or
- during the course of Q6, redeploy this bonus potential into a discretionary pot that could be allocated by the CAA for enhancements in HAL's performance that are revealed as necessary after the price control is set.

Stakeholder views

11.45 The CAA received three responses commenting on bonuses in the QSM framework.

- BA regarded bonuses contrary to the purpose of SQR and objected to their inclusion in the scheme. BA considered it inappropriate for HAL to receive bonuses for achieving the levels of service that it has been paid to deliver. BA stated that bonuses encourage HAL to under-forecast achievable performance and over-forecast opex in order to ensure that they achieve bonuses, and give the appearance of over-achieving against targets.
- HAL supported the CAA's initial proposals to retain bonuses on the QSM elements within SQR scheme, and to remove bonus elements from arrivals reclaim (baggage carousels) and PSE (general). However, it considered that the total level of bonuses should be sufficient to incentivise good performance, and that the total levels of bonuses should be increased to 3% to provide a better balance between potential rebates and bonuses. HAL argued that a bonus should be introduced to direct security (1.00%) and transfer security (0.5%) by individual terminal on a monthly basis, so that it could be incentivised to deliver.
- The LACC welcomed the removal of bonuses from PSE (general) and arrivals reclaim (baggage carousel) availability, and continued to believe that bonuses should not be retained. It supported the reduction in scope and maximum level of bonuses, and that the difference between the Q5 and proposed Q6 levels of bonus should

not be reallocated to any other dimension of service provision from HAL. The LACC opposed the level of rebates being lowered in light of the lower bonus level.

CAA's final proposals

11.46 After considering the responses it received, the CAA takes the view that bonuses should provide an incentive to attain a common minimum baseline standard across all terminals, and proposes that for Q6, a bonus of 0.36% should be allocated to each QSM element.

11.47 The CAA considers that it may not be appropriate to allocate bonuses to direct and transfer security, as this may incentivise HAL to move passengers through security inappropriately quickly. As no other SQRB element has been identified as a potential bonus area, the CAA proposes to keep the maximum bonus at 1.44% from the start of Q6.

11.48 The CAA recognises that within the duration of the price control period passengers' priorities may change. There may be areas in which bonuses become an appropriate and effective tool to incentivise performance. Accordingly, the CAA proposes to retain the possibility during Q6 to allocate bonuses equivalent to an additional maximum 0.8% of airport charges. Before doing so, the CAA would consult with stakeholders about the merits of any proposal and there should be no presumption that the CAA will allocate part or all of these unallocated bonuses. Any possible reallocation of bonuses will require licence modification as specified in section 22 of the Act.

Passenger satisfaction – Wi-fi

Issue

11.49 Following the publication of the initial proposals, the CAA requested views on this issue in its letter to stakeholders dated 31 May 2013. Recognising the importance of Wi-fi in optimising information provision to passengers, the CAA considered ways to incentivise Wi-fi provision at the airport, possibly through a published monthly measure. It invited Stakeholder views on this area after publication of the initial proposals.

CAA's initial proposals

11.50 The CAA did not include a service standard for Wi-fi provision in its initial proposals.

Stakeholder views

11.51 The CAA received three responses commenting on service standards for Wi-fi provision.

- BA did not believe that the currently limited user group of the Wi-fi service warranted its inclusion in the service quality scheme at this time. It opposed having any rebates or bonuses attached to this element, as it considered that as this is a revenue-generating service in its own right, HAL already has an incentive to provide and improve it. It suggested that a low QSM score may reflect a lack of passenger feedback on Wi-fi rather than insufficient service provision. Therefore, if the proposed Wi-fi measure is to be reported, it should be based on quantitative data. Wi-fi should not be included as a reported measure because free Wi-fi has been provided in June 2013. Wi-fi is a commercial service proposition and is not sufficiently important to passengers.
- HAL considered the inclusion of a Wi-fi measure unreasonable and disproportionate.
- The LACC opposed an SQR standard for Wi-fi as it is a commercial offering from HAL which it has much incentive to keep operational. Wi-fi therefore did not need to have an SQR metric attached to it.

CAA's final proposals

11.52 The CAA has taken the views of stakeholders and the CAA's Consumer Panel into consideration. Given the importance of information to the passengers, particularly in times of disruption, and the likely increase in passengers' usage of Wi-fi devices, the CAA still views it necessary to incentivise provision of free Wi-fi at Heathrow. The CAA therefore proposes the introduction of a new published measure on passengers' satisfaction on Wi-fi provision at Heathrow. The CAA considers that the addition of a published Wi-fi measure should encourage HAL to provide Wi-fi to a level that satisfies passengers.

Central and transfer search – design of interim and automated measurement metrics

Issue

11.53 For Q5, the standards for central security and transfer search were

based on queue time measurements taken manually once every 15 minutes. Both HAL and the airlines preferred measurement at a per-passenger level rather than using a single queue time sample from each 15-minute time period. The CAA supported this approach on the basis that it represented a more consistent and reliable commitment to all passengers, whilst simplifying the current standards.

11.54 Whilst both parties agreed that ultimately a move towards a fully automated per passenger measure was desirable, such a metric would require an automated measurement system in each terminal. At present, the technology to allow for this has not been installed, nor have costs been included in HAL's FBP for such automation. The CAA recognised that even using an automated system, measurements made would likely be on a sampled basis rather than for 100% of passengers, albeit a greater sample than one passenger every 15 minutes.

CAA's initial proposals

11.55 In the initial proposals, the CAA set the standard on an estimated per passenger basis. To acknowledge that an automated solution had yet to be fully planned for implementation in Q6, the CAA proposed that interim measurements would be achieved through a sample of passengers more representative of the population by time of day. This measure would aim to reflect the variability of passenger throughput and better estimate the performance per passenger. For example, a possible metric might be based on queue times measured once every 15 minutes with results weighted differently by peak and off-peak hours. The exact metric would be subject to agreement between HAL and terminal AOCs.

Stakeholder views

11.56 The CAA received the following responses commenting on the interim and automated measurement metrics of central and transfer search.

- BA supported the implementation of automated measurement with full consultation on areas such as input assumptions, method of measurement, calibration and algorithms used. It urged the CAA to balance HAL's requests for additional time for introducing full automation with passenger benefits.

- HAL considered an interim solution to queue measurement an unnecessary complication.
- The LACC supported the CAA's proposals of a per-passenger metric based on 99% of passengers' experience, and acknowledged the need for a robust automated measurement system. It stated that the new measure should avoid the averaging of queue times during off-peak and peak periods.

CAA's final proposals

Design of interim metric

11.57 Subsequent to the publication of the initial proposals, the CAA has reviewed how such a weighted metric might work in practice and has identified a number of issues:

- variation in passenger throughput both between terminals and over time both across the day, by day and by season means it is not possible to identify consistent peak periods in a simplistic fashion;
- the forthcoming opening of Terminal 2 will alter any patterns in throughput again; and
- the weighting of different quarter hours could generate unintended consequences (whereby peak hour measurements are considered 'more important' than others) and is not a sufficient substitute for the maintenance of a consistent sampling proportion.

11.58 Bearing in mind these concerns, the CAA does not feel that a modification of the current formulation of the metric would benefit passengers overall. However, it does consider it to be sub-optimal as compared with an automated system which would allow for per-passenger measures to be made robustly and a consistent sampling proportion to be maintained. The CAA thus encourages HAL to minimise the period for which reliance will be placed on this interim metric.

Design of automated measurement metric

11.59 The CAA discussed the introduction of a per-passenger metric to be introduced later in Q6 in its letter to stakeholders dated 31 May 2013. As written, the formula in the draft condition allows the performance in the month to be subdivided into smaller periods and performance weighted by passsenger throughput in those periods.

11.60 A rebate would be triggered when a weighted average of 1% of passengers or more queued for 10 minutes or more. The introduction of an automated queue measurement system is intended to provide a step-change in the level of data available, and the system implemented should allow for full time-stamping of data; and the potential to help identify any patterns in performance over time and to review performance at a detailed and granular level.

Progress of introducing automated queue measurement

11.61 The CAA proposes that the introduction of automated queue measurement follow the progress set out in figure 11.5. The CAA strongly encourages HAL in the work it is doing to implement such a system at both Terminal 5, and in the other terminals in phases. The CAA expects the system to be operational and capable of delivering robust performance measurement at a per-passenger level by 31 March 2015, if not before.

Figure 11.5 CAA's proposed progress on automated queue measurements

Date	Progress
Up to 31 March 2014	Maintain Q5 metrics and standards for central search and transfer search
1 April 2014	Harmonisation of central search (interim) and transfer search (interim) standards [note]
By 30 June 2014	HAL to publish the first progress report on automated queue time measurements – such reports are to be continue quarterly until the introduction of the technology
1 April 2015	Switch from central search (interim) and transfer search (interim) to per passenger metrics for central search and transfer search [note]

Source: CAA

Note: see section 'Central and transfer search – service standards'

11.62 To ensure full transparency as to progress of the project, the CAA proposes that HAL publish quarterly updates with forecast implementation dates on the SQRB pages of its website, and provide such updates to the CAA and terminal AOCs. The first progress update will be due by the end of June 2014.

Central and transfer search – service standards

Issue

11.63 Figure 11.6 below sets out the standards for central search and

transfer search for Q5.

Figure 11.6: Central search and transfer search standards for Q5

Element	Standard
Central search	95% of 15-minute queue time measurements less than 5 minutes
	99% of 15-minute queue time measurements less than or equal to 10 minutes
Transfer search	95% of 15-minute queue time measurements less than 10 minutes

Source: CAA

11.64 For Q6, the airlines proposed harmonised, but materially higher, standards for central and transfer search than in Q5; moving from a measure of 95% of 15-minute measurements within 5 minutes' queue time, to 95% of passengers within 5 minutes.

11.65 HAL proposed a harmonised standard of 99% of 15-minute measurements within 10 minutes' queue time, as it considered a queue up to 10 minutes to be satisfactory to the majority of passengers. HAL indicated in its FBP that the proposal was broadly equivalent to 99% of passengers passing through security within 10 minutes, and considered this proposal was opex and capex neutral, as compared with Q5.

11.66 The per-passenger automated queue measurement metric, whilst moving away from a 5-minute queue time target for central search, increased the Q5 standard in two ways – first by moving to a per-passenger measure rather than a 'time slice' measure, and second, by increasing the proportion of transfer passengers targeted from 95% to 99%. It therefore helps focus on the 'tail' of the distribution, increasing the proportion of passengers covered by the metric.

CAA's initial proposals

11.67 In its initial proposals, the CAA proposed to set the standard at 99% of passengers queuing less than 10 minutes for both central and transfer search when the automated queue measurement technology is put in place.

Stakeholder views

11.68 The CAA received the following responses containing substantive comments on the security queuing service level.

- BA agreed with the principle of a harmonised measure but considered a single 10-minute standard for security insufficiently demanding. BA stated that this would be highly detrimental to the passenger, as well as a retrograde step in service offering. BA highlighted that it also had the potential to severely impact airline operations affecting punctuality. BA proposed that the CAA put in place a harmonised target of 99% in 8 minutes to be rolled out as existing HAL security capital projects were completed by the end of Q6.
- HAL responded that a 10-minute standard was acceptable to passengers, and therefore supported the CAA's initial proposals to set the same standard for direct and transfer passengers of 99% of passengers waiting less than 10 minutes. However, HAL noted that additional security capacity in Terminals 3 and 5 would be required in order to meet the standard.
- The LACC, while agreeing on a harmonised queuing standard for direct and transfer passengers, considered the 10-minute target for 99% of passengers inadequate, and viewed that HAL should be able to achieve greater throughput at lower cost. The LACC also indicated that HAL had not adequately demonstrated the costs and throughput modelling on security queues, and that HAL had indicated it was no longer engaging with the airlines on Q6 issues. Therefore, the issue could not be progressed by the airlines and they looked to the CAA to require HAL to engage on these issues.

CAA's final proposals

Standards of the interim metric

11.69 The CAA proposes the following interim security standards for Q6 until the introduction of the automated queue measurement technology.

Figure 11.7: CAA proposed interim security standards for Q6

Element	Standard
Central search (interim)	95% of 15-minute queue time measurements less than 5 minutes
	99% of 15-minute queue time measurements less than 10 minutes
Transfer search (interim)	95% of 15-minute queue time measurements less than 5 minutes
	99% of 15-minute queue time measurements less than 10 minutes

Source: CAA

11.70 The CAA notes that harmonisation of central search and transfer search standards is widely supported. Therefore, it proposes that such harmonisation takes place at the beginning of Q6, by way of extending the central search (interim) standards to transfer search.

11.71 The CAA further proposes that a minor change be made to the interim security standards. The standards should be 99% of 15-minute queue time measurements 'less than 10 minutes' rather than 'less than or equal to 10 minutes'.

11.72 The CAA believes that this minor change can achieve consistency across all the security standards in the SQRB scheme, and satisfy the expectation of 86% of departing passengers and 89% of connecting passengers, as supported by the CAA's passenger research[79] results shown below.

Figure 11.8: Maximum security queuing time that departing and connecting passengers at Heathrow think reasonable

Minutes	<10	10	11 –15	15 – 60	Total
Departing (n = 495)	14%	31%	23%	31%	100%
Connecting (n = 557)	11%	31%	24%	35%	100%

Source: CAA passenger research

Note: A relatively high proportion of passengers responded in the survey expressed that a maximum security queuing time of 10 minutes exactly was reasonable. Therefore, the 10-minute queuing time was set out separately to give a clear picture of passengers' expectations.

Standards of the automated measurement metric

11.73 The CAA proposes that the standard for central and transfer search should be set at 99% of passengers queuing less than 10 minutes. In meeting these security standards, HAL must not risk meeting its other legal commitments especially in relation to safety and security.

Central and transfer search – definition of queues

Issue

11.74 In Q5, queue length was defined as "the time taken for a passenger to move from the back of the security queue to the start of the roller-bed at the front of the X-ray machine." Stakeholders expressed views on the definition of queues.

[79] CAA, May 2013, CAA passenger research: satisfaction with the airport experience: Heathrow, Gatwick and Stansted, www.caa.co.uk/cap1044

Stakeholder views

11.75 The CAA received the following responses regarding the definition of queues.

- BA requested the CAA to clarify interpretation of search measure at Terminal 5 as the current interpretation gives HAL an unfair benefit. It called for the inclusion of unimpeded walk times in the queue time measurements, and agreements and regular updates between HAL and the airlines on the unimpeded walk times.
- The LACC stated that the existing security search targets failed to capture the actual passenger experience. The CAA should set a consistent definition of finish point for all search lanes at Heathrow, to provide service baseline across Heathrow. The CAA should set the finish point at the archway metal detector so that the actual queuing time can be recorded. The LACC also considered it important to have an accurate calibration of the unimpeded walk times, and urged the CAA to decide on the maximum length of waiting maze beyond which passengers should not be expected to queue. Setting a specific finish point would provide equivalence across Heathrow regardless of the design or length of roller-beds in each of the terminals.

CAA's final proposals

11.76 The CAA considers that the performance standard should apply on security queuing times and not security processes. It therefore considers it appropriate to set the finish point of security queues at the start of the roller-bed where the security process starts. The CAA also considers that a standard on queuing times without restrictions on the length of the security maze should be sufficient to ensure good passenger experience.

11.77 Therefore, the CAA proposes to retain the Q5 definition of security queues for Q6 until the introduction of the automated queue measurement technology. Upon introduction of the technology, the definition is to be agreed between HAL, the airlines and the CAA.

11.78 The CAA agrees that unimpeded walk times is an area for further consideration for Q6, and encourages HAL and the airlines to come to an agreement prior to the start of Q6.

Central and transfer search – other issues

Issue

11.79 Some issues raised by stakeholders on central security and transfer search were not covered in the CAA's initial proposals. These are set out under 'stakeholder views' below.

Stakeholder views

11.80 The CAA received the following comments:

- BA considered it necessary to have a measure to capture the total passenger journey times in situations where passengers were redirected before reaching the security queues. For example, stopping transfer passengers at the bottom of the escalators should be counted as a failure of the service standard.
- HAL believed that exclusion to the security service standard should apply to family or assistance lanes, and applied for a limited period after significant changes in government requirements.
- The LACC noted that the fast track security queues were paid for separately by airlines and should not be included in security queue time measures.

CAA's final proposals

11.81 The CAA encourages HAL and the airlines to work collaboratively on enhancing the passenger experience, and in particular agree on the circumstances under which redirection of passengers should take place. The CAA considers that redirection should only happen in exceptional circumstances (e.g. for health and safety reasons), and should never be used as a measure to meet security queuing time targets.

11.82 The CAA considers that every passenger should be treated equally, therefore proposes that no exclusion be applied to family or assistance lanes. HAL must make sure that these lanes are clearly signposted, and passengers who do not need special assistance will not be diverted to these lanes.

11.83 The CAA agrees with the LACC's opinion on fast track lanes. HAL must ensure that performance of these lanes should not be included in the security queue time measure if they are paid for separately by

the airlines.

Performance of third parties

Issue

11.84 HAL's January FBP suggested reporting performance (with no targets or financial incentives) of the following:

- UK Border Force (UKBF);
- companies providing baggage services; and
- airline punctuality.

11.85 The airlines disagreed that HAL should report third party performance and that the SQR should only relate to HAL as the regulated company.

11.86 The CAA saw merit, outside of the SQR, in HAL aiding transparency for passengers and other stakeholders by publishing information related to third parties operating at Heathrow. The CAA welcomed this initiative, especially if HAL and relevant third parties can develop it voluntarily in passengers' interests.

CAA's initial proposals

11.87 Under section 83 of the Act, the CAA has a new statutory duty to provide information for the purpose of assisting users of air transport services to compare services and facilities provided by the industry. Under section 84 of the Act the CAA has been given a further duty to provide information relating to the environmental effects of civil aviation.

11.88 The CAA has been developing its policy on how it intends to respond to these new duties and launched a consultation on Better Information in May 2013, which closed at the end of August 2013[80].

Stakeholder views

11.89 The CAA received two responses to its initial proposals commenting on the publication of third parties' performance.

- HAL disagreed with the CAA's initial proposals for not including publication of third party performance in the service quality scheme.

80 Details of the consultation can be found at http://www.caa.co.uk/default.aspx?catid=2608.

- The LACC did not consider it appropriate for the airlines to be required to achieve or report on their quality performance as they are in active competition at Heathrow and are not regulated companies. Publication of performance should only apply to monopolist service providers (e.g. UKBF) and regulated companies (e.g. HAL).

CAA's final proposals

11.90 The CAA is keen to encourage a collaborative working environment at Heathrow whereby airlines and other third parties recognise the benefits to passengers of transparent performance information, and work together on delivering them. However, the airport licence cannot lawfully be used to impose obligations on third parties. Therefore, where the provision of information about services provided by third parties is concerned, the CAA considers that this should be addressed through its information duty.

11.91 The CAA is currently considering the responses to its Better Information consultation. Some further investigative work is also being carried out with major UK airports to better understand options for data provision in the area of airline reliability (e.g. cancellations).

11.92 A final Statement of Policy with regard to the CAA's duties and powers to provide information to users of air transport is due to be published by the end of 2013. Alongside this, next steps for further engagement and the development of proposals for specific information areas will be set out.

HAL/airline service charter

Issue

11.93 HAL proposed that only those elements of the SQR related to the passenger perception (i.e. QSM) measures, central and transfer security should remain in the SQR scheme for Q6, with the other elements transferred to a separate, commercially negotiated service charter. The airlines did not believe that HAL's proposal is either viable or appropriate.

CAA's initial proposals

11.94 The CAA supported developing more mature commercially driven governance vehicles for some airport operator/airline transactions,

reflecting what is commonly seen at competitive airports. However, in the short term, and especially given HAL's SMP, the CAA did not consider that it is in passengers' interests to remove large elements of the current service quality protection to a voluntary service charter.

Stakeholder views

11.95 The CAA received two responses commenting on the proposed service charter.

- HAL considered that a service charter should be included to facilitate a more commercial and flexible approach to service quality.
- The LACC did not support the proposed service charter due to HAL's history of using its SMP in negotiations with the airlines. It supported the continuation of the SQR for Q6.

CAA's final proposals

11.96 The CAA acknowledges that a service charter could help to facilitate flexible commercial solutions on service quality across the whole airport community. The CAA has supported, and continues to support, the creation of a charter that sets out clearly respective roles in supporting customer experience, and creates mutual accountability to deliver these roles. However, the airport licence is a not suitable vehicle for ensuring airline standards, given the accountability for meeting the conditions of the licence lies with the airport. Therefore, the CAA does not feel it appropriate to include a service charter within the licence.

11.97 For Q6, the CAA considers that the proposed SQRB is in the best interests of passengers. Nevertheless, the CAA encourages the airport community to work together in the interests of passengers to consider all aspects of the passenger experience, not merely those identified and regulated within the confines of the SQRB scheme. Where commercial arrangements can help to deliver these benefits, the CAA supports such initiatives.

CAA's final proposals

11.98 The CAA's final proposals for the SQRB scheme set out in this

chapter and Appendix C are incorporated in Condition D.1 (and the associated Schedule 1 to Condition D.1) in the draft licence, which is set out in Appendix A in this document.

11.99 The Q6 scheme in the CAA's final proposals is broadly based on the Q5 scheme, with the following improvements:

- the inclusion of a self-modification provision allowing the airport operator and airlines to make immediate changes to the scheme where both sides agree;
- the removal of bonuses in areas which HAL has consistently outperformed;
- a proposed timeline on automated queue measurement for central and transfer search;
- additional reporting requirements, in particular on passenger satisfaction with Wi-fi and security queuing (covered in Appendix C);
- an improved metric for control post search (covered in Appendix C); and
- a rationalised metric of and pier-served stand usage (covered in Appendix C).

CHAPTER 12

A licence for HAL

Introduction and structure of chapter

12.1 In its 'minded to' position on Test C of the MPT, published in May 2013, the CAA considered that, for users of air transport services, the benefits of regulating the relevant operator by means of a licence are likely to outweigh the adverse effects. This chapter discusses the structure and content of the CAA's final proposals[81] for HAL's licence. It consists of the following sections:

- structure of HAL's Licence;
- final Proposals for Licence Condition;
- other Licence Conditions;
- other issues for future consideration;
- summary of final proposals; and
- HAL's Licence.

12.2 In reaching its final proposals, the CAA has considered Stakeholder views in response to its proposed licence conditions.[82] Where appropriate, the CAA has also taken into account responses to other relevant consultations[83] for consistency.

Structure of HAL's Licence

12.3 HAL's licence is set out in Appendix A of this document. It consists of the following parts:

- Part A: Scope and Interpretation.

[81] Earlier chapters set out the final proposals relating to price control and service quality.

[82] As set out in its initial proposals (chapters 12 and 15) as well as those conditions that the CAA considered to be necessary or expedient having regard to its duties under the Act.

[83] Such as responses to the Initial Proposals for GAL and STAL in relation to Revocation Conditions.

- Part B: General Conditions (Payment of fees and licence revocation).
- Part C: Price Control Conditions.
- Part D: Service Quality Conditions.
- Part E: Financial Conditions.
- Part F: Consultation Conditions.

Final Proposals for Licence Conditions

12.4 The CAA received five substantive responses[84] to its proposed licence conditions. Please note that some of the conditions proposed under 'other licence conditions' in the initial proposals have been re-categorised or not taken forward. These are discussed at the end of this chapter.

Part A: Scope and Interpretation

CAA's initial proposals

12.5 This part of the draft licence provided details of the airport, the airport operator, and the airport area for which the licence is granted. It also specified the date on which the licence comes into force, and its duration, as well as details on interpreting the licence.

12.6 In the initial proposals, the CAA said that the airport area for which the licence would be granted would be based on those areas where HAL is the operator (that is, has overall control of the area) and has market power in that area. In its May 2013 letter, the CAA also considered whether the licence should go wider than the area covered by the market power determination.

12.7 In determining the airport area the CAA proposed to use the definitions of airport under section 66 of the Act, the qualifying information in section 67 and the definition of airport operation

[84] These are: HAL, Virgin, BA, the Heathrow Airline Community (AOC and LACC) and the Independent Airport Parking Association (IAPA).

services (AOS) in section 68 as a starting point. The CAA then proposed to consider whether HAL provides AOS at the facilities listed in section 66 and whether HAL has overall responsibility for the management of the facilities listed based on section 9(4)[85] of the Act.

Stakeholder views

12.8 HAL considered that it typically owns the facilities at the airport used in the provision of airport operation services described in section 68, but that the degree of "full management control" depends on the lease in question.[86] It also accepted general responsibility for the airport's overall development for aviation safety and security but in many cases does not control the types of services, prices charged nor the quality.[87] In particular it considered that, in line with section 9(4) of the Act, it was not the operator of the area leased by the fuel farm operator and the hydrant system operator.

12.9 The LACC noted that the airport area would be an important consideration in that it "underpins" the rest of the licence.

CAA's final proposals

12.10 The CAA has considered the issue of the airport area in more detail. It considers that, in line with its duties under section 1 of the Act to carry out its functions in a targeted and proportionate manner, the airport area should be linked to the scope of the relevant market and limited to the area in which HAL is found to have substantial market power.

12.11 As the CAA has not yet published the final Market Power Determination (MPD) for HAL, the CAA is basing the airport area in the draft licence included in Appendix A of this document on the area considered in its 'minded to' position. This may change, therefore, depending on the final MPD.

12.12 The CAA's 'minded to' position was that HAL has substantial market power in the market for airport operation services for full service

[85] These are types of services, prices charged, quality of services, access and development.

[86] For instance the eastern maintenance base is leased to BA on a long term lease, and cargo facilities are divested to 3rd parties.

[87] For instance it has a degree of management control of the fuel hydrant system in that it provides the land, and receives rent, but has no control over the provision of fuel supply and storage infrastructure.

carriers and associated feeder traffic and that these were delivered from the core area of the airport.[88] The CAA therefore currently proposes to include in the airport area covered by the licence, all those parts of the core area of the airport, unless it can show, in line with matters set out in section 9(4) of the Act, that it is not the operator of a discrete area. HAL needs to demonstrate that it does not have control over access to that area, its development or the type and quality of services provided there or the prices charged.

12.13 Under section 18 of the Act, the CAA may include other such conditions as it considers necessary or expedient having regard to its duties under section 1, as well as conditions it considers necessary or expedient to guard against the risk of abuse of the substantial market power found in the MPD. Under section 21(1)(f) it may also include conditions containing provisions relating to activities carried on outside the airport area for which the licence is granted. These give the CAA the power to go wider than the relevant market and the airport area when including conditions in the licence, such as basing the price control on a single-till RAB-based approach as discussed in chapter 2 of this document.

12.14 In response to HAL's comments regarding the fuel storage and hydrant facilities, the CAA notes that, under the supplementary definition of airport in section 67 of the Act, the servicing of aircraft includes the supply of fuel. If the MPD includes the areas used for servicing aircraft, this could include the fuel farm and hydrant areas, and so these could be included in the airport area if HAL is considered to be the operator of this particular area. The CAA therefore sought further information from HAL to confirm whether it held 'overall responsibility for the management' of the fuel facilities according to the matters listed in section 9(4) and so should be included in the licence area.

12.15 The CAA has reviewed the terms of the leases for the fuel facilities and its initial views are that HAL does not have overall responsibility for the management of these facilities for the following reasons:

[88] These are defined in section 5(4) of the Act as the land, buildings and other structures used for the purposes of the landing, taking off, manoeuvring, parking and servicing of aircraft at the airport, passenger terminals and the cargo processing areas.

- it has very limited control over the types of services provided in the area (the facilities are limited to be used for fuel storage and supply);
- it has no control over the prices for services that are charged for those services;
- it has no control over the quality of services provided in the area;
- it controls access to the area to the extent that it is part of the airport and personnel must pass through other parts of the airport to access the area, but it has very limited rights of entry to the area; and
- it has limited control over the development of the area.

12.16 The CAA's initial view therefore is that HAL is not the operator of the area covered by the fuel farms and hydrant systems and therefore the airport area in the licence will not include the fuel facilities. This view may change in light of the CAA's position in its final MPD for HAL. The CAA also welcomes Stakeholder views.

12.17 The CAA has therefore specified in the draft licence that the airport area consists of:

- the land, buildings and other structures used for the purposes of the landing, taking off, manoeuvring, parking and servicing of aircraft at the airport excluding the fuel farm and fuel hydrant facilities;
- the passenger terminals; and
- the cargo processing areas.

Part B: General Conditions

Payment of fees

CAA's initial proposals

12.18 As in other regulated sectors, the Act allows the CAA to require the licence holder to pay charges to the CAA in respect of its functions under Chapter 1 of the Act. In addition, the CAA has general powers to determine charges under a scheme or regulations made under section 11 of the Civil Aviation Act 1982 (the 1982 Act). Also as in

other regulated sectors, payment of fees would be enforceable using civil sanctions as well as the enforcement powers in the Act.

Stakeholder views

12.19 The CAA received one comment on the condition on fees. Virgin supported the payment of fees condition and the proposals to use civil sanctions as well as the enforcement powers under the Act.

CAA's final proposals

12.20 The CAA has not received any evidence following the initial proposals to suggest the payment of fees condition needs to be changed. Therefore, the CAA proposes to continue to rely on the current scheme set up under the 1982 Act to determine regulatory charges while, through the licence, placing an obligation on HAL to pay these charges when the licence comes into force and whilst it continues in force. Under the 1982 Act, the CAA has an obligation, before making a charging scheme, to consult persons affected by the scheme and the Secretary of State.

Licence revocation

CAA's initial proposals

12.21 Revocation is the ultimate sanction for a licence breach by a regulated company and should be typically used as a last resort when all other channels have been exhausted. The licence must include the grounds on which the licence can be revoked, and specify that revocation must be in accordance with procedures set out in section 48 of the Act. The CAA proposed that the grounds on which it could revoke HAL's licence should be as follows.

- Where the licence is no longer required, such as where the Licensee requests or agrees to revocation, where the Licensee is no longer the operator of all of the airport area, or where either the airport and/or airport area is no longer dominant.
- Where the Licensee has materially failed to comply with regulatory requirements. For instance:

- Failure to comply with an enforcement order[89] or to pay a penalty[90] (following any appeal proceedings under the Act and allowing at least 3 months for the Licensee to comply before starting revocation proceedings under section 48 of the Act);
- Failure to comply with relevant orders made under the Competition Act 1998 (CA98) or the Enterprise Act 2002 (EA02);[91]

- Failure to pay its fees under Condition 1;[92] or
- Failures in supplying information in accordance with the Act.

Stakeholder views

12.22 The CAA received three responses containing comments on revocation provisions in HAL's licence.

12.23 HAL considered that revocation would directly conflict with the CAA's primary duty under the Act and that there was no evidence that it was proportionate or necessary. It also expressed concern over using the licence to enforce other statutes[93] thereby exposing it to 'double jeopardy' for breaches of those Acts, which it considered should be enforced by means of their own enforcement provisions.

12.24 The LACC responded that allowing the Licensee up to 6 months for the payment of penalty fees was generous, and that a period of 3 months with a further month at the CAA's discretion was more appropriate. HAL should have to account publicly for any lack of payment and the level of implementation of actions required of it by the CAA to address the cause of incurring a penalty.

12.25 Virgin considered that revocation should be used as a last resort. Virgin also considered that revocation on its own would not be enough

[89] Within the meaning of section 33 of the Act, or an urgent enforcement order within the meaning of sections 35 and 36 of the Act.

[90] Within the meaning of sections 39, 40, 51 or 52 of the Act.

[91] The CAA proposed that it is proportionate for the competition enforcement route to have the same ultimate sanction as the route in the Act.

[92] Condition 2.1(e) of the initial proposals' Draft Licence Conditions stated that the CAA may revoke the licence if any amount payable under Condition 1 of the licence is unpaid three months after it becomes due and such failure is not rectified to the satisfaction of the CAA within three months after the CAA has given notice of such failure to the licensee.

[93] The Competition Act/Enterprise Act that already have their own enforcement provisions.

to compel an airport operator to close the airport or cease operations and the CAA needed to consider carefully what other steps may be required.

12.26 GAL commented in response to the consultation on its proposed licence that failure to comply with an order made under competition law should not be grounds for revocation; it considered that it should not be subject to additional and enhanced remedies that others subject to those Acts did not face. It considered that revocation for non-payment of fees or non-payment of penalty was also disproportionate as the CAA has enough other remedies to ensure payment.

CAA's final proposals

12.27 The CAA is required under section 17(4) of the Act to include provisions about the circumstances in which the licence may be revoked. It agrees that licence revocation is a serious sanction as the prohibition on charging in section 3 of the Act means it would not be lawful for HAL to charge for airport operation services at the airport if it has no licence. In all likelihood, this would mean that HAL would have to cease operations. Other than in extreme circumstances, the CAA does not consider that this is likely to be in the best interests of passengers and cargo owners, so there should be several checks and opportunities for HAL to change its behaviour before the CAA takes such exceptional action.

12.28 The CAA agrees with HAL that placing additional sanctions over and above those already included in the CA98 and EA02 Acts would be unduly onerous and unfair in relation to other companies subject to those Acts. In addition, the CAA's initial view that there should be similar ultimate sanctions for failures to comply with orders under the Act and the CA98 Act[94] does not apply to the EA02 Act in the same way. Therefore, the CAA proposes not to include failure to comply with orders made under the CA98 and EA02 Acts as grounds for revocation.

12.29 The CAA also considers that the inclusion of non-payment of fees as specific grounds for revocation is repetitive and unnecessary as

[94] This is because of its concurrency powers and its obligation to consider whether to use the CA98 Act at all stages of an investigation.

payment of fees is already a separate condition in the licence. Non-payment of fees would therefore not of itself trigger a revocation process but revocation could follow from failure to comply with an enforcement order and/or non-payment of a penalty. For clarity, the CAA has also redrafted the provision for revoking the licence on the grounds of failure to comply with an enforcement order or a penalty; this does not change the effect of the provision.

12.30 The CAA considers it is not necessary to include the imposition of a penalty by the CAA under section 52 in the list of grounds for revocation as there are already sufficient sanctions in the Act. However, failure to pay a penalty issued under section 52 would remain grounds for revocation.

12.31 The CAA notes the LACC's and the AOC's comment above. The CAA does not consider it is necessary to include specific provisions in the licence for HAL to publicly account for lack of payments as a failure to comply with this condition would be apparent in any subsequent enforcement action.

Part C: Price control conditions

Price Control

12.32 The CAA's initial proposals for the draft price control condition were set out in chapter 10 of the initial proposals and the CAA's May 2013 letter.[95] Stakeholder views and the CAA's final proposals are set out in chapters 2 to 10 of this document.

12.33 The licence condition is in many respects similar to the price control condition, which governed HAL's price control in Q1 to Q5. The substantive changes are:

- the inclusion of a BR factor to passthrough the difference between forecast and outturn rates revaluation costs;
- the S factor has been made symmetrical, including unanticipated cost reductions as well as cost increases;

[95] See the following link for further detail: http://www.caa.co.uk/docs/78/20130531LetterToHeathrowStaekholders.pdf

- the arrangements for the core and development capex mechanisms. As discussed in chapter 5 above, this will ensure that HAL is remunerated for investment undertaken, while not recovering a return on investment which is anticipated at the price control, but which it does not then undertake.

Charges for other services

CAA's initial proposals

12.34 The CAA proposed to include a condition requiring HAL to be transparent in how it set charges for activities that are not otherwise covered by this licence through the price control, or by the ACRs or the GHRs.[96] This condition was based on a similar condition in Q5. This condition is discussed in more detail in chapter 8 of this document.

12.35 The CAA proposed that it would not be necessary, proportionate, or consistent with its duties, to transpose into the proposed licence other Q5 public interest conditions relating to the provision of information desks and restricting the use of agency staff.

Stakeholder views

12.36 The LACC supported the proposals but in relation to the transparency condition it suggested that paragraph 5.5 in the indicative licence[97] should be re-inserted as it provided an important dimension of transparency and cost relatedness. The LACC also considered that provisions relating to agency staff and information desks should be included otherwise the airline community has no assurance that HAL would not revert back to leveraging SMP by engaging in similar activity to that which led to the introduction of the condition in Q5.

12.37 The Independent Airport Parking Association (IAPA) considered that the current transparency condition for other charges included facilities for park and ride operators within the definition of facilities for bus and

[96] Airport Charges Regulations 2011 (SI 2011 No.2491 Transport) and the Airports (Groundhandling) Regulations 1997 (SI 1997 No.2389 Civil Aviation).

[97] The indicative licence published by the CAA in January 2012 can be found at http://www.caa.co.uk/default.aspx?catid=78&pagetype=90&pageid=12880. Paragraph 5.5 proposed that the Licensee should reconcile any differences between costs stated in the annual information required by the licence and those provided in the Profit Centre Reports provided to the CAA.

coach operators, and that the CAA should extend the condition to cover facilities for meet and greet operators. IAPA commented that HAL had a monopoly for access to airport forecourt, and as it competes in a downstream airport parking market, it has an incentive to leverage its position in the upstream market into the downstream market. Its members faced problems at airports relating to the price they paid for access to airport facilities and obtaining access to locations which enabled them to compete fairly with the airport operator's own park and ride or meet and greet operations.

CAA's final proposals

12.38 The CAA notes the above comments and considers that the previous conditions on agency staff and information desks relate to conduct that occurred in 1996 and are unlikely to recur. They were issues that only arose at Heathrow under its management at the time and not at other airports and so are not issues that are inherent to airport operators with SMP. The CAA considers that this conduct is unlikely to recur and, therefore, it would be disproportionate to replicate these particular public interest conditions in the licence. In the unlikely event that HAL repeats this conduct, the CAA can deal with the situation using its licensing powers if appropriate at the time. Therefore, the CAA is not making any changes to the condition covering charges for other services as set out in the initial proposals. See chapter 8 for further detail on this condition on charges for other services.

12.39 The CAA notes IAPA's comments about the location of facilities for its members. The CAA considers that as the airport operator operates in both the upstream market and downstream markets there could be a potential for anti-competitive behaviour. The CAA is not proposing a licence condition now but will be undertaking some research after 1 April 2014 into wider issues of road access and forecourt access at the licensed airports in 2014/2015. Once the CAA has completed this research, it will have a better idea of the scale of any potential problems and the best way of addressing it.[98]

[98] The CAA notes that under the Act, it can either use its concurrent competition powers (with the OFT to handle allegations of anti-competitive behaviour relating to airport operation services under the Competition Act 1998) or licensing powers (requiring airport operators that pass the market power test in section 6).

Procurement of capital projects condition

CAA's initial proposals

12.40 The CAA questioned whether it should include a condition to oblige HAL to secure the best value from major capital investments that were in passengers' interests. Note that in the initial proposals this condition was named 'best value/competitive tendering.'

Stakeholder views

12.41 BA supported a proposal for a licence condition that protects passengers' interests by obliging HAL to secure best value from capital investment.[99] BA proposed additional protection that would allow the CAA to intervene should evidence be presented that HAL is failing to invest at sufficient levels to sustain performance and causing detriment to passengers' interests.

12.42 HAL considered that although competitive tendering does comprise one element of HAL's Q6 strategy, it does not accept that it is the only mechanism to demonstrate value for money.

12.43 The LACC considered that such a condition was in the interests of passengers, especially given the recent findings by ASA on the efficiency of capital investment by HAL.

CAA's final proposals

12.44 The CAA considers that, where capital investments are ultimately being paid for by the airlines, it would be in the interests of those airlines, and their customers, to ensure that HAL carries out procurement for its capital investment projects efficiently and effectively. There is evidence that this has not always been done effectively in the recent past, although HAL has already made improvements to its processes. It is important, particularly where there is a large capital programme with many different contractors and operational constraints, to ensure these improvements are followed through and built upon through clear processes and policies.

12.45 The CAA has therefore included an obligation that HAL must, so far as reasonably practicable, secure its procurement of capital projects efficiently and economically. In doing so, it must take account of a

[99] HAL's failure or refusal to invest in capital projects could bring potential detriment to passengers.

number of factors including the direct and indirect cost to airlines. If HAL cannot confirm those costs with the airlines, the CAA would assess whether HAL had, so far as reasonably practicable, made reasonable assumptions about those costs.

12.46 The licence condition requires HAL to publish a code of practice, setting out the principles, policies and processes by which it will meet its obligation. The CAA considers that the procurement code of practice would work better if it is developed and owned by HAL, rather than being imposed. The licence specifies some elements that must be included but it will be up to HAL to ensure that the detail of these is enough to comply with the overall obligation.

12.47 The CAA recognises that there may be some projects where an alternative procurement method would be more effective. The licence requires HAL to provide its reasons and justification to the CAA annually where this has happened.

Charges for cargo only operators

12.48 The CAA's proposals for a draft condition on charges for cargo only operators were set out in chapter 2 of the initial proposals. Stakeholder views and the CAA's final proposals are set out in chapter 2 of this document. In summary, the CAA proposes to retain the condition used in Q5 restricting HAL from charging cargo only operators more than equivalent passenger service operators.

Part D: Service Quality Conditions

Service quality levels, rebates and bonuses

CAA's initial proposals

12.49 The CAA's proposals for the service quality regime were set out in chapter 11 of the initial proposals and the CAA's May 2013 letter set out the draft service quality condition[100], which gives effect to the Statement of Standards, Rebates and Bonuses which would be included as a Schedule to the licence. The draft condition also included proposals for a provision for changes to the Schedule where

[100] See http://www.caa.co.uk/docs/78/20130531LetterToHeathrowStaekholders.pdf for more information.

the CAA, HAL and the airlines agreed.

12.50 The stakeholders' responses and the CAA's final proposals are also set out in chapter 11 of this document.

Operational Resilience

CAA's initial proposals

12.51 In the initial proposals, the CAA included a draft licence condition based on an overarching responsibility requiring HAL, so far as reasonably practicable, to secure the availability and continuity of airport operation services, particularly in times of disruption, to further the interests of passengers and cargo owners.[101]

12.52 Under the condition, HAL would be required to:

- consult on, develop and maintain resilience plans and processes setting out how it would do this, where appropriate in line with any guidance issued by the CAA (the plans would be limited to the actions where HAL is in control and could flag other actions where HAL relied on the airlines or groundhandlers to take action);
- facilitate a governance forum to foster a more cooperative and collaborative approach to managing disruption;
- lead on coordination and communication between itself, the airlines and the groundhandlers to ensure a more coherent response to disruption, including developing a 'rules of conduct' for airlines and groundhandlers, setting out what HAL would need from those bodies to support HAL in meeting its obligations under this condition; and
- publish information relevant to other service providers and passengers so far as possible to help them plan their response to disruption.

Stakeholder views

12.53 HAL welcomed ongoing community collaboration to improve resilience and passenger welfare during times of mass disruption and agreed that the key issue was dealing with the impact of events and their underlying cause. However, it considered that the CAA had adopted

[101] See chapter 12 of the initial proposals for more detail.

an inconsistent approach; on one hand noting good progress, whilst still holding HAL to account for many activities outside its control. It commented that the CAA should not be looking to outsource responsibility to HAL on these matters. It was also unclear as to how the CAA would deal with situations where stakeholders fail to 'volunteer' and that the CAA needed to clearly set out its expectations with regard to consumer outcomes for HAL and its stakeholders as well as the principles it would apply.

12.54 The LACC supported the CAA's focus on enhancing HAL's capability to manage disruption through better collaborative arrangements. It also noted that whilst much progress had been made in managing disruption in recent years, there remained in exceptional events safety and security requirements should always take precedence.

12.55 The LACC welcomed the draft operational resilience licence conditions but required further information on the governance process for condition 6.2, which it regarded was 'subjective'. It also suggested that the requirements specified in condition 7 of the indicative licence[102] to operate an efficient and reliable airport, and to use best endeavours to minimise detriment to passengers during disruption, were critical and should be re-introduced.[103]

12.56 The LACC also considered that the proposal requiring the Licensee to develop a 'rules of conduct' was unacceptable, as it extended the licensee's market power by allowing it to impose rules about the conduct of its customers without consulting or reaching agreement with those customers on those rules, and was contrary to the EU liberalisation of groundhandling designed to promote competition. It also considered that as airlines are already subject to binding obligations regarding passenger welfare and compensation in the event of cancellation under the EU denied boarding regulations (EU 261), it strongly opposed any further measures which increased liabilities or imposed new obligations either in the licence or under the

[102] Published by the CAA in January 2012 at http://www.caa.co.uk/default.aspx?catid=78&pagetype=90&pageid=12880

[103] The LACC considered that HAL has recently jeopardised operational resilience through proposed reduction in key capital investment areas including additional fuel infrastructure, airfield resilience in a capacity constrained airport, projects that maintain minimum SQR standards.

Conditions of Use. It also suggested two principle areas[104] that address and enhance operational resilience through joint work between relevant parties, as well as potential working elements to increase Heathrow's resilience.[105]

12.57 BA fully endorsed the proposals to strengthen the approach to operational resilience and disruption management, but sought clarity on the following areas:

- the licence holder must have (and continue to develop and maintain) a complete suite of fully documented and thoroughly prepared business continuity and resilience plans; and
- it also noted that issuing guidance on how best to maintain clear lines of accountability is a sensible proposal, and it may also be helpful for airlines to be involved in scoping what may be required.

12.58 BA was strongly against any financial incentive based around continuous improvement (CI) as it is inherently difficult to define or measure and could drive perverse behaviours. Conversely incentivisation via strengthening of rebates for negative operational impacts (due to poor management of disruption), is more quantifiable and will drive behaviour that directly correlates with passengers' interests. It is logical to transfer HAL's current obligations on providing information on the SQR scheme performance into a licence condition. However, it is inappropriate to include any requirement for the provision of information on airline performance as the licence is specifically related to HAL as a regulated business. It also agrees that the CAA Information Powers programme is a more appropriate forum for this.

12.59 BA stated that the wording of the condition requiring the Licensee to

[104] 1) Avoiding disruption by strategic planning: A-CDDM (Airport Collaborative Decision-Making) to reduce delays through NMOC (Network Manager Operations Centre, Central Airport Coordination for Airport Snow Control to improve capability for aircraft de-icing, developing an APOC (Airport Operations Centre), increase fuel storage capacity, provide free Wi-Fi and a substantial asset renewal programme.

2) Through European network management: The Network Operations Plan 2013-2015 provides a short to medium outlook on how the ATM network will operate to optimise, increased efficiency measures planned at network level and by each Area Control Centre (ACC), UK national and local ATC planning to optimise existing capacity.

[105] See LACC response page 129 for more information.

develop rules of conduct is unclear, particularly in relation to the wide interpretation of 'proportionate'. BA supports the inclusion of the following clarified conditions:

- the Licensee has the ability to oblige all carriers to comply with rules of conduct, including the mandating of compliance with HADACAB[106] (including consequences for failure to comply);
- the rules of conduct must be balanced and not be overly burdensome or require providers of services to exceed their obligations under law; and
- that any inclusion of rules of conduct added into the Conditions of Use must be subject to meaningful consultation

12.60 There is a clear process of recourse to the CAA should the providers of services feel that the Licensee has not fulfilled the second and third bullet points above. Virgin was concerned that putting too much emphasis on operational resilience could encourage the airport operator to over-invest in this area to mitigate any associated risk and it noted that any investment must be made in a fair and transparent manner which best meets passengers' interests.

12.61 The Consumer Council of Northern Ireland welcomed the use of licences to strengthen airport operator's approaches to planning for service disruption and their response to passengers in the event of service disruption. It is essential that airlines are fully involved in developing service disruption plans as airlines are required to provide passengers with assistance and accommodation in accordance with EU 261 in instances of flight disruption.

CAA's final proposals

12.62 The CAA notes HAL's comments on the CAA's approach to holding HAL to account for operational resilience, including activities outside its control. The CAA considers that a licence condition on operational resilience is necessary as part of the wider industry framework for dealing with disruption. The CAA considers that disruption can best be managed effectively through collaboration by all parties with clear leadership from the central hub organisation. Placing greater

[106] The processes and rules for forecasting and declaring reduced capacity at Heathrow and for reducing the number of flights during such times.

responsibility on HAL to coordinate planning for and response to disruption will balance, but not cut across, the airlines' responsibilities to their passengers. The CAA therefore proposes to include an operational resilience condition largely similar to that in the initial proposals.

12.63 The CAA does not expect to hold HAL to account for activities outside its control. The CAA would expect the plans proposed in the licence to cover only those activities for which HAL is responsible. For example, HAL should have contingency plans for denial of access to key infrastructure at the airport (such as the terminals, runway or airfield) and for loss of IT systems, key suppliers or key staff (including UKBF). Therefore, where services are provided by a third party and HAL only acts as a landlord for the facilities (such as fuel supply or groundhandling services), the CAA would not expect HAL to have contingency plans for ensuring continuity of supply of those services but would only expect HAL to have plans for the effect that disruption to those services would have on its own operations.

12.64 However, as part of the collaboration requirement within the licence condition, the CAA would expect HAL to liaise with its stakeholders about each other's resilience plans to ensure they are compatible, so far as necessary and reasonably practicable. As a minimum, HAL should ensure that it understand the needs of those stakeholders and the actions they will need to take, so it can take these factors into account in its own plans.

12.65 The CAA notes the airlines' concerns about requiring HAL to impose rules of conduct. The CAA considers that, in order for HAL to coordinate a whole industry response effectively, it will need to be clear what part other parties will need to play. Therefore, there will need to be some minimum standards or rules of conduct expected of those parties during disruption relating to actions required and passenger welfare, to ensure that all parties are incentivised to work together. The CAA notes that there is already a similar requirement in the Groundhandling Directive.[107]

12.66 However, the CAA recognises that the licence cannot compel third parties to do things and that it should not be used to impose additional

[107] Council Directive 96/67 EC of 15 October 1996 on access to the groundhandling market at community airports.

obligations on them over and above what is already required under other legislation. Any such rules should be negotiated voluntarily. But the CAA considers that with good collaboration, clear expectations and plans setting out relevant roles and responsibilities fully owned by all parties, coupled with effective application of EU 261, this will be a significant step forward towards a more efficient whole industry response.

12.67 The CAA has therefore amended the draft licence to require HAL to agree the rules of conduct with the airlines and groundhandlers. The obligation on HAL will be to lead the development and negotiation of these rules. The rules must be targeted at meeting the overarching obligation, should not be unduly burdensome to the providers and should be proportionate in terms of treating each carrier in a fair and equitable manner, where necessary according to their market share.

12.68 Where agreement cannot be reached the rules will not be imposed but the CAA would look to the industry to continue to seek alternative solutions. The CAA recognises that this is likely to be an ongoing process that will need time to develop fully but if it appears that progress is stalling the CAA will consider whether there are other incentives or regulatory powers available to it to encourage progress, such as inserting provisions allowing the CAA to act as arbiter or to determine the rules.

12.69 The CAA notes BA's comments on the application of the HADACAB process. The CAA considers that HADACAB is an essential element of the industry's planning and management of disruption that the operational resilience condition is designed to address, alongside HAL's and the airlines' existing obligations under national and international law, and that HAL should have a leading role. There is already ongoing work within the industry to extend include rules for planned part-day disruption and, when it is clearer how this will work and the licence is in place, the CAA will consider whether a more specific condition is required, for example, relating to a greater decision making role for HAL or an ability to ensure compliance.

12.70 The CAA notes comments that HAL should not be required to provide information on passenger rights as this cuts across the airlines' responsibilities under EU 261. However, the CAA does not agree that it cuts across these obligations; this information is, by its nature, publicly available from a number of sources and there is nothing to

suggest that it can only be disseminated by particular people. The CAA does not expect HAL to provide information about reservations or re-booking for instance, but it considers that during disruption passengers should receive as much relevant information as possible from both their airline and HAL so that they can make informed choices. There may be instances where an airline is unable to disseminate the relevant information adequately and the CAA considers that in such circumstances HAL should also have a responsibility to provide that information.

Part E: Financial conditions

Regulatory accounting requirements

CAA's initial proposals

12.71 The CAA proposed to formalise the existing process in a licence condition by combining the current regulatory accounts process with other financial reporting information provided by HAL.[108] The CAA considered that this was unlikely to create additional costs and may give the opportunity for further streamlining. The CAA proposed that the licence should require regulatory accounting guidelines and those guidelines should include the details of the required information. However, the need to provide regulatory accounts and have them audited and the timeframe for providing would be set out in the licence.

Stakeholder views

12.72 The LACC supported the CAA's position of regulatory accounts to be maintained in line with regulatory accounting guidelines.

CAA's final proposals

12.73 The CAA's proposals for regulatory accounting requirements are unchanged from its initial proposals. The CAA proposes that the licence should require regulatory accounting guidelines and those guidelines should include the details of the required information. However, the need to provide regulatory accounts and have them

[108] This will require HAL to produce audited regulatory accounts in accordance with regulatory accounting guidelines.

audited and the timeframe for providing would be set out in the licence.

Financial resilience

CAA's initial proposals

12.74 The CAA assessed the implications of introducing either a full regulatory ring fence provision, or a more tailored one that comprises only those elements that do not cut across HAL's existing financial arrangements. The CAA reached the following conclusions:

- while there are reasonable grounds to support the inclusion of a full ring fence[109], the CAA does not consider that it is necessary since the incremental benefits to users could be significantly outweighed by the incremental costs[110]. It is therefore likely to be in passengers' interests that any ringfencing provisions do not cut across HAL's current financial conditions;[111]
- if the CAA is to rely on HAL's contractual ring fence, there would need to be a licence condition that requires HAL to notify CAA of relevant changes before the changes come into effect; and
- the alternative approach would be to introduce a full ring fence provision but derogate those aspects that cut across existing financial arrangements.[112]

12.75 Given the above, the CAA proposed that the following elements of the standard financial ring fence are included in HAL's licence;

- certificate of adequate resources;[113]

[109] Financial distress could cause detriment to passengers' interests, reduce expenditure and impact future service quality.

[110] Other reasons include: HAL is already very financially secure and its existing financial arrangements are not compatible with a full regulatory ring fence, HAL's debt covenants already form a contractual ring, a change to HAL's financing structure could require complete re-financing of existing debt (£12 billion) the costs of which might be passed on to passengers.

[111] This is consistent with the government's policy.

[112] As these conditions would effectively remain dormant, this would provide greater certainty and clarity by setting out the restrictions on HAL's future financial arrangements.

[113] The CAA proposed that company directors annually certify to the CAA whether they expect to have (or not to have) adequate resources (including financial, staff and other resources) to continue to operate for the following 24 months. Where circumstances change, the CAA must

- restrictions on business activity;[114]
- ultimate holding company undertaking; and[115]
- obligation to report changes in contractual ring fence.

Stakeholder views

12.76 The LACC supported the inclusion of a ring fence,[116] but considered there were some limited areas in which it should go further. It opposed the CAA's proposal not to pursue the prohibition on cross guarantees and considered that it should reassess its decision on the prohibition of the granting of security and disposal of assets without CAA approval. It also proposed some guiding principles for financial resilience, which it argued was important to the airline community.[117]

12.77 BA agreed with the CAA's assessment that some form of financial ring fence would be helpful. It considered that whilst a contractual ring fence would be a slightly easier concept to introduce, there was a significant risk of divergence between the interests of financial institutions and passengers and therefore, a regulatory ring fence with the necessary derogations, along with a side statement from the CAA laying out a clearly explained path to achieving a full ring fence, would be more appropriate. BA recognised the significant complications of introducing a full ring fence, but given the importance of HAL's financial resilience, such measures were necessary.

12.78 HAL accepted the rationale for its inclusion and suggested that the proposals were more than sufficient. It was surprised at the 24 month prefunding obligation[118] as this was double the standard requirement

be informed as soon as possible. The CAA proposed that this requirement can be designed to reduce any administrative burdens.

[114] The CAA proposed to set the restriction quite widely to cover 'the business activities of Heathrow airport'. The CAA also proposed the inclusion of a de minimis qualification and/or provision for the CAA to grant exemptions, where this would be in the passengers' interest.

[115] CAA proposed to place an obligation on HAL to obtain a legally binding undertaking from its ultimate holding company not to do anything that would place the Licensee in breach of the licence.

[116] Including credit rating requirements, certificate of adequate resources, restriction of activities, holding company undertakings, reporting changes to contractual ringfence and the continuity of service plan.

[117] Such as benefits outweigh the costs and financial stability for HAL.

[118] Within the certificate of adequate resourcing.

in other UK sectors and would require HAL's directors to pre-fund up to £4 billion to meet cash and debt servicing requirements over 2 years. HAL asked for evidence as to why 12 months was not sufficient.

12.79 Virgin commented that the ring fence proposals[119] suggested by the CAA were comprehensive. The CAA's focus on restricting business activities were not of particular concern, although it should help ensure that airport operators focus on their main business along with their associated obligations to passengers.

CAA's final proposals

12.80 The CAA notes that some airlines considered that it could go further and introduce a licence condition which would require HAL to obtain CAA approval before disposal of assets.

12.81 If the CAA were to introduce such a condition it would relate only to assets which are important in operating the airport because, to do otherwise, could create significant administrative burdens without any real benefit. The CAA considers that it is unlikely that HAL would disposal of an asset that was important in operating its airport because in doing so it would put at risk the operations related to the asset which could, in effect, be very wide ranging. If HAL did decide to disposal of an asset then the CAA considered that it has sufficient tools to protect passengers, for example;

- the owner of that asset could be licensed (if it met the requirements of the Act); and
- the CAA's secondary duty to promote efficiency and economy could mean that airport charges would not increase if that decision was 'inefficient'. For example, if HAL as a consequence of the disposal experienced an increase in costs, these additional costs would not be passed on.[120]

12.82 Airlines also suggested that the CAA introduce some form of a prohibition on cross guarantees. The CAA notes that there could not be a blanket provision given HAL's current financial arrangements.

[119] Prohibition on security over assets, certificate of adequate resources, holding company undertaking, minimum credit rating, prohibition on cross guarantees.

[120] The CAA cannot fetter its discretion and would look at the specific circumstances of the case.

Any prohibition would have to specifically carve-out existing cross guarantees and also allow for administrative changes to them. If the changes were more than administrative, the CAA would need to assess whether the benefit of prohibiting the new cross guarantees would outweigh the costs.

12.83 In the initial proposals, the CAA raised it concerns that this is likely to be complex and, therefore, require significant monitoring and raise significant risk of non-compliance if one of the cross obligations is overlooked. It would also involve the CAA in HAL's actual financing at a level of detail rarely seen in economic regulation, and therefore inconsistent with the CAA's position that actual financing is a matter for the company (for example, the CAA uses a simplified notional financial structure for calculating the WACC).

12.84 The CAA notes that airlines also considered that the CAA should lay out a path to the full ringfence. The CAA sees merit in providing guidance where appropriate and there may be benefit in the CAA setting out in guidance what it sees as a full ring fence.

12.85 The CAA notes HAL's concern about the annual certificate of confirmation of adequate resources over a 24-month period – rather than a 12-month period. The CAA notes that the NERL licence covers 24 months.

12.86 The CAA proposes to make two changes to its initial proposals in respect of the certificate of adequacy of resources licence condition. First, to make it clear that the CAA is concerned with airport operation services, instead of a certificate in respect of sufficient resources 'to enable the licensee to comply with its obligations under its licence', the final proposals include the requirement to provide a certificate of sufficient resources 'to provide airport operation services at the airport'. Second, consistent with its approach the NERL, the CAA has include a requirement that alongside the certificate the licensee shall also submit a statement of the factors the directors have taken into account in providing that certificate. This will enable the CAA to assess better the certificate provided. The proposed therefore condition has four parts;

i) the Licensee shall at all times act in a manner calculated to secure that it has available to it sufficient resources including (without limitation) financial, management and staff resources, to enable it

to provide airport operation services at the airport. The CAA notes that this does not specify a forward looking time period;

ii) the need to provide a certificate in one of three forms:

(1) "the directors of the Licensee have a reasonable expectation that the Licensee will have available to it ... sufficient financial and other resources and financial and operational facilities to enable the Licensee to provide airport operation services at London Heathrow Airport ... for a period of two years"; or

(2) A qualified confirmation; a statement as above but with an 'except for' provision; or

(3) A certificate that states HAL does not have sufficient resources for a period of two years,

iii) A requirement to inform the CAA if HAL becomes aware of any circumstance which causes it no longer to have the reasonable expectation expressed in the then most recent certificate.

iv) An audit certificate stating whether or not the Auditors are aware of any inconsistencies between, on the one hand, that certificate and the statement submitted with it and, on the other hand, any information which they obtained during their audit of the relevant year-end accounts of the Licensee.

12.87 HAL suggested that the licence condition would require them to hold more cash in reserve or pay for a stand-by facility, and that this would increase costs which would ultimately be borne by passengers. However, the CAA considers that the licence condition as drafted does not require HAL to have constantly in place two years' worth of financial resources, rather it requires management to express an opinion as to whether or not it will have available financial resources. Without fettering the CAA's discretion in the event of a dispute, the CAA interprets the licence condition as drafted to mean that management could have the reasonable expectation that it can put in place the resources (e.g. a facility) in time for its needs as they arise. For example, if a bond was due for redemption in 23 months' time, HAL does not need to have in place today the resources to redeem the bond (i.e. replace it) but that it has the reasonable expectation that it will be able to go to the market in due course and have resources in place in time to redeem it.

12.88 The CAA also notes that it is not a breach of licence to be unable to give a confirmation of resources as the licence allows HAL to provide alternative statements. However, the CAA is keen to avoid HAL being in a position where it feels repeatedly unable to give the positive confirmation. The CAA is keen to work with HAL in order to facilitate the functioning of this condition.

12.89 The CAA considers that this condition has two major benefits – first it highlights the importance of adequate resources in economic regulation and second it provides the CAA important and timely information on which it can act appropriately.

12.90 In conclusion, the CAA's final proposals are the same as its initial proposals, and the CAA sees no additional financing costs arising from the certificate of adequate resources. In respect of the airlines who wish the CAA to go further than the initial proposals, the CAA notes that the introduction of financial resilience conditions for the first time for regulated airport operators is a significant development and that licence modifications, subject to due process, are possible in future.

Continuity of service plan (CSP)

CAA's initial proposals

12.91 This condition would reduce the risk of service disruption whilst issues relating to financial distress are being resolved.

Stakeholder views

12.92 HAL looked forward to developing the CSP, but given the equal focus on operational resilience, it commented that it might be more appropriate to combine the CSP and resilience plans. The LACC also supported the inclusion of a CSP, and Virgin commented that it would increase the transparency of HAL's operating and financial structure, and would assist an insolvency practitioner during a transitional period.

CAA's final proposals

12.93 The CAA agrees that HAL should consider how it meets its licence obligations in an efficient manner. The CAA would be content for HAL to combine the CSP and the resilience plans (required under the operational resilience licence condition) if this would be more efficient

and effective. However, the CSP condition requires specific activities and information to be included in the CSP for different purposes to the resilience plans, therefore the CAA is retaining the separate obligations.

Part F: Consultation Conditions

CAA's initial proposals

12.94 The CAA questioned whether it should include a condition requiring HAL to comply with a consultation protocol setting out the CAA's expectations on how HAL should consult with airlines.

Stakeholder views

12.95 HAL considered that it had already developed a fit for purpose governance framework that supported information and consultation protocols, and there was little evidence that further work needed to be done. It also considered that the CAA should relax regulatory requirements to encourage a genuine commercial dialogue.

12.96 The LACC considered that it was crucial that the licence contained a condition which maintained the substance of the current Annex G from the Q5 settlement. Virgin also welcomed the inclusion of such a condition.

12.97 BA considered that whilst there had been improvements, there still remained clear issues around HAL's commitment to meaningful consultation. It therefore considered that there was no possible argument for the removal of Annex G and in fact, there needed to be an unambiguous and detailed obligation on the licensee to engage in meaningful and responsive consultation. It also considered that fundamental conditions (such as requirements to meaningfully consult) that are integral to the quinquennial process must be explicitly and clearly specified within the licence, to avoid misinterpretation. It considered HAL's argument, that discussions and agreements should take place on a commercial basis without the use of regulation to compel them, were premature, given the extent of its market power.

CAA's final proposals

12.98 The CAA notes in particular the views of the airlines on this matter and

agrees, where HAL needs to consult its stakeholders, it must do so in a clear and effective manner and it must take into account any responses to its consultations. The CAA considers that a condition in the licence is the most effective way of ensuring that HAL carries out this requirement consistently and diligently at all times.

12.99 The CAA notes that Annex G of the Q5 price settlement concentrates on consultation for future planning. However, this licence requires consultation in a number of areas and it would benefit all parties if these consultations were also backed by clear processes.

12.100 The CAA has therefore included a condition that requires HAL to consult relevant stakeholders on a variety of matters[121] so that those stakeholders have the information they need to take informed views. HAL must also take those views into account when deciding on the future development of its proposals.

12.101 The CAA considers that these processes will work best if they are developed and owned by the Licensee rather than having rules imposed. The licence condition therefore specifies that HAL must develop and agree protocols setting out how it will comply with this obligation and the CAA can give guidance (following consultation) on what should be included in these protocols.[122] The protocols must be reviewed and updated as necessary and as a minimum at least once before the start of a new price control period. Where HAL cannot agree the protocols, the CAA may determine the outstanding issues.

12.102 The CAA considers that the protocols currently in use for many of these matters[123] are a good starting point, although these will need to be updated to reflect the requirements of the Act and the Q6 price control. The CAA also notes that HAL is already developing others such as the Q6 Governance arrangements for individual capex projects, but in order to allow HAL sufficient time to develop and agree the protocols once the licence is in place, the condition requires HAL

[121] Such as future investment, delivery of capital projects, non-regulated charges, SQR, traffic forecasts and operational resilience.

[122] The CAA is not intending to issue guidance on this immediately but will develop guidance as necessary based on decisions following any complaints from stakeholders about the application of this condition.

[123] Such as the Consultation and Information Protocol published in June 2011 can be found at http://www.caa.co.uk/docs/5/HeathrowConsult&Info.pdf

to publish them no later than 6 months after the licence comes into force.

12.103 The condition is generic for several different areas where consultation is needed with different people so it is difficult to specify the relevant stakeholders exactly. HAL would be expected to use its judgement as to who is relevant to each protocol in order to comply with its obligation to consult.

Other licence conditions

12.104 In its initial proposals, the CAA considered that there may be merit in considering other licence conditions for HAL. These conditions were:

- a provision, possibly in the interpretation section of the licence, to clarify that HAL would not be expected to breach safety or security requirements in order to comply with the licence;
- a reopener for the price control;
- a complaints handling condition;
- revocation upon insolvency; and
- a non-discrimination condition.

Breaching legal obligations

CAA's initial proposals

12.105 The CAA considered including a statement in the interpretation section of the licence to the effect that in meeting the licence condition, the licensee should not be required to breach any other legal obligations (for example in relation to safety and security requirements). This may be required to ensure that the licensee does not consider there is a choice between breaching the licence and breaching those other requirements.

Stakeholder views

12.106 The LACC agreed with CAA's proposals. HAL did not comment on this condition.

12.107 GAL commented on a similar proposal for its potential licence that this should not be included as it could lead to uncertainty and

inconsistency.

CAA's final proposals

12.108 Whilst it is important to recognise that HAL may have conflicting obligations at times, the CAA agrees that including such provision in the licence itself could lead to uncertainty and inconsistency between the three sets of obligations and related enforcement regimes. Furthermore, it could have unintended consequences on compliance with the economic licence. The CAA does not therefore consider it would be appropriate to include licence conditions in this area.

12.109 It is for HAL to be aware of all its relevant obligations and to manage its activities to ensure compliance with each one. For its part, the CAA will take into account all the relevant circumstances, including safety and security obligations, in any investigations it may carry out or in enforcement or licence modification decisions that it may make under the Act.

Reopening the price control

CAA's initial proposals

12.110 In its initial proposals, the CAA asked whether it should include a provision to reopen the price control within the regulatory period in extreme circumstances, such as including a self modification provision under section 21(3) of the Act.

Stakeholder views

12.111 HAL considered that this condition seemed relatively straightforward and uncontroversial, largely mirroring the approach in previous settlements. However, it also considered that the CAA should only use reopeners (for material changes in circumstances) in extreme circumstances and should issue guidance. It also commented that they were uncertain, cumbersome and could delay commencement of efficient investment, and that Notified Items were a better alternative.

12.112 BA commented that in principle it supported reopeners, although such provisions should not undermine the price control settlement.

12.113 The LACC agreed that reopeners should only be in extreme circumstances, and considered that the CAA should issue a criteria and process in advance of the licence coming into force. The Licensee and its customers should also be able to request a

reopening of price cap.

CAA's final proposals

12.114 The CAA does not consider it is appropriate or proportionate to include a self modification provision in relation to a price control condition. The mechanism in section 21(3) does not allow any party to appeal to the CC against either the decision to modify the licence or the changes that are made. In addition the CAA does not consider it would be possible to specify the types of changes required at this stage, as required under the self modification provisions in section 21(3) of the Act. The CAA therefore intends to rely on the modification mechanism in section 22 of the Act to make any necessary changes during the period covered by the price control. Any party materially affected by a price control could request that the CAA uses its powers under section 22 to modify the licence in such circumstances and the CAA will consider each request on its merits.

Complaints handling condition

CAA's initial proposals

12.115 The CAA questioned whether the licence should contain clear requirements on HAL in relation to how it deals with passenger complaints.

Stakeholder views

12.116 HAL commented that it had a well established and effective complaints handling process in which there is a 'high degree of consumer confidence' and there is no need for further investigation. Before the CAA takes this issue forward, it would be helpful to set out issues it has identified that require remedying.

12.117 The LACC responded that it would be useful for the licence to contain a requirement on how licensees handle complaints. This should contain a single obligation for any complaints to be available for airlines to view.

12.118 Virgin wished to further explore the prospect of including a passenger complaints handling requirement within the licence.

CAA's final proposals

12.119 The CAA agrees that, to date, this has not been raised as a problem

that needs addressing and no additional evidence to the contrary has been offered through the consultation on the initial proposals. The CAA considers that the inclusion of a complaints handling condition would not be consistent with being proportionate and targeting regulation only at cases in which action is needed and would impose an unnecessary burden on HAL. The CAA has therefore not included a complaints handling condition in the final proposals. However, the CAA will keep this under review as the licence framework beds in and may consider including a condition in the future if necessary.

Non-discrimination condition

CAA's initial proposals

12.120 The CAA proposed a non-discrimination condition designed so as not to duplicate or cut across existing obligations such as those under section 41 of the AA86, the ACR or the CA98.

Stakeholder views

12.121 HAL considered that there was no basis for a non-discrimination licence condition as there are well established competition laws in existence to which the CAA has access and more general provisions in the ACR, and therefore there is no justification for an ex-ante licence requirement.

12.122 The LACC considered that it might be useful to include this condition.

12.123 GAL considered in response to its own consultation, that non-discrimination is adequately covered in the ACRs, the CA 98 and the Groundhandling Regulations (GHRs) and it is therefore not necessary to include it in a licence.

12.124 STAL considered in response to its own consultation that this condition would duplicate provisions contained in ACR and could overlap with the CAA's concurrent competition powers.

CAA's Final Proposals

12.125 The CAA considers that section 41 of the AA86, the ACRs, GHRs and the CA98 each include non-discrimination provisions which, individually or together, have adequate protection against discrimination. The CAA does not consider that including additional protection within the licence will provide any greater benefit and would not be consistent with its duties to be proportionate and to target those

areas where action is required and not to impose unnecessary burdens.

12.126 The CAA has therefore not included a non-discrimination condition but will rely instead on existing legislation.

Revocation upon insolvency

CAA's initial proposals

12.127 The CAA questioned whether stakeholders considered insolvency should also be grounds for revocation, as it would most likely be in the interests of any receiver, passengers and cargo owners to keep the airport open and running during insolvency. The CAA clarified its views in its May 2013 letter that it considers including insolvency as grounds for revocation would not be in the interests of passengers or cargo owners. Instead, the CAA proposed that the obligation in the financial resilience condition requiring HAL to notify the CAA if it was seeking advice on insolvency could provide sufficient early warning of any insolvency risk.

Stakeholder views

12.128 HAL did not include any comments on this proposal in their response to the initial proposals.

12.129 The LACC agreed that it would most likely be in the interests of passengers to keep the airport open and running and that in the event of insolvency, a revocation provision could be "useful".

12.130 Virgin considered that it was important that the CAA had the ability to revoke the airport operator's licence upon insolvency.

CAA's final proposals

12.131 The CAA is no longer proposing to include insolvency as grounds for revocation. Following the clarification of its views in the May 2013 letter, the CAA has developed a licence condition for inclusion in the financial resilience condition which requires HAL to inform the CAA if HAL were to seek advice on insolvency. This obligation also requires HAL to inform the CAA if any of its linked companies, whose own insolvency or inability to trade would have an adverse effect on HAL's ability to trade, were to seek insolvency advice.

Other issues for future consideration

Capital Expenditure

12.132 Following the initial proposals, HAL wrote to the airlines saying that the proposed WACC would not provide an adequate return on investment and it was therefore suspending the CE discussions on the proposed capex for Q6. HAL then reopened negotiations with a substantially reduced programme.

12.133 The CAA considers this action highlights the need for greater accountability for HAL with regards to the development and delivery of its capital spend. The CAA is clear that the interests of passengers and cargo owners are generally best served when the airport operator and airlines are working constructively together. The CE process was developed and agreed to ensure the capex for Q6 based on the needs of all parties, including those end users, and the airlines' willingness to pay for those projects. HAL should not be able unilaterally to determine the level of capital expenditure having gone through such an extensive CE process.

12.134 As discussed in earlier chapters of this document, the CAA considers that it has proposed a fair and reasonable WACC and it would expect HAL to invest not just to meet the minimum obligations for its legal compliance but also to undertake investments that further the interests of passengers, proposals for which have been discussed and agreed through the CE process.

12.135 The CAA is therefore proposing to develop a new licence condition that will ensure that the appropriate level of capital expenditure required, consistent with end users' interests, is delivered efficiently. The CAA's initial thinking is that this licence condition will have four parts:

- requiring HAL to operate, maintain and enhance the airport efficiently and economically;
- incorporating clear processes and policies for CE into the licence; and
- requiring HAL to deliver the agreed output from the CE process over the course of the control period.

- The CAA will also consider whether it is necessary to include additional obligations similar to those in other regulated sectors relating to enhancements.

12.136 Given the timing of this in relation to the Q6 and licence development processes, the CAA does not consider that it would be reasonable or practicable to develop such a condition to take effect on 1 April 2014 but it will begin the process to consult on the details of this condition and to make a licence modification under section 22 of the Act in 2014, once the licence is in place and allowing for any appeals to be determined.

Liability in the Conditions of Use

12.137 The LACC responded that the unilaterally imposed liability condition in the Heathrow CoU provided evidence for HAL's clear SMP and it strongly urged the CAA to remove this from the CoU and replace it with a condition which would be present in any commercial relationship between a customer and supplier. The revised condition should set out HAL's obligation to indemnify airlines for any direct costs relating to HAL's negligent actions.

12.138 Virgin commented that the licences should include an obligation that the CoU must be fair, reasonable and non-discriminatory as a way of addressing Virgin's concerns on liability.

12.139 The CAA does not consider that it can act as an arbiter or court on this matter outside the licence and, in the first instance, the airlines would need to look to contractual remedies to resolve this issue. Including a licence condition that potentially cuts across existing contractual arrangements would need to be considered very carefully to determine if this was the right thing to do and, if so what the scope and detail of such a condition would be to avoid any unintended consequences. The CAA considers that this debate should be carried on at a later date, once the licence is in place.

Summary of Final Proposals

Part A: Scope and Interpretation

Final Proposals

12.140 The CAA will link the airport area in the licence to the airport area covered in the final MPD, but is considering whether to exclude the fuel farm and fuel hydrant system (should they be included in the MPD) on the grounds that HAL is not the operator of these areas.

Part B: General Conditions

Final Proposals

12.141 *Payment of fees condition:* the CAA is not proposing any changes to this condition compared to the initial proposals.

12.142 *Revocation condition*: the CAA has removed a failure to comply with an order made under the CA98 or the EA02 from the grounds for revocation, following representations from both GAL and HAL. They argued that it was not proportionate to subject them to additional sanctions that others subject to those Acts do not face. The CAA has also removed non-payment of fees as this duplicates the failure to comply with an enforcement order made under the Act, and the imposition of a penalty under section 52 of the Act, as there are already sufficient sanctions in the Act.

Part C: Price Control Conditions

Final proposals

12.143 *Charges for other services*: the CAA is not proposing any changes to this condition compared to its initial proposal.

12.144 *Procurement condition*: the CAA has included a condition requiring HAL to ensure its procurement of capital projects is efficient and economical, and that it must publish its policies and procedures on how it will achieve this.

12.145 *Cargo condition*: The CAA has included a condition relating to charges for cargo only carriers.

Part D: Service Quality Conditions

Final Proposals

12.146 *Service quality rebates and bonuses (SQRB) condition*: the CAA included a self-modification provision allowing the CAA, Hal and the airlines to make immediate changes to the SQRB scheme where all sides agreed. It also proposed a provision that allowed the CAA to act as an arbiter if the parties could not reach agreement on the proposed changes.

12.147 *Operational resilience*: the CAA has amended this to require HAL to consult on the rules of conduct for airlines and groundhandlers.

Part E: Financial Conditions

Final Proposals

12.148 The CAA is not proposing to make any changes to the regulatory accounts, financial resilience or continuity of service plans conditions from its initial proposals.

Part F: Consultation Conditions

Final Proposals

12.149 The CAA has included a new condition requiring HAL to consult stakeholders on a number of issues. HAL will have to publish protocols setting out how it will do this.

Other conditions

12.150 In addition, the CAA has identified a possible need for a new licence condition, to be developed next year when the licence is in place, relating to the planning and delivery of capital projects. Following HAL's reaction to the CAA's initial proposals on the WACC where it unilaterally revised the capex programme contrary to agreed CE process, the CAA has discussed with HAL including a licence condition relating to delivery of agreed capex, possibly putting greater accountability on HAL with regards to the CE process.

Final proposals

12.151 The CAA's final proposals for HAL's licence are contained in Appendix A.

Appendix A

Draft licence

Licence granted to

HEATHROW AIRPORT LIMITED

by the Civil Aviation Authority

under section 15 of the Civil Aviation Act 2012

on [date]

Table of Contents: (Appendix A)

Heathrow Airport Limited Licence

Part A: Scope and interpretation of the Licence

A1 Scope

A1.1 The CAA has made a market power determination under section 7 of the Act on [date] that means, for the purposes of section 3 of the Act, Heathrow Airport Limited (the Licensee) is the operator of a dominant airport area at a dominant airport.

A1.2 The Airport is London Heathrow.

A1.3 The Airport Area is those areas, as defined in sections 66 and 67 of the Act that comprise:

(a) the land, buildings and other structures used for the purposes of the landing, taking of, manoeuvring, parking and servicing of aircraft at the airport, [excluding the fuel farm and fuel hydrant systems];[124]

(b) the passenger terminals; and

(c) the cargo processing areas.

A1.4 The CAA, in exercise of the powers conferred by section 15 of the Act, hereby grants to the Licensee this licence authorising the Licensee, and those persons listed in section 3(3) of the Act, to require a person to pay a relevant charge in respect of airport operation services that it provides at the Airport, subject to the conditions of this Licence.

A1.5 This Licence shall come into force on 1 April 2014 and shall continue in force until revoked in accordance with Condition B2 of this Licence.

A2 Interpretations

A2.1 Unless specifically defined within this Licence or in the Act or the context otherwise requires, words and expressions used in the Conditions shall be construed as if they were an Act of Parliament and the Interpretation Act 1978 applied to them. References to an enactment shall include any statutory modification or re-enactment thereof after the date this Licence comes into force.

[124] The CAA will make a final decision on the areas to be excluded when it has reviewed the relevant documentation from HAL and undertaken further work on the market power assessment.

A2.2 Any word or expression defined for the purposes of any provision of Part I of the Act shall, unless the contrary intention appears, have the same meaning when used in the Conditions.

A2.3 Any reference to a numbered Condition or Schedule is a reference to the Condition or Schedule bearing that number in this Licence, and any reference to a paragraph is a reference to the paragraph bearing that number in the Condition or Schedule in which the reference occurs.

A2.4 In construing the provisions of this Licence, the heading or title of any Condition, Schedule or paragraph shall be disregarded.

A2.5 Where the Licensee is required to perform any obligation by a specified date or within a specified period and has failed so to perform, such obligation shall continue to be binding and enforceable after the specified date or after expiry of the specified period, but without prejudice to any rights or remedies available against the Licensee under the Act or this Licence by reason of the Licensee's failure to perform by that date or within the period.

A2.6 The provisions of sections 74 and 75 of the Act shall apply for the purposes of the publication or sending of any document pursuant to this Licence.

A3 Definitions

A3.1 In this Licence:

a) the Act means the Civil Aviation Act 2012;

b) airlines means providers of air transport services;

c) the CAA means the Civil Aviation Authority.

Part B: General Conditions

B1 Payment of fees

B.1 The Licensee shall pay to the CAA such charges and at such times as are determined under a scheme made under section 11 of the Civil Aviation Act 1982 in respect of the carrying out of the CAA's functions under Chapter I of the Act.

B2 Licence revocation

B.2 The CAA may revoke this Licence in any of the following circumstances and only in accordance with sections 48 and 49 of the Act:

(a) if the Licensee requests or otherwise agrees in writing with the CAA that the Licence should be revoked;

(b) if:

i) the Licensee ceases to be the operator of all of the Airport Area;

ii) the Airport Area ceases to be a dominant airport area; or

iii) the Airport ceases to be a dominant airport; or

(c) if the Licensee fails:

(i) to comply with:

1. an enforcement order (given under section 33 of the Act); or

2. an urgent enforcement order (given under section 35 which has been confirmed under section 36); or

(ii) to pay any penalty (imposed under sections 39, 40, 51 or 52 of the Act) by the due date for any such payment,

where any such a failure is not rectified to the satisfaction of the CAA within three months after the CAA has given notice in writing of such failure to the Licensee, provided that no such notice shall be given by the CAA before:

1. the proceedings relating to any appeal under section 47 brought in relation to the validity or terms of an order or

the CAA's finding or determination upon which it is based are finally determined; or (as the case may be);

2. the proceedings relating to any appeal under sections 47 or 55 brought in relation to the imposition of a penalty, the timing of the payment of the penalty or the amount of the penalty are finally determined.

Part C: The price control conditions

C1 Price Control

C1.1 When the Licensee fixes the amounts to be levied by it by way of airport charges in respect of relevant air transport services in the year beginning on 1 April 2014 it shall fix those charges at the levels best calculated to secure that; in that year, the total revenue at the Airport from such charges divided by the total number of passengers using the Airport does not exceed the maximum revenue yield per passenger, which shall be calculated as follows:

$$M_{2014/15} = £22.47\left(1 + B_{2012/13}\right) + \frac{D_{2014/15}}{Q_{2014/15}} - \frac{T_{2014/15}}{Q_{2014/15}} - K_{2014/15}$$

Where:

$M_{2014/15}$ is the maximum revenue yield per passenger using the Airport in 2014/15 expressed in pounds;

$B_{2012/13}$ is the bonus factor in 2014/15 based on the Licensee's performance in 2012/13, as defined in condition C1.8;

$D_{2014/15}$ is the cumulative development capex adjustment in 2014/15 defined in condition C1.9;

$T_{2014/15}$ is the capital 'trigger' factor in 2014/15 defined in condition C1.7;

$Q_{2014/15}$ is passengers using the Airport in 2014/15; and

$K_{2014/15}$ is the per passenger correction factor in 2014/15 defined in condition C1.5.

C1.2 On each occasion on which the Licensee fixes the amounts to be levied by it by way of airport charges in respect of relevant air transport services in each of the four subsequent relevant years beginning with 1 April 2015, the Licensee shall fix those charges at the levels best calculated to secure that, in each relevant year, total revenue at the Airport from such charges divided by the total number of passengers using the Airport does not exceed the amount set in accordance with the formula below:

$$M_t = (1 + RPI_{t-1} + X + B_{t-2})Y_{t-1} + \frac{D_t}{Q_t} - \frac{T_t}{Q_t} + \frac{BR_t}{Q_t} - K_t$$

Where:

M_t is the maximum revenue yield per passenger using the Airport in year t expressed in pounds, where;

RPI_{t-1} is the percentage change (positive or negative) in the Office for National Statistics (ONS) CHAW Retail Price Index between August in year t-1 and the immediately preceding August;

X = 0%;

B_{t-2} is the bonus factor in year t, based on the Licensee's performance in t-2, as defined in condition C1.8;

Y_{t-1} is the revenue yield per passenger in year t-1 defined in condition C1.3;

D_t is the cumulative development capex adjustment in year t defined in condition C1.9;

T_t is the capital 'trigger' factor in year t defined in condition C1.7;

Q_t is passengers using the Airport in year t;

BR_t is the business rate revaluation factor in year t defined in condition 1.11; and

K_t is the per passenger correction factor in year t defined in condition C1.5.

Y_{t-1}: average revenue yield per passenger

C1.3 Y_{t-1} is the average revenue yield per passenger in year t-1 calculated in accordance with the following formula:

$$Y_{t-1} = Y_{t-2}(1 + RPI_{t-2} + X) + S_{t-1}$$

Where:

$$Y_{2014/15} = £22.47 + S_{2014/15}$$

RPI_{t-2} is the percentage change (positive or negative) in the Retail Price Index between that published with respect to August in year t-2 and that published with respect to the immediately preceding August;

X = 0%

S_{t-1} is the allowable security cost per passenger defined in condition C1.4.

S_{t-1}: allowable security cost per passenger

C1.4 S_{t-1} is the allowable security cost per passenger in year t-1 arising as a result of changes to security standards. Additional costs from changes in security standards are considered as positive values. Reductions in cost from changes in security standards are considered as negative values. This mechanism only applies when the expected cumulative cost associated with changes to security standards are:

a) above a cumulative £20,000,000 "deadband" figure; or

b) below a cumulative - £20,000,000 "deadband" figure

S_{t-1} is calculated in accordance with the following formulae expressed in pounds:

For each relevant year t-1, in the case that EC is a positive value, with reference to the absolute value of EC:

If: $|EC_{t-1}| >$ £20,000,000; and

$|EC_{t-2}| >$ £20,000,000

Then: $S_{t-1} = 0.9C_{t-1}$

Or if: $|EC_{t-1}| >$ £20,000,000; and

$|EC_{t-2}| <$ £20,000,000

Then: $S_{t-1} = 0.9\frac{(EC_{t-1} - £20{,}000{,}000)}{(t^*)Q_{t-1}}$

Or if: $|EC_{t-1}| <$ £20,000,000; and

$|EC_{t-2}| >$ £20,000,000

Then: $S_{t-1} = -0.9\frac{(EC_{t-2} - £20{,}000{,}000)}{(t^*)Q_{t-1}}$

Otherwise: $S_{t-1} = 0$

For each relevant year t-1, if EC is a negative number, with reference to the absolute value of EC:

If: $|EC_{t-1}|$ > £20,000,000; and

$|EC_{t-2}|$ > £20,000,000

Then: $S_{t-1} = 0.9C_{t-1}$

Or if: $|EC_{t-1}|$ > £20,000,000; and

$|EC_{t-2}|$ < £20,000,000

Then: $S_{t-1} = 0.9\frac{(EC_{t-1}+£20{,}000{,}000)}{(t^*)Q_{t-1}}$

Or if: $|EC_{t-1}|$ < £20,000,000; and

$|EC_{t-2}|$ > £20,000,000

Then: $S_{t-1} = -0.9\frac{(EC_{t-2}+£20{,}000{,}000)}{(t^*)Q_{t-1}}$

Otherwise: $S_{t-1} = 0$

Where:

Q_{t-1} is passengers using the Airport in year t-1.

t* is a time variable, which is defined for each year in table C.1 below:

Table C.1 Time variable

Year t =	t* =
2014/15	5
2015/16	4
2016/17	3
2017/18	2

C_{t-1} is the total allowable security cost per passenger using the Airport in year t-1 (whether of a positive or negative value) expressed in pounds relative to the previous year;

EC_t is the expected cumulative security cost over the five relevant years starting on 1 April 2014, in year t, which shall be calculated in accordance with table C.2 below:

Table C.2 Calculation of annualised allowable security costs

Year t =	2013/14	2014/15	2015/16	2016/17	2017/18
Changes in 2014/15	0	$5 \times C_{2014/15} \times Q_{2014/15}$	$5 \times C_{2014/15} \times Q_{2014/15}$	$5 \times C_{2014/15} \times Q_{2014/15}$	$5 \times C_{2014/15} \times Q_{2014/15}$
Changes in 2015/16	0	0	$4 \times C_{2015/16} \times Q_{2015/16}$	$4 \times C_{2015/16} \times Q_{2015/16}$	$4 \times C_{2015/16} \times Q_{2015/16}$
Changes in 2016/17	0	0	0	$3 \times C_{2016/17} \times Q_{2016/17}$	$3 \times C_{2016/17} \times Q_{2016/17}$
Changes in 2017/18	0	0	0	0	$2 \times C_{2017/18} \times Q_{2017/18}$
EC_t =	Sum rows	Sum rows	Sum rows	Sum rows	Sum rows

Where:

C_t is the total qualifying security claims per passenger using the Airport in year t (whether of a positive or negative value) expressed in pounds, relative to security costs per passenger in the previous year; and

Q_t is the actual number of passengers using the Airport in year t.

K_t: per passenger correction factor

C1.5 K_t is the per passenger correction factor (whether positive or negative value) to be made in year t, which is calculated as follows:

$$K_t = \frac{R_{t-2} - (Q_{t-2}M_{t-2})}{Q_t}\left(1 + \frac{I_{t-2}}{100}\right)^2$$

Where:

R_{t-2} is total revenue from airport charges in respect of relevant air transport services levied at the Airport in year t-2 expressed in pounds;

Q_t is passengers using the Airport in year t;

M_{t-2} is the maximum revenue yield per passenger using the Airport in year t-2;

I_{t-2} is the appropriate interest rate for year t-2, which is equal to:

- the specified rate plus 3% where K_t is positive; or
- the specified rate where K_t is negative. In both cases K_t takes no account of I_t for this purpose.

C1.6 In relation to the years 2014/15 and 2015/16, the values of R_{t-2}, Q_{t-2}, M_{t-2} and I_{t-2} shall be calculated by reference to the conditions as to airport charges imposed in relation to the Airport under the Airports Act 1986 in force at 31 March 2014.

T_t: trigger factor

C1.7 T_t is the trigger factor, which is a reduction in the maximum revenue yield per passenger occurring when the Licensee has not achieved specific capital investment milestones associated with relevant projects. The factor shall be calculated as follows:

$$T_t = \sum_i TM_{it}TF_{it}$$

Where:

For any specific trigger i, in year t:

TF_{it} is the number of months between the milestone month and the earlier of; the project completion date or the end of year t, up to a maximum of 12.

TM_{it} is the trigger payment associated with each trigger in year t;

Where:

$$\mathrm{TM_{ti}} = \mathrm{MTP_i}\frac{\mathrm{P_{t-1}}}{237.34}$$

MTP_i is the monthly trigger payment which is defined for each relevant project; and

P_{t-1} is the value of the ONS CHAW Retail Price Index in August in year t-1;

The triggers, milestone month and monthly trigger payments are defined in table C.3 and through the governance arrangements.

Table C.3 Triggers

Trigger	Milestone month	Monthly trigger payment
[To be defined in the final decision]	[To be defined in the final decision]	[To be defined in the final decision]

B_{t-2}: bonus factor

C1.8 B_{t-2} is the bonus factor based on performance in respect of specified elements k of the Licensee's service quality rebates and bonuses scheme (SQRB) as defined in Condition D1, in year t-2. The bonus factor shall be calculated in accordance with Schedule 1 of this Licence.

D_t: cumulative development capex adjustment

C1.9 D_t is the cumulative development capex adjustment, which adjusts the maximum revenue yield per passenger in year t to account for cumulative changes in the revenue requirement associated with development capex projects. D_t shall be calculated in accordance with table C.4 below.

Table C.4 Development capex adjustment

Year t =	2014/15	2015/16	2016/17	2017/18	2018/19
Additional revenue requirement in 2014/15	0.5 x $d_{2014/15}$	$d_{2014/15}$ x P_{t-1} / 237.34	$d_{2014/15}$ x P_{t-1} / 237.34	$d_{2014/15}$ x P_{t-1} / 237.34	$d_{2014/15}$ x P_{t-1} / 237.34
Additional revenue requirement in 2015/16	0	0.5 x $d_{2015/16}$	$d_{2015/16}$ x P_{t-1} / 237.34	$d_{2015/16}$ x P_{t-1} / 237.34	$d_{2015/16}$ x P_{t-1} / 237.34
Additional revenue requirement in 2016/17	0	0	0.5 x $d_{2016/17}$	$d_{2016/17}$ x P_{t-1} / 237.34	$d_{2016/17}$ x P_{t-1} / 237.34
Additional revenue requirement in 2017/18	0	0	0	0.5 x $d_{2017/18}$	$d_{2017/18}$ x P_{t-1} / 237.34
Additional revenue requirement in 2018/19	0	0	0	0	0.5 x $d_{2018/19}$
D_t =	Sum Rows x W	Sum Rows x W	Sum Rows x W	Sum Rows x W	Sum Rows x W

Where:

W is the Weighted Average Cost of Capital which shall have a value of 5.6%;

d_t is the annual development capex adjustment in year t defined in condition C1.10; and

P_{t-1} is the value of the ONS CHAW Retail Price Index in August in year t-1.

d_t: annual development capex adjustment

C1.10 The annual development capex adjustment in year t is an amount equal to the difference between the development capex allowance included in the Q6 settlement and the total capex associated with new core capex projects in year t, to be calculated as follows:

$$d_t = O_t - (V_t \frac{P_{t-1}}{237.34})$$

Where:

O_t is the total capex in year t associated with all development capex projects that have transitioned to core capex project status after the Q6 settlement either during or before year t, in accordance with the governance arrangements.

V_t is the development capex allowance in year t; and

P_{t-1} is the value of the ONS CHAW Retail Price Index in August in year t-1;

BR_t: business rate revaluation factor

C1.11 BR_t is the business rate revaluation factor in year t, calculated in accordance with the following formulae.

If: t = 2018/19

Then:

$$\mathrm{BR_t} = 0.8\left[\left(\mathrm{Z_{2017/18}}\right)(1 + \mathrm{RPI_{t-1}}) + \mathrm{Z_{2018/19}}\right]$$

Otherwise: $BR_t = 0$

Where:

RPI_{t-1} is the percentage change (positive or negative) in the ONS CHAW Retail Price Index between August in year t-1 and the immediately preceding August.

Z_t is the business rate forecast variance in year t, calculated in accordance with table C.5 below:

Table C.5 Business rate forecast variance

Year t =	Z_t =
2014/15	0
2015/16	0
2016/17	0
2017/18	$U_t - \left(£136{,}900{,}000 \ \frac{P_{t-1}}{237.34}\right)$
2018/19	$U_t - \left(£136{,}800{,}000 \ \frac{P_{t-1}}{237.34}\right)$

Where:

U_t is the business rate cost incurred in year t, to be calculated following the business rate revaluation to be undertaken by the Valuation Office Agency in 2017.

P_{t-1} is the value of the ONS CHAW Retail Price Index in August in year t-1.

Definitions

C.1.12 In this condition C.1:

(a) **airport charges** has the meaning assigned to it by regulation 3(1) of the Airport Charges Regulations 2011 (2011 No.2491);

(b) **allowable security claim per passenger** means the annual equivalent of the increase or decrease in security costs at the Airport in the relevant year t-1 which arise as a result of a change in required security standards at the Airport, as certified by the CAA, divided by the number of passengers using the Airport in that year;

(c) **average revenue yield per passenger** means the revenue from airport charges levied in respect of relevant air transport services in the relevant year, before any deduction of unpublished discounts or payments under Service Level Agreements, divided by the total number of passengers using the Airport in the relevant year;

(d) **business rate cost** is the tax paid by the Licensee associated with the Airport's land and property assets, as determined by the Valuation Office Agency;

(e) **core capex project** is any project that has reached Gateway 3, being taken forward for implementation following consultation in accordance with the governance arrangements;

(f) **development capex allowance** is a capex allowance included in the Q6 RAB based on the sum of development capex project P80 cost estimates [to be defined in the final decision];

(g) **development capex project** is any project under development that has not reached Gateway 3 in accordance with the governance arrangements, but for which an allowance has been included in the development capex allowance;

(h) **Gateway 3** has the meaning set out in the governance arrangements;

(i) **the governance arrangements** means the arrangements set out in the Q6 Capital Efficiency Handbook published by the Licensee by 1 October 2014 as agreed by the CAA;

(j) **passenger using the Airport** means a terminal passenger joining or leaving an aircraft at the Airport. A passenger who changes from one aircraft to another, carrying the same flight number is treated as a terminal passenger, as is an interlining passenger;

(k) **project completion date** is the date when in the judgement of the CAA the Licensee has achieved the trigger criteria as defined for each project in table C.3 and through the governance arrangements;

(l) **relevant air transport services** means air transport services carrying passengers that join or leave an aircraft at the Airport, including air transport services operated for the purpose of business or general aviation;

(m) **relevant year** means the period of twelve months ending with 31 March in each year;

(n) **specified rate** means the average of the Treasury Bill Discount

Rate (expressed as an annual percentage **interest** rate) published weekly by the Bank of England, during the 12 months from the beginning of September in year t-2 to the end of August in year t-1.

C2 Charges for other services[125]

C2.1 By [31 December 2014] and by [31 December] in each subsequent year the Licensee shall inform the CAA of the system used by it to allocate costs to the Specified Facilities. The Licensee shall make any amendments to its cost allocation system if so requested by CAA by [31 March] prior to each charging year commencing on [1 April].

C2.2 By [31 December 2014] and by [31 December] in each subsequent year the Licensee shall provide to the CAA statements of actual costs and revenues in respect of each of the Specified Facilities for the year ending the previous [31 March].

C2.3 By [31 March] each year, the Licensee shall provide to the CAA and to users of the Specified Facilities or their representatives prior to implementing any price changes a statement of the pricing principles for each item charged including the assumptions and relevant cost information adequate to verify that the charges derive from the application of the pricing principles.

C2.4 Where charges for the specified facilities are not established in relation to cost the Licensee shall provide to the CAA and to users of the Specified Facilities or their representatives a statement of the principles on the basis of which the charges have been set with full background information as to the calculation of such charges including statements of any comparables used.

C2.5 Where in respect of any year actual revenue for any of the Specified Facilities differs from that forecast for the purposes of the price control review for the period [1 April 2014] to [31 March 2019] (as specified by the CAA), the Licensee shall provide to the CAA and to users of the specified facilities or their representatives detailed reasons for the differences.

[125] The dates in this condition will be dependent on whether the CAA decides to set the Q6 price control to 4 years and 9 months to allow for a change in the reporting year.

Definitions

C2.6 In this Condition C2 the Specified Facilities are: desk licences (other than check-in desks), staff car parking, staff ID cards, fixed electrical ground power, airside parking, airside licences, cable routing, maintenance, heating and utility services and facilities for bus and coach operators.

C3 Procurement of capital projects

C3.1 The Licensee shall, so far as is reasonably practicable, secure the procurement of capital projects in an efficient and economical manner, taking account of value for money including scope, aggregated direct and indirect costs for the airlines affected by the project, programme timing risk and benefit to users of air transport services.

C3.2 The following obligations in this Condition C3 are without prejudice to the generality of Condition C3.1 and compliance with the following obligations shall not necessarily be treated in itself as sufficient to secure compliance with Condition C3.1. In fulfilling these obligations, the Licensee shall at all times comply with Condition C3.1

Publication of a Procurement Code of Practice

C.3.3 By 1 October 2014 the Licensee shall publish a Procurement Code of Practice setting out the principles, policies and processes by which it will comply with Condition C3.1.

C.3.4 As a minimum, the Procurement Code of Practice shall include the following information:

(a) the acquisition principles, which shall ensure that the design and delivery of relevant capital projects are carried out in a manner which provides an appropriate balance of responsibility between the parties for cost certainty, risk, schedule and specification;

(b) the options for acquisition models that the Licensee intends to apply;

(c) the critical criteria that the Licensee intends to apply for adopting a particular acquisition model; and

(d) the key principles that the Licensee will apply to all contractors with regards to the operational requirements of airlines and the Licensee's own airport operation services.

C.3.5 The information required under Condition C3.4 shall demonstrate how the Licensee will:

(a) further the objective for procurement in Condition C3.1;

(b) incentivise efficiency by its contractors; and

(c) take account of the overall performance of its contractors in awarding additional projects.

C3.6 The Licensee shall publish by 1 May each year a report identifying instances where significant capital investment work has not been procured in line with the Procurement Code of Practice, providing in each case evidence and analysis as to why an alternative procurement method better met the objective.

C4 Charges for cargo only operators

C4.1 In each of the five consecutive years beginning on 1 April 2014 Licensee shall not levy airport charges in respect of air services that do not fall within the definition of passenger air services that are higher than are levied in respect of equivalent air services falling within that definition.

Definitions

C4.2 In this Condition C4 passenger air services means air services carrying passengers that join or leave an aircraft at the Airport, including air services operated for the purpose of business or general aviation.

Part D: Service quality conditions

D1 Service quality standards, rebates, bonuses and publication

D1.1 The Licensee shall comply with the Statement of Standards, Rebates and Bonuses ("the Statement").

D1.2 The Statement is in Schedule 1 to this Licence and subject to the following provisions of this condition is a condition of this Licence.

D1.3 The Licensee shall maintain records of the actual quality of service, rebates and bonuses in such form and detail that the performance can be independently audited against the standards set out in the Statement.

D1.4 The Licensee shall publish relevant information about its performance in accordance with the requirements specified in the Statement.

D1.5 The Licensee shall facilitate and pay for regular, independent audits of the adequacy, measurement and workings of the service quality rebates and bonuses (SQRB) scheme, including the QSM. The independent auditors for this purpose will be appointed by the CAA and shall report to the CAA.

D1.6 The CAA may by notice modify the Statement with immediate effect where there is written agreement between:

(a) the Licensee; and

(b) the AOC.

D1.7 Where the Licensee and the AOC cannot reach agreement, either party may request that the CAA determines the modification.

D1.8 Where a request has been made under Condition D1.7, the CAA may by notice determine the modifications, following a reasonable period of consultation.

D1.9 The modifications that can be made under Conditions D1.6 and D1.7 are any modifications to Schedule 1 except:

(a) any modifications to the elements listed in the 'Element' columns of Table 1 to Table 5 and Table 8; and

(b) any modifications to the table of bonuses (Table 7) and to the calculation of the bonus factor set out in the Statement.

D1.10 Modifications can be made to the Statement under Conditions D1.6 and D1.8 no more frequently than one group of changes in each three month period.

Definitions

D1.11 In this Condition D1:

(a) the AOC means Heathrow Airline Operators Committee, a company limited by guarantee representing all airlines at the Airport. Agreement of the AOC shall be decided according to the AOC's governance arrangements; and

(b) the QSM has the meaning set out in the Statement.

D2 Operational Resilience

D2.1 The purpose is to secure the availability and continuity of airport operation services at the Airport, particularly in times of disruption, to further the interests of users of air transport services in accordance with best practice and in a timely, efficient and economical manner.

D2.2 The Licensee shall achieve the purpose so far as is reasonably practicable having regard to all relevant circumstances.

D2.3 The following obligations in this Condition D.2 are without prejudice to the generality of Condition D2.2 and compliance with the following obligations shall not necessarily be treated in itself as sufficient to secure compliance with Condition D2.2. In fulfilling these obligations the Licensee shall at all times comply with Condition D2.2

Resilience plans

D2.4 By 1 October 2014 the Licensee shall publish one or more plan(s) or other documents setting out the principles, policies and processes by which it will comply with Condition D2.2

D2.5 As a minimum, the plan(s) shall include those elements set out in any relevant guidance issued by the CAA as revised from time to time.

D2.6 In particular the plan(s) shall include details on how the Licensee, in cooperation with airlines using the Airport, will seek to ensure the welfare of users of air transport services during disruption.

D2.7 Prior to publishing any plans or other documents under Condition D2.4 the Licensee shall consult all relevant parties on those plans or documents.

D2.8 The Licensee shall allow a reasonable time for relevant parties to respond to any consultation issued under Condition D2.7

D2.9 The Licensee shall, from time to time or when so directed by the CAA, review and, if necessary and following consultation, revise any plans or other documents published under Condition D2.4 so that they may better comply with Condition D2.2.

D2.10 No revision of any CAA guidance under Condition D2.5 or CAA direction under Condition D2.9 shall have effect unless the CAA has first consulted the Licensee and any relevant parties.

Coordination and cooperation

D2.11 The Licensee shall so far as is reasonably practicable coordinate and cooperate with all relevant parties at the Airport to meet the requirements of Condition D2.2.

D2.12 The Licensee shall set up and facilitate a committee of relevant parties or organisations representing those relevant parties. All relevant parties shall have the right to be on this committee or, if they so wish, to be represented on it by an organisation appointed to that effect.

D2.13 The Licensee shall develop rules of conduct for airlines and suppliers of groundhandling services to follow, particularly during disruption, in consultation with those parties. The rules of conduct shall be set out in the Licensee's Conditions of Use and in any written arrangements, including licences issued by the Licensee, for the supply of groundhandling services and shall comply with the following principles:

(a) they shall be applied in a proportionate manner to the various airlines and suppliers of groundhandling services; and

(b) they shall relate to the purpose in Condition D2.1;

D2.14 The Licensee shall take all reasonable steps to ensure that airlines and suppliers of groundhandling services comply with the rules of conduct.

Provision of information

D2.15 In the event of service disruption however caused the Licensee shall so far as is reasonably practicable:

(a) coordinate the communication of timely, accurate, clear and relevant operational information, conditions and decisions to relevant parties;

(b) provide, or ensure the provision of timely, accurate, clear and relevant information about its operations to, and adequate communication with, users of air transport services; and

(c) provide timely, accurate, clear and relevant information to users of air transport services including, but not limited to, information about their relevant rights under the Denied Boarding Regulations during disruption.

Definitions

D2.16 In this Condition D.2

(a) Conditions of Use means the Heathrow Airport Conditions of Use including Airport Charges, as reviewed and published by the Licensee on an annual basis;

(b) The Denied Boarding Regulations means Regulation (EC) 261/2004 of the European Parliament and of the Council of 11 February 2004 establishing common rules on compensation and assistance to passengers in the event of denied boarding and of cancellation or long delay of flights, and repealing Regulation (EEC) No 295/91;and

(c) Relevant parties means those providing a service to users of air transport services at the airport including airlines, providers of groundhandling services, the provider of aerodrome air navigation services, fuel and energy suppliers and the Border Agency.

Part E Financial conditions

E1 Regulatory accounting requirements[126]

E1.1 This Condition applies for the purpose of making available, in a form and to a standard reasonably satisfactory to the CAA, such audited regulatory accounting information as will, in furtherance of the requirements of this Licence:

(a) enable the CAA, airlines and users of air transport services to assess on a consistent basis the financial position of the Licensee and the financial performance of provision of airport operation services and associated services provided in connection with the Airport;

(b) assist the CAA, airlines and users of air transport services to assess performance against the assumptions underlying the price control conditions in Conditions C1 and C2 of this Licence; and

(c) inform future price control reviews.

E1.2 The Licensee shall keep and, so far as it is able, procure that any related undertaking keeps the accounting records required by the Companies Act 2006 to keep in such form as is necessary to enable the Licensee to comply with this Condition and the Regulatory Accounting Guidelines.

E1.3 The Licensee shall prepare on a consistent basis from the accounting records referred to in Condition E1.2, in respect of the financial year commencing on [ ] and each subsequent financial year, regulatory accounts in conformity with the Regulatory Accounting Guidelines for the time being in force in accordance with this Condition. The first financial year of the Licensee for the purposes of this Licence shall run from [ ] to [ ], and thereafter each financial year of the Licensee shall run from [ ] to the following [ ] unless otherwise agreed with the CAA.

[126] The dates in this condition will be dependent on whether the CAA decides to set the Q6 price control to 4 years and 9 months to allow for a change in the reporting year.

E1.4 The Regulatory Accounting Guidelines prepared pursuant to Condition E1.3 shall, without limitation:

(a) provide that, except so far as the CAA reasonably considers otherwise, the regulatory accounts shall be prepared in accordance with applicable law and International Financial Reporting Standards (IFRS) as adopted by the EU from time to time; and

(b) state the accounting policies to be adopted.

E1.5 The Licensee shall:

(a) procure, in respect of the regulatory accounts prepared in accordance with Condition E1.3 in respect of a financial year, a report by the Auditors addressed to the CAA stating whether in their opinion those accounts including accompanying commentary on performance have been properly prepared in accordance with this Condition and the Regulatory Accounting Guidelines and on that basis fairly present the financial position and the financial performance of the Licensee;

(b) deliver to the CAA the Auditors' report referred to in sub-paragraph (a) and the regulatory accounts referred to in Condition E1.3 as soon as reasonably practicable, and in any event not later than six months after the end of the financial year to which they relate; and

(c) arrange for copies of the regulatory accounts and Auditors' report referred to in Conditions E1.5(a) and (b), respectively, to be made publicly available and, so far as reasonably practicable, to do so when the annual statutory accounts of the Licensee are made available.

E1.6 In this Condition E1 Regulatory Accounting Guidelines means the guidelines, published from time to time by the CAA so as to fulfil the purpose set out in Condition E1.1, which govern the format and content of such regulatory accounts and the basis on which they are to be prepared.

E2 Financial Resilience

Certificate of adequacy of resources

E2.1 The Licensee shall at all times act in a manner calculated to secure that it has available to it sufficient resources including (without limitation) financial, management and staff resources, to enable it to provide airport operation services at the Airport.

E2.2 The Licensee shall submit a certificate addressed to the CAA, approved by a resolution of the board of directors of the Licensee and signed by a director of the Licensee pursuant to that resolution. Such certificate shall be submitted within four months of the end of the Licensee's financial year and shall include a statement of the factors which the directors of the Licensee have taken into account in preparing that certificate. Each certificate shall be in one of the following forms:

(a) "After making enquiries based on systems and processes established by the Licensee appropriate to the purpose, the directors of the Licensee have a reasonable expectation that the Licensee will have available to it, after taking into account in particular (but without limitation) any dividend or other distribution which might reasonably be expected to be declared or paid, any amounts of principal and interest due under any loan facilities and any actual or contingent risks which could reasonably be material to their consideration, sufficient financial and other resources and financial and operational facilities to enable the Licensee to provide airport operation services at London Heathrow Airport of which the Licensee is aware or could reasonably be expected to make itself aware it is or will be subject for a period of two years from the date of this certificate."

(b) "After making enquiries based on systems and processes established by the Licensee appropriate to the purpose, the directors of the Licensee have a reasonable expectation, subject to what is said below, that the Licensee will have available to it, after taking into account in particular (but without limitation) any dividend or other distribution which might reasonably be expected to be declared or paid, any amounts of principal and interest due under any loan facilities, and any actual or contingent risks which could reasonably be material to their

consideration, sufficient financial and other resources and financial and operational facilities to enable the Licensee to provide airport operation services at London Heathrow Airport of which the Licensee is aware or could reasonably be expected to make itself aware it is or will be subject for a period of two years from the date of this certificate. However, they would like to draw attention to the following factors which may cast doubt on the ability of the Licensee to provide airport operation services at London Heathrow Airport for that period……..”

(c) “In the opinion of the directors of the Licensee, the Licensee will not have available to it sufficient financial or other resources and financial and operational facilities to provide airport operation services at London Heathrow Airport of which the Licensee is aware or of which it could reasonably be expected to make itself aware or to which it will be subject for a period of two years from the date of this certificate.”

E2.3 The Licensee shall inform the CAA in writing as soon as practicable if the directors of the Licensee become aware of any circumstance which causes them no longer to have the reasonable expectation expressed in the then most recent certificate given under Condition E2.2(a) or (b).

E2.4 The Licensee shall obtain and submit to the CAA with each certificate provided under Condition E2.2 a report prepared by its Auditors stating whether or not the Auditors are aware of any inconsistencies between, on the one hand, that certificate and the statement submitted with it and, on the other hand, any information which they obtained during their audit of the relevant year end accounts of the Licensee.

E2.5 If the Licensee or any of its linked companies (or, where applicable the Directors and Officers of any of those undertakings) seeks, or is advised to seek, advice from an insolvency practitioner or any other person relating to

(a) the Licensee’s financial position or ability to continue to trade; or

(b) that linked company’s financial position or ability to continue to trade, only to the extent that it would affect the Licensee’s financial position or ability to continue to trade,

the Licensee shall inform the CAA within 3 working days.

Restriction on activities

E2.6 The Licensee shall not, and shall procure that its subsidiary undertakings shall not, conduct any business or carry on any activity other than:

(a) the Permitted Business; and/or

(b) any other business or activity for which the CAA has given its written consent for the purposes of this Condition, such consent not to be unreasonably withheld or delayed.

Ultimate holding company undertakings

E2.7 The Licensee shall procure from each Covenantor a legally enforceable undertaking in favour of the Licensee in the form specified by the CAA that that Covenantor will:

(a) refrain from any action, and procure that every subsidiary of the Covenantor (other than the Licensee and its subsidiaries) will refrain from any action, which would then be likely to cause the Licensee to breach any of its obligations under this Licence;

(b) promptly upon request by the CAA (specifying the information required) provide to the CAA (with a copy to the Licensee) information of which they are aware and which the CAA reasonably considers necessary in order to enable the Licensee to comply with this Licence.

E2.8 Such undertaking shall be obtained within seven days of the company or other person in question becoming a Covenantor and shall remain in force for so long as the Licensee remains the holder of this Licence and the Covenantor remains a Covenantor.

E2.9 The Licensee shall:

(a) deliver to the CAA, within seven days of obtaining the undertaking required by Condition E2.8, a copy of such undertaking;

(b) inform the CAA as soon as practicable in writing if the directors of the Licensee become aware that the undertaking has ceased to be legally enforceable or that its terms have been breached; and

(c) comply with any direction from the CAA to enforce any such undertaking.

Change to contractual ring fence

E2.10 The Licensee shall not amend, vary, supplement or modify or concur in the amendment, variation, supplementation or modification of any of the finance documents in respect of credit rating requirements (whether in each case in the form of a written instrument, agreement or document or otherwise) (a "Variation") unless it has given prior written notice thereof to the CAA. The Licensee shall, as soon as reasonably practicable:

(a) notify the CAA of the possibility of any such Variation; and

(b) provide a summary of the executed change.

E2.11 The provisions of Condition E2.10 shall not apply to any administrative or procedural Variation.

Definitions

E2.12 In this Condition E2:

(a) the Covenantor means a company or other person which is at any time an ultimate holding company of the Licensee.

(b) a linked company means any company within the Licensee's Group where the financial position of that company or its inability to continue to trade would have an adverse effect on the Licensee's financial position or ability to continue to trade;

(c) Permitted Business means:

(i) any and all business undertaken by the Licensee and its subsidiary undertakings as at 1 April 2014;

(ii) to the extent that it falls outside the definition in Condition E2.12(c)(i), the business of owning, operating and developing the Airport and associated facilities by the Licensee and its subsidiary undertakings (including, without limitation, any and all airport operation services, provision of facilities for and connected with aeronautical activities including retail, car parks, advertising and surface access and the infrastructure development thereof); and

(iii) any other business, provided always that the average of any expenses incurred in connection with such businesses

during any one financial year is not more than 2% of the value of the RAB at the start of the financial year.

E3 Continuity of service plan

E3.1 The purpose of the continuity of service plan shall be to describe in detail the legal, regulatory, operational and financial information that an administrator, receiver, new management or similar could reasonably be expected to require in order for the administrator to efficiently carry out its functions and to remain compliant with this Licence and the Licensee's aerodrome licence.

E3.2 The Licensee shall prepare and at all times maintain a continuity of service plan fulfilling the requirements of Condition E3.1.

E3.3 The continuity of service plan prepared under Condition E3.2 shall be submitted to the CAA as follows:

(a) the first continuity of service plan shall be submitted as soon as practicable, and in any event not later than 1 October 2014;

(b) subsequent continuity of service plans within 20 business days of the CAA's written request.

E3.4 The form, scope and level of detail of the plan referred to in this Condition shall be approved by the CAA, (such approval not to be unreasonably withheld or delayed).

E3.5 At least every 12 months the Licensee shall review the appropriateness of its continuity of service plan and submit to the CAA a certificate addressed to the CAA, approved by a resolution of the board of directors of the Licensee and signed by a director of the Licensee pursuant to that resolution. Such certificate shall be submitted [within four months] of the end of the Licensee's financial year in the following form:

"The Licensee has reviewed its continuity of service plan. In the opinion of the directors of the Licensee the continuity of service plan is fit for purpose and complies with its obligations under its Licence.

Part F: Consultation conditions

F1.1 The Licensee shall ensure that:

(a) it consults relevant parties on:

(i) its proposals for future investment in the short, medium and long-term that have the potential to affect those parties;

(ii) its proposals for the development and delivery of key capital projects identified in its future investment proposals in Condition F1.1.a.i;

(iii) charges that are subject to Condition C2;

(iv) the service quality regime in Condition D1;

(v) its traffic forecasts;

(vi) its operational resilience activities in Condition D2; and

(vii) its policies and proposals for any other airport operation service it provides,

so that those parties have sufficient information to take an informed view; and

(b) the views of the relevant parties are taken into account in deciding on the future development of the proposals.

F.1.2 The Licensee shall by 1 October 2014 consult on, agree and publish one or more protocols setting out how it will satisfy the obligation in Condition F1.1.

F.1.3 As a minimum, the protocols shall include those elements set out in any relevant guidance issued from time to time by the CAA.

F.1.4 No revision of any CAA guidance under Condition F1.3 shall have effect unless the CAA has first consulted the Licensee and any other relevant parties.

F1.5 In compliance with Condition F1.2, the Licensee may publish any protocol that is already agreed with relevant parties and is in force at the date this Licence comes into force.

F1.6 The Licensee shall, in consultation with relevant parties, review the protocols from time to time and update them as necessary, or if directed by the CAA by notice to do so.

F1.7 Where the Licensee cannot reach agreement with the relevant parties under Conditions F1.2 or F1.6, it may refer the matter to the CAA for determination and the CAA may, by notice, determine it.

F1.8 In this condition F1, relevant parties means those stakeholders that need to be consulted for each protocol, including any groups or boards already established for the purpose of developing protocols and in place at the date this Licence was granted.

Schedule 1

Statement of Standards, Rebates and Bonuses

1. Introduction

1.1 This Schedule sets out the Standards, Rebates and Bonuses as referred to in Conditions C1 and D1 of this Licence. This Schedule may be modified from time to time in accordance with Condition D1.

1.2 The remaining parts of this Schedule are:

2. Components of the service quality rebates and bonuses (SQRB) scheme
    - 2.A Quality of Service Monitor (QSM)
    - 2.B Queue times
    - 2.C Availability
    - 2.D Aerodrome congestion term (ACT)
3. Rebates
    - 3.A Payment
    - 3.B Calculation
4. Bonuses
    - 4.A Payment
    - 4.B Calculation
5. Publication
6. General Matters
    - 6.A Rounding
    - 6.B Definitions
7. Tables

2. Components of the service quality rebates and bonuses (SQRB) scheme

2.1 The SQRB scheme consists of elements, standards, bonuses, rebates and publication requirements as set out in Table 1 to Table 8 of this Schedule. In these tables:

a) 'Group' defines the group in which the related elements belong to;

b) 'Element' identifies the relevant element i of service;

c) 'Metric' defines the basis of measurement for each relevant element i;

d) '$Standard_{i,j,a}$' defines the relevant standard of element i in month j in terminal a;

e) $ANNMAX_i$ is the maximum percentage of Airport Charges for the Relevant Year relating to air transport services for the carriage of passengers for the relevant terminal;

f) $R_{i,j}$ is one-sixth of the maximum percentage of Airport Charges for the Relevant Year relating to air transport services for the carriage of passengers for the relevant terminal; and

g) PSE is passenger-sensitive equipment including lifts, escalators and travelators. PSE (priority) is a set of assets for each terminal agreed locally between the Licensee and the AOC and notified in writing from time to time to the CAA.

2.A Quality of Service Monitor (QSM)

2.2 QSM is the Quality of Service Monitor survey. The results of the QSM survey are used to assess the Licensee's performance in the passenger satisfaction elements as specified in Table 1 to Table 5 and Table 7 of this Schedule.

2.3 The performance for passenger satisfaction elements is measured by moving annual averages weighted by passenger numbers in the relevant terminal, using the formulae:

a) Except for the 12 months after air transport services for the carriage of passengers commence at Terminal 2, performance of element i in month j in terminal a is:

$$\text{Performance}_{i,j,a} = \frac{\sum_{m=1}^{m=12}\left[\pi_{j-m+1,a}\text{Monthly performance}_{i,j-m+1,a}\right]}{\sum_{m=1}^{m=12}\pi_{j-m+1,a}}$$

b) For the 12 months after air transport services for the carriage of passengers commence at Terminal 2, performance of element i in month j in Terminal 2 is:

$$\text{Performance}_{i,j,2} = \frac{\sum_{m=1}^{m=\mu}\left[\pi_{j-m+1,2}\text{Monthly performance}_{i,j-m+1,2}\right]}{\sum_{m=1}^{m=\mu}\pi_{j-m+1,2}}$$

where:

$\pi_{j,a}$ is the number of passengers in month j in terminal a;

$\text{Monthly performance}_{i,j,a}$ is the performance of element i in month j in terminal a;

m is a counter of the 12 months ending in month j; and

μ is a counter of months where

- the month after air transport services for the carriage of passengers commence at Terminal 2 = 1;
- the second month after air transport services for the carriage of passengers commence at Terminal 2 = 2, so on and so forth;
- the twelfth month after air transport services for the carriage of passengers commence at Terminal 2 = 12.

2.4 The QSM shall be conducted by the Licensee using the following approach:

a) the QSM shall be based on the results of survey interviews with not less than 30,000 passengers (departing and arriving interviews combined) per year at the airport;

b) the interviews obtained shall reflect the expected profile of passengers travelling through the airport weighted such that they are representative of:

i) country of destination for departing interviews;

ii) country of origin for arriving interviews;

c) in instances where the country total traffic is high, the sample may be sub-weighted by individual airport destinations;

d) the QSM scores shall be calculated through a weighted average of the individual scores, weighted by actual traffic statistics for the month;

e) departing passengers shall be interviewed at the gate or gate area, immediately prior to boarding the aircraft;

f) arriving passengers shall be interviewed on the arrivals concourse just before leaving the terminal building;

g) selection of passengers to take part in the survey shall be random and unbiased with respect to demographic characteristics; and

h) during the course of a month, interviewing shall be conducted in each terminal on a selection of mornings/afternoons and weekdays/weekend days.

2.5 In respect of the relevant elements for measuring performance and calculating rebates and bonuses, the interviewing procedures specified in paragraph 2.6 to 2.12 shall apply.

Introduction

2.6 To invite passengers to take part in the QSM survey:

a) [for arriving and departing passengers] “I am now going to ask you a series of questions which require you to rate your answers on the same rating scale”. The showcard is then displayed with the following responses on it: Extremely poor (1), Poor (2), Average (3), Good (4), Excellent (5).

Departure lounge seating availability

2.7 A simple average of the QSM scores for the question on seating:

a) [for departing passengers] “Now, thinking about the departures lounge, how do you rate the ease of finding a seat?”

Cleanliness

2.8 A weighted average of the QSM scores for five cleanliness questions, weighted by the number of passengers using each type of facility:

a) [for arriving and departing passengers] “Generally, how would you rate the cleanliness of the Terminal overall?"

b) [for arriving and departing passengers] “How would you rate the toilet facilities level of cleanliness?”

c) [for departing passengers] "How would you rate the level of cleanliness of the check-in area?”

d) [for departing passengers] “How would you rate the cleanliness in the lounge?”

e) [for arriving passengers] “How would you rate the cleanliness of the arrivals concourse?”

Way-finding

2.9 A weighted average of the QSM scores for the three way-finding questions, weighted by the number of passengers using each form of way-finding:

a) [for departing passengers] “How easy for you was it to find your way around within this terminal?”

b) [for departing passengers] “Have you been between terminals today? How would you rate the ease of finding your way?”

c) [for departing passengers] “How easy was it to find your way around within this terminal?”

Flight Information

2.10 A simple average of the QSM scores for the three flight information questions:

a) [for departing passengers] “Flight information (screens and boards only) – how do you rate the ease of finding?”

b) [for departing passengers] “Flight information (screens and boards only) – how do you rate the ease of reading?”

c) [for departing passengers] “Flight information (screens and boards only) – how do you rate the ease of understanding the information?”

Security

2.11 A simple average of the QSM scores for the four security questions:

a) [for departing passengers] “How would you rate the queuing time?”

b) [for departing passengers] “and the helpfulness/courtesy of the staff?”

c) [for departing passengers] “and the care taken with your belongings during the checks?”

d) [for departing passengers] “and the organisation/efficiency of the whole Security process?”

Wi-fi

2.12 A simple average of the QSM scores for the second question below

a) [for departing and arriving passengers, to filter out non-Wi-fi users] “Have you used the Wi-fi service today at Heathrow?”

b) [for departing and arriving passengers who answered ‘yes’ in (a)] “How would you rate the Wi-fi service in the Terminal on a scale of 1-5?”

2.B Queue times

2.13 **Queue times** are used to assess the Licensee’s performance in central search, transfer search and staff search as specified in Table 1 to Table 5 of this Schedule.

2.14 Before the introduction of the automated queue measurement technology, a **Queue Time** for central search and transfer search shall be the delay imposed by the queue for security including ticket presentation and facial capture, up to the point that the passenger reaches the security roller bed.

2.15 Upon the introduction of the automated queue measurement technology, the definition of a **Queue Time** for central search and transfer search shall be agreed between the Licensee, the AOC and the CAA.

2.16 **Queue Times** shall be calculated by:

$$A - B + C$$

where:

A is the elapsed time between passengers or staff passing a defined entry portal and reaching the security roller bed (the exit point);

B is an allowance for the free flow transit time from the point when passengers reach the entry portal to the point where they reach the security roller bed (including an allowance for any intermediate processes conducted between the portal and the roller bed). This is referred to as the 'unimpeded walk time'; and

C is any additional time that passengers spend in the queue for search before reaching the defined entry portal.

2.17 The unimpeded walk times, the inclusion of any uni-queue or maze systems, process delay times, entry and exit points allowed for in the above equation shall be agreed locally for each search area between the Licensee and the AOC with final endorsement at the joint airport-airline Service Quality Working Group.

2.18 The **Defined Method** of data collection shall be agreed locally for each search area between the Licensee and the AOC with final endorsement at the joint airport-airline Service Quality Working Group. The **Defined Method** is either:

a) Manual method – where queues are measured by the Manual method in the manner agreed by the CAA during Q5, times will be taken by manually noting the queue time of the first passenger presenting to either the portal (if the queue does not extend to the portal) or the back of the queue (if the queue extends beyond the portal) after a clockwise 15-minute period. For example, taking four measurements in every hour at hh:mm, hh:mm+15, hh:mm+30, hh:mm+45 where mm lies between 0 and 14) during the relevant time over which performance counts for rebates, up to the point that the passenger reaches the security roller bed; or

b) Automated method – where queues are measured by the automated method, times will be taken by an electronic system that has been reviewed and endorsed by the Relevant Parties and the CAA.

2.19 The proportion of measurements under a specified number of minutes in a period shall be calculated by dividing the number of

measurements under a specified number of minutes by the total number of measurements taken in the period.

2.20 Upon the introduction of the automated queue measurement technology and agreement between the Licensee, the AOC and the CAA, a per-passenger metric is to be adopted for central search and transfer search. The per-passenger metric shall be calculated as:

$$\mathrm{PPM} = \sum_{\mathrm{m}} \frac{\mathrm{Pax_m}}{\sum_{\mathrm{m}} \mathrm{Pax_m}} \cdot \mathrm{C_m}$$

where:

$\mathrm{Pax_m}$ is the estimated number of passengers using the search facility in period m;

$\mathrm{C_m}$ is the proportion of measurements under a defined number of minutes in period m as specified in Table 1 to Table 5 of this Schedule and it shall be calculated by dividing the number of measurements under a defined number of minutes by the total number of measurements taken in period m; and

the periods m shall be agreed locally between the Licensee and the AOC with final endorsement at the joint airport-airline Service Quality Working Group and the CAA.[127]

2.C Availability

2.21 Availability shall be defined as 'serviceable and available for use, independent of any other element'. It shall be used to assess the Licensee's performance in respect of certain passenger operational elements and airline operational elements as specified in Table 1 to Table 5 of this Schedule.

2.22 Availability of relevant facilities is defined for element i in month j in terminal a as:

$$\mathrm{Availability_{i,j,a}} = 100 \cdot \left(1 - \frac{\sum_{\mathrm{k=1}}^{\mathrm{n_{i,a}}} \mathrm{TU_{k,j,a}}}{\mathrm{n_{i,a}} \cdot \mathrm{Time_j}}\right)$$

[127] This specification allows for setting the number of periods m to 1 (the whole month), or to make a passenger weighted average of the measurements by defining two or more periods in the month (e.g. peak/off-peak or hourly periods).

where:

$Availability_{i,j,a}$ is the percentage availability of element i in month j in terminal a;

$TU_{k,j,a}$ is the relevant time elapsed during which asset k in terminal a is unavailable as set out in paragraph 2.23;

$n_{i,a}$ is the number of assets included in element i in terminal a; and

$Time_j$ is the total relevant time in month j as defined in Table 1 to Table 5 of this Schedule.

2.23 The time elapsed during which an asset is unavailable shall be measured from when a fault is reported by automatic back indication or by inspection or by a third party report (subject to the **Exclusions** in paragraph 2.24).

2.24 The following sets out the limited circumstances when time will not be required to be counted towards the time when equipment is unavailable or when other standards are not met. Such circumstances are referred to as **Exclusions**.

a) specific stands, jetties and fixed electrical ground power to accommodate annual and five yearly statutory inspections, where this work is done in consultation with the AOC, and the period specified in advance, the exclusion not to be more than two days over any Relevant Year for any particular relevant asset. If works extend beyond any notified period, then any additional downtime shall count against the serviceability standard;

b) specific passenger-sensitive equipment or arrivals baggage carousels to accommodate planned maintenance, where the work is done in consultation with the AOC, the period is specified in advance, the work falls in a dead-band period as defined in paragraphs 6.3(f) and 6.3(g), and the exclusion is not more than 30 days over any Relevant Year for any particular relevant asset. If works extend beyond a notified period, then any additional downtime shall count against the serviceability standard. (If a specific asset is measured

against both the passenger-sensitive equipment (general) standard and the passenger-sensitive equipment (priority) standard this exclusion shall apply to both);

c) security queues for central search, transfer search, staff search and control post search for two hours following evacuations;

d) closure of passenger-sensitive equipment (lifts, escalators, travelators) in areas immediately adjacent to security queues where it is considered by the Licensee that their continued use is likely to lead to unacceptable health and safety risks due to increased congestion;

e) stands taken out of service to accommodate high security flights;

f) closure of stands to ensure passenger safety during evacuation, emergency or safety incidents and relevant passenger-sensitive equipment subject to the AOC agreeing after the event that such equipment was in the immediate vicinity of the stands or the incident;

g) downtime where equipment is automatically shut down by fire alarm activation and the fire alarm activation is not due to a system fault with the fire alarm;

h) passenger-sensitive equipment where downtime is due to the activation of an emergency stop button or break glass, limited to equipment where there is back indication of serviceability and limited to 10 minutes for each occurrence in the case of false alarms;

i) downtime to accommodate fire risk-assessed deep cleans where an assessment of the equipment's condition has shown that a deep clean is needed to ensure a safe operation can be maintained and to reduce the risk of fire;

j) equipment downtime due to damage of, or misuse of, baggage carousels, jetties, stand equipment (e.g. lighting) or fixed electrical ground power units likely to have been caused by airlines or their agents or to passenger-sensitive equipment where an airline or airline agent has accepted responsibility or

where the AOC agrees with the airport in writing that the likelihood is that the damage has been caused by an airline or its agent;

k) downtime where a fault has been reported by airlines or their agents, but, when the engineers attend the site, no fault is found and the equipment is working;

l) equipment or stands taken out of service whilst a major investment project is undertaken in the vicinity where this is done in consultation with users and the timing of work has been determined after consultation with the AOC, and the period specified in advance. If work extends beyond this period, then the additional downtime shall count against the serviceability target;

m) equipment or stands taken out of service for replacement or major refurbishment work, when the timing of work has been determined after consultation with the AOC, and the period specified in advance. If work extends beyond this period, then the additional downtime shall count against the serviceability target;

n) during trials of new security processes or equipment. The scope and terms of exclusion shall be for predetermined periods that have been agreed by the Licensee and the AOC; and

o) during major operational disruption events which have a major impact on security staff resource, passenger volumes or off-schedule activity. The applicability and duration of the exclusion in respect of these events shall be as agreed with the AOC where such agreement can be made retrospectively.

2.D Aerodrome congestion term (ACT)

2.D(1) Basis of rebates

2.25 $\mathrm{Rebate}_{\mathrm{ACT}}$ shall be calculated across all the air transport services for the carriage of passengers at the airport and the same rebates as a percentage of the relevant charges shall be paid to the Relevant Parties using all the terminals at the airport.

2.26 Except as set out in paragraph 2.40, a rebate shall be payable in respect of departures or arrivals where a **Material Event** has occurred and which was caused primarily by a failure on the part of the Licensee or of the provider of aerodrome air traffic services or their respective agents or contractors (where 'agents' exclude bodies carrying out activities specified in the annex of the EU Ground Handling Directive[128]); and this has generated a **Material Operational Impact** as defined in paragraph 2.30 below.

2.D(2) Definitions of terms

Material Events

2.27 A **Material Event** is one or more of the following:

a) radar or other critical air traffic control equipment or systems failure;

b) tower staff shortages;

c) tower industrial action;

d) industrial action by the Licensee's operational staff;

e) closure of runways;

f) closure of rapid exit taxiways, rapid access taxiways, and other runway exit or access taxiways or both;

g) closure of aircraft manoeuvring areas;

h) runway or taxiway lighting system failures;

i) failure of other critical equipment e.g. fire tenders; or

j) where bad weather has been forecast and has materialised and the **Relevant Bad Weather Equipment** as set out in paragraph 2.29 is not available or has not been deployed.

2.28 The Licensee shall not be liable to pay rebates for disruption due to bad weather unless one or more of the factors above apply.

Relevant Bad Weather Equipment

2.29 The **Relevant Bad Weather Equipment** is defined as in respect of:

[128] Council Directive 96/67/EC of 15 October 1996 on access to the groundhandling market at Community airports (Official Journal L 272 25/10/1996 p 0036-0045).

a) Low visibility procedures:

i) Instrument Landing System (ILS), Instrumented Runway Visual Range (IRVR) system, Surface Movement Radar (SMR), Microwave Landing System (MLS) (where installed) and Advanced Surface Movement Guidance and Control System (ASMGCS) (where installed); and

ii) operational availability of lighting and signage systems to enable Category 2/3 operations to continue.

b) Ice

i) airfield (i.e. runways, taxiways and manoeuvring area) and aircraft stands anti/de-icing equipment and media, (as specified to the AOC); and

ii) operational availability and deployment of trained staff to operate the equipment.

c) Snow

i) runway and taxiway snow clearance equipment (as specified to the AOC by the requirements of paragraph 2.41); and

ii) operational availability and deployment of trained staff to operate the equipment.

Material Operational Impact

2.30 A **Material Operational Impact** is defined as:

a) For arrivals:

i) a flow rate restriction (ATFM or local[129]) is applied which is less than the declared runway scheduling limit; and

ii) the cumulative number of actual movements is less than the cumulative reference number of movements by at least four movements for any **Relevant Measurement Period**

[129] ATFM restrictions are air traffic flow movement restrictions imposed through the Central Flow Management Unit of Eurocontrol. Local restrictions are of a temporary duration and originate from the Tower watch supervisor.

during the period before the flow rate restriction is removed.

b) For departures:

i) the cumulative number of actual movements is less than the cumulative reference number of movements by at least four movements for any relevant measurement period during the period of the material effect.

Maximum Cumulative Arrival Movements Deferred

2.31 **Maximum Cumulative Arrival Movements Deferred** is the maximum number of cumulative arrival movements deferred at any of the **Relevant Measurement Periods** for the particular **Material Event**, calculated as follows:

$$= A_i \times \sum_{s=1}^{s=\theta} (\text{Expected ARR}_s - \text{Actual ARR}_s)$$

where:

s denotes any **Relevant Measurement Period** relating to the particular **Material Event**;

θ denotes the **Relevant Measurement Period** relating to that particular **Material Event** at which $\text{Expected ARR}_s - \text{Actual ARR}_s$ reached its maximum.

Expected ARR_s is the number of **Expected Arrival Movements** in the **Relevant Measurement Period** s as determined in accordance with paragraphs 2.36 to 2.38;

Actual ARR_s is the number of actual arrivals in the **Relevant Measurement Period** s; and

A_i is the **Proportion of Responsibility** for the i^{th} **Material Event** attributed to the Licensee or the provider of aerodrome air traffic services or their respective agents or contractors.

Maximum Cumulative Departure Movements Deferred

2.32 **Maximum Cumulative Departure Movements Deferred** is the maximum number of cumulative departure movements deferred at any of the **Relevant Measurement Periods** for the particular **Material Event**, calculated as follows:

$$= A_i \times \sum_{s=1}^{s=\theta} (\text{Expected DEP}_s - \text{Actual DEP}_s)$$

where:

s denotes any **Relevant Measurement Period** relating to the particular **Material Event**;

θ denotes the **Relevant Measurement Period** relating to that particular material event at which $\text{Expected DEP}_s - \text{Actual DEP}_s$ reached its maximum.

Expected DEP_s is the number of **Expected Departure Movements** in the **Relevant Measurement Period** s as determined in paragraphs 2.36 to 2.38;

Actual DEP_s is the number of actual departures in the **Relevant Measurement Period** s; and

A_i is the **Proportion of Responsibility** for the i^{th} **Material Event** attributed to the Licensee or the provider of aerodrome air traffic services or their respective agents or contractors.

Relevant Measurement Period

2.33 **Relevant Measurement Period** is defined as any period beginning with the **Clock-Face Hour** preceding the commencement of the **Material Event** and ending no later than the next **Clock-Face Hour** after the **Material Event** ends.

Clock-Face Hour

2.34 **Clock-Face Hour** is the period of 60 minutes which for any relevant hour hh, starts with hh:00:00 and ends at hh:59:59.

Proportion of Responsibility

2.35 Where the Licensee reasonably considers that a **Material Event** with a **Material Operational Impact** has been made more severe by contributory causes beyond the control of the airport or its agents, it shall estimate the proportion of the effect which it considers to have been due to the **Material Event** as set out in paragraph 2.26.

Expected Arrival Movements and Expected Departure Movements

2.36 The **Expected Arrival Movements** and **Expected Departure Movements** shall be estimates made by the Licensee retrospectively by hour for each **Material Event** and made available to users on the Licensee's extranet site or in a manner agreed with users, as soon as practicable after the **Material Event** to which it relates.

2.37 The Licensee shall use its best endeavours to calculate the **Expected Arrival Movements** and **Expected Departure Movements** to reflect the relevant movements in each hour in the absence of any **Material Event** or **Material Operational Impact**.

2.38 These calculations shall have regard to the actual arrival or departure movements during the relevant hour and day in the weeks preceding the relevant hour where there were no **Material Events** or other significant factors which affected arrivals or departure rates. These calculations may be supplemented by a consideration of other relevant factors which the Licensee regards as appropriate in order to make best estimates.

2.39 The Licensee shall set out the basis of its calculations with the estimates.

2.D(3) Exceptions

2.40 The unavailability of facilities shall not require the rebates to be payable:

a) where the **Material Event** is due to runways, taxiways, other aircraft manoeuvring areas, or associated airfield lighting being taken out of service whilst a major investment project is undertaken in the vicinity and where this is done in consultation with users and the timing of work has been determined after consultation with the AOC, and the period specified in advance. If work extends beyond this period, then

rebates shall be payable if the work causes **Material Events**, which satisfy paragraphs 2.27 and 2.30; or

b) where the **Material Event** is due to runways, taxiways, other aircraft manoeuvring areas, or associated airfield lighting being taken out of service for replacement or major refurbishment work or tower related works and when the timing of work has been determined after consultation with the AOC, and the period specified in advance. If work extends beyond this period, then rebates shall be payable if the work causes **Material Events**, which satisfy paragraphs 2.27 and 2.30.

2.D(4) Data collection and communication

2.41 The Licensee shall:

a) provide to the AOC prior to each Winter season a list of the anti-icing or de-icing equipment and media and runway and taxiway snow clearance equipment in commission at the airport;

b) compile a log of all the events at the airport which it considers could have a potentially material effect on operations at the airport (the 'Super-Log'). This shall include ATFM and local restrictions imposed on operations at the airport along with Material Events relating to departures (which may not necessarily have been linked to an ATFM or local restriction). The Licensee may also include other events where it considers that this materially adds to the value of the Super-Log as a complete record;

c) report to Relevant Parties the new events that have been recorded each week as soon as practicable after the end of the relevant week on its extranet site or in such other format as may be agreed by the Licensee and Relevant Parties; and

d) report to Relevant Parties as soon as practicable after the relevant week the calculations of the maximum number of movements deferred for each **Material Event** set out under paragraphs 2.27 above and the assumptions supporting the expected level of arrivals or departures in each hour during the course of the **Material Event** and any estimate of the **Proportion of Responsibility** as set out in paragraph 2.35.

3. Rebates

3.1 The Licensee shall pay rebates to Relevant Parties as set out in this Schedule and as may be modified from time to time.

3.A Payment

3.2 This Schedule sets out the total level of rebates that shall accrue over each Relevant Year. The Licensee shall, however, pay rebates to the Relevant Parties on a monthly basis in the month following the month in which they accrue.

3.3 The rebates applying to each individual terminal shall be allocated to the Relevant Parties that used the terminal in the relevant month pro rata with the Airport Charges incurred for air transport services for the carriage of passengers in that month.

3.4 The payments on a month-by-month basis shall be based on a forecast of the total Airport Charges paid in respect of air transport services for the carriage of passengers in the Relevant Year. The Licensee shall base the scale of monthly rebate payments on its best estimate of the total Airport Charges from such services for the Relevant Year. This is likely to lead to the sum of the monthly rebates paid during the course of the Relevant Year being less or more than the rebates required by this Schedule for the Relevant Year as a whole. Therefore,

a) where the amount of rebates paid during the course of the Relevant Year is less than the amount of annual rebates required by this Schedule, the Licensee shall be liable to pay further amounts to the Relevant Parties that have received rebates so that the amount of rebates paid in respect of the Relevant Year is brought up to the level required by this Schedule. Such additional amounts shall be paid to the Relevant Parties pro rata to the rebates already paid in the course of the year and shall be made as soon as practicable after the publication of the Licensee's audited accounts. Payment will be waived where the CAA receives a letter from the AOC to the effect that the sum is so small that to enforce payment would incur disproportionate processing costs for the Relevant Parties;

b) where the amount of rebates paid during the course of the Relevant Year is more than the amount of annual rebates required by this Schedule, the Licensee may recover the difference between the amount paid and the required amount from the Relevant Parties that have received rebates pro rata with the rebates paid.

3.B Calculation

3.5 The Licensee shall pay rebates for each terminal calculated as follows:

$$\text{Annual percentage rebate} = \text{Rebate}_{\text{P\&}A} + \text{Rebate}_{\text{ACT}}$$

where:

$\text{Rebate}_{\text{P\&}A}$ is the aggregate percentage rebate in the Relevant Year relating to the 'Passenger' and 'Airline' elements (P&A) set out in Table 1 to Table 5 of this Schedule and calculated in accordance with section 3.B(1) of this Schedule; and

$\text{Rebate}_{\text{ACT}}$ is the aggregate percentage rebate in the Relevant Year relating to the Aerodrome congestion term (ACT) as calculated in accordance with section 3.B(2) of this Schedule.

3.B(1) $Rebate_{P\&A}$

3.6 Except where explicitly stated, $\text{Rebate}_{\text{P\&}A}$ shall be calculated separately for each terminal based on the performance relevant to each individual terminal against the standards set out for that terminal.

3.7 The $\text{Rebate}_{\text{P\&}A}$ shall be calculated as follows

$$\text{Rebate}_{\text{P\&}A} = \sum_{a} \sum_{i} \text{MIN}\left[\text{ANNMAX}_{i}, \sum_{j} \text{R}_{i,j} \cdot \text{x}_{i,j,a}\right]$$

where:

ANNMAX_{i} is the maximum annual rebate percentage for each element as specified in Table 1 to Table 5 of this Schedule;

$\text{R}_{i,j}$ is the relevant potential rebate percentage per month for each

element i as specified in Table 1 to Table 5 of this Schedule; and

$x_{i,j,a}$ = 0 if $\text{Standard}_{i,j,a}$ in month j is met as defined in paragraph 3.8; or = 1 otherwise.

3.8 The $\text{Standard}_{i,j,a}$ of element i in month j in terminal a is met if:

a) for elements other than departure lounge seating availability, cleanliness, way-finding, flight information and pier-served stand usage:

$$\text{Monthly performance}_{i,j,a} \geq \text{Standard}_{i,j,a}$$

b) for departure lounge seating availability, cleanliness, way-finding, flight information and pier-served stand usage:

$$\text{Performance}_{i,j,a} \geq \text{Standard}_{i,j,a}$$

where:

$\text{Monthly performance}_{i,j,a}$ is the recorded monthly performance of element i in month j in terminal a;

$\text{Performance}_{i,j,a}$ is the moving annual average $\text{Monthly performance}_{i,j,a}$ weighted by monthly passenger numbers in terminal a and is calculated using the formulae set out in paragraph 2.3; and

$\text{Standard}_{i,j,a}$ is the relevant standard of element i in month j in terminal a as defined in Table 1 to Table 5 of this Schedule.

3.9 The performance for security and Wi-fi are for publication only and shall not be used in the calculation of $\text{Rebate}_{P\&A}$. No standards are set for these two elements.

3.B(2) $Rebate_{ACT}$

3.10 The Rebate_{ACT} shall be calculated as follows:

$$\text{Rebate}_{ACT} = \text{Min}\left[100 \cdot \left(\frac{\text{Rebate}_{ARR} + \text{Rebate}_{DEP}}{R_t}\right), \text{MAXRebate}_{ACT}\right]$$

where:

$\text{Rebate}_{ARR} = \sum_{\text{All material events}} v_{ARR_i}$ is the element of this term related to arrival movements at the airport;

$\text{Rebate}_{\text{DEP}} = \sum_{\text{All material events}} v_{\text{DEP}_i}$ is the element of this term related to departure movements at the airport;

$\text{MAXRebate}_{\text{ACT}}$ is the maximum annual percentage rebate under the aerodrome congestion term which is 1.00%; and

R_t is the total revenue from Airport Charges in respect of relevant air services levied at the relevant airport in Relevant Year_t.

3.11 For each **Material Event** i:

a) v_{ARR_i} is the value in Table 6 of this Schedule, dependent on the **Maximum Cumulative Arrival Movements Deferred** for the i^{th} relevant **Material Event** as uplifted by inflation in paragraph 3.12; and

b) v_{DEP_i} is the value in Table 6 of this Schedule, dependent on the **Maximum Cumulative Departure Movements Deferred** for the i^{th} relevant **Material Event** as uplifted by inflation in paragraph 3.12.

3.12 For $\text{Rebate}_{\text{ACT}}$ incurred in Relevant Year_t (i.e. $\text{Rebate}_{\text{ACT},t}$), the amount payable shall be inflated to outturn prices by the formula:

$$\text{Rebate}_{\text{ACT},t} = \text{Rebate}_{\text{ACT},2013/14} \times \left(\frac{P_{t-1}}{P_{2013/14}} \right)$$

where:

$\text{Rebate}_{\text{ACT},2013/14}$ is $\text{Rebate}_{\text{ACT}}$ in 2013/14 prices as listed in Table 6 of this Schedule;

P_{t-1} is the value of the CHAW series of the retail price index published by the Office for National Statistics with respect to August in $\text{Relevant Year}_{t-1}$; and

$P_{2013/14}$ is the value of the CHAW series of the retail price index published by the Office for National Statistics with respect to August 2013.

4. Bonuses

4.A Payment

4.1 The Licensee may recover bonuses from Relevant Parties. Bonus payments shall be included in the calculation of the Airport Charges in respect of relevant air transport services in Condition C1.

4.B Calculation

4.2 B_t is based on performance in respect of Specified Elements in Relevant Year_t as set out in Table 7 of this Schedule.

4.3 For the purposes of calculating M_t as specified in Condition C1, for 2014/15 and 2015/16, B_{t-2} = 0.

4.4 B_t for Relevant Year_t shall be calculated as follows:

$$B_t = \sum_{j=\text{April}}^{j=\text{March}} \sum_{k} \text{Max}\left[0, \text{Min}\left[\text{BNS(T1)}_{kj}, \text{BNS(T2)}_{kj}, \text{BNS(T3)}_{kj}, \text{BNS(T4)}_{kj}, \text{BNS(T5)}_{kj}\right]\right]$$

where:

For each month j and Specified Element k;

$$\text{BNS(T1)}_{kj} = \frac{1}{12} \times \text{MAB}_k \frac{\text{Min}\left[\text{UPL}_k, \text{MP(T1)}_{kj}\right] - \text{LPL}_k}{\text{UPL}_k - \text{LPL}_k}$$

$$\text{BNS(T2)}_{kj} = \frac{1}{12} \times \text{MAB}_k \frac{\text{Min}\left[\text{UPL}_k, \text{MP(T2)}_{kj}\right] - \text{LPL}_k}{\text{UPL}_k - \text{LPL}_k}$$

$$\text{BNS(T3)}_{kj} = \frac{1}{12} \times \text{MAB}_k \frac{\text{Min}\left[\text{UPL}_k, \text{MP(T3)}_{kj}\right] - \text{LPL}_k}{\text{UPL}_k - \text{LPL}_k}$$

$$\text{BNS(T4)}_{kj} = \frac{1}{12} \times \text{MAB}_k \frac{\text{Min}\left[\text{UPL}_k, \text{MP(T4)}_{kj}\right] - \text{LPL}_k}{\text{UPL}_k - \text{LPL}_k}$$

$$\text{BNS(T5)}_{kj} = \frac{1}{12} \times \text{MAB}_k \frac{\text{Min}\left[\text{UPL}_k, \text{MP(T5)}_{kj}\right] - \text{LPL}_k}{\text{UPL}_k - \text{LPL}_k}$$

Except:

For months including or after 'Such time when Terminal 1 is decommissioned',

$$\mathrm{BNS(T1)_{kj}} = 0.36\%$$

For months before or including 'Such time when air transport services for the carriage of passengers commence at Terminal 2',

$$\mathrm{BNS(T2)_{kj}} = 0.36\%$$

where:

For each Specified Element k, $\mathrm{LPL_k}$, $\mathrm{UPL_k}$ and $\mathrm{MAB_k}$ have the values assigned in Table 7 of this Schedule; and

$\mathrm{MP(T1)_{kj}}$, $\mathrm{MP(T2)_{kj}}$, $\mathrm{MP(T3)_{kj}}$, $\mathrm{MP(T4)_{kj}}$ and $\mathrm{MP(T5)_{kj}}$ are the moving annual average monthly performance for Specified Element k in month j weighted by monthly passengers numbers in Terminal 1, Terminal 2, Terminal 3, Terminal 4 and Terminal 5, respectively. It is calculated using the formulae set out in paragraph 2.3.

5. Publication

5.1 The Licensee shall publish in each terminal at the airport:

a) on a monthly basis, within four weeks of the end of the month,

i) its performance against the standards (where applicable) for each of the terminals at the airport with respect to:

- departure lounge seating availability (QSM);
- cleanliness (QSM);
- way-finding (QSM);
- flight information (QSM);
- security (QSM) [no standard is set for this element];
- Wi-fi (QSM) [no standard is set for this element];
- central search (either interim or automated measurement metrics depending on method in use

during the month); and

- transfer search (either interim or automated measurement metrics depending on method in use during the month).

5.2 The Licensee shall publish on the Service Quality page on its website:

a) on a monthly basis, within four weeks of the end of the month,

i) its performance against the standards (where applicable) for each of the terminals at the airport with respect to all elements specified in Table 8 of this Schedule; and

ii) the estimated amount of rebates and bonuses, generated by the performance relating to all elements specified in Table 8 of this Schedule.

b) on an annual basis, within two months of the end of the Relevant Year,

i) its confirmed performance against the standards (where applicable) for each of the terminals at the airport with respect to all elements specified in Table 8 of this Schedule; and

ii) the confirmed amount of rebates and bonuses, generated by the performance relating to all elements specified in Table 8 of this Schedule.

5.3 The Licensee shall publish on the Regulatory Accounts page on its website:

a) on an annual basis, as soon as available,

i) the audited actual amount of rebates and bonuses, generated by the performance relating to all elements specified in Table 8 of this Schedule split by relevant element.

5.4 Detailed publication requirements are set out in Table 8 of this Schedule.

6. General Matters

6.A Rounding

6.1 For the purposes of this Schedule, the calculation and reporting of all performance and standards shall be to two decimal places (in the case of percentages to two decimal places of a percentage point).

6.2 In Table 1 to Table 5 of this Schedule, the maximum annual rebates are measured to two decimal places, and the maximum monthly rebates are measured to four decimal places. In Table 6 of this Schedule, the amounts of $\mathrm{Rebate}_{\mathrm{ACT}}$ in thousands are measured to two decimal places. In Table 7 of this Schedule, the maximum annual bonuses are measured to two decimal places.

6.B Definitions

6.3 In this Schedule:

a) Airport Charges has the meaning as in Regulation 3(1) of the Airport Charges Regulations 2011 (SI 2011/2491);

b) Relevant Parties means airlines that have paid Airport Charges in the relevant month in respect of air transport services for the carriage by air of passengers;

c) Relevant Year means the period of twelve months ending with 31 March in each year;

d) the AOC means the Airline Operators Committee;

e) Terminal excludes general aviation facilities and facilities for the handling of cargo; and

f) A relevant dead-band period is:

i) 1 November to 30 November;

ii) 1 January to 31 January;

iii) 1 February to 28 February (29 February in a leap year); and

iv) 1 March to 14 days before Easter Sunday.

g) Dates that fall outside of the periods as defined in paragraph 6.3(f) shall not be regarded as falling in a dead-band period.

7. Tables

Table 1: Terminal 1

Group	i	Element	Metric	Time of day over which performance counts for rebates[130]	Standard$_{i,j,t}$	Maximum rebate[131]	
						Annual ANNMAX$_i$	Monthly R$_{i,j}$ (for all j)
Passenger satisfaction elements	1	Departure lounge seating availability	Moving annual average QSM scores weighted by monthly passenger numbers	Unrestricted	3.80	0.36%	0.0600%
	2	Cleanliness			4.00	0.36%	0.0600%
	3	Way-finding			4.10	0.36%	0.0600%
	4	Flight information			4.30	0.36%	0.0600%
	5	Security			Publication only		
	6	Wi-fi			Publication only		
Security	*7a*	*Central search (interim)*[132]	*Percentage of queue times measured once every 15 minutes that are less than 5 minutes*	*05:00 to 22:30*	*95.00%*	*1.00%*	*0.1667%*
	7b		*Percentage of queue times measured once every 15 minutes that are less than 10 minutes*	*05:00 to 22:30*	*99.00%*		

[130] Where relevant, if the Licensee and the AOC fail to agree a period for a particular element, the default time period will be the period specified for central search.

[131] Maximum annual rebate is measured to two decimal places; maximum monthly rebate is measured to four decimal places.

[132] The central search (interim) metrics are adopted until the introduction of automatic queue measurements (see the section 'Central and transfer search – design of interim and automated measurement metrics' in chapter 11).

Group	i	Element	Metric	Time of day over which performance counts for rebates[130]	Standard$_{i,j,t}$	Maximum rebate[131]	
						Annual ANNMAX$_i$	Monthly R$_{i,l}$ (for all j)
Security	*8a*	*Transfer search (interim)*[133]	*Percentage of queue times measured once every 15 minutes that are less than 5 minutes*	*05:00 to 22:30*	*95.00%*	*0.50%*	*0.0833%*
	8b		*Percentage of queue times measured once every 15 minutes that are less than 10 minutes*	*05:00 to 22:30*	*99.00%*		
	7	Central search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	1.00%	0.1667%
	8	Transfer search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	0.50%	0.0833%
	9	Staff search	Percentage of queue times measured once every 15 minutes that are less than 10 minutes	Period agreed locally between the Licensee and the AOC	95.00%	0.38%	0.0633%
	10	Control posts	Percentage of vehicles waiting less than 15 minutes at each control post group[134]		95.00%	0.38%	0.0633%
Passenger operational elements	11	PSE (general)	% time serviceable and available for use, independent of any other element	Period agreed locally between the Licensee and the AOC	99.00%	0.35%	0.0583%

[133] The transfer search (interim) metrics are adopted until the introduction of automatic queue measurements (see the section 'Central and transfer search – design of interim and automated measurement metrics' in chapter 11).

[134] The control post groups are: CTA (CP5, CP8); Cargo (CP10, CP10a, CP25a); Eastside (CP14, CP16); Terminal 5 (CP18, CP19, CP20); and Southside (CP24).

Group	i	Element	Metric	Time of day over which performance counts for rebates[130]	Standard$_{i,j,t}$	Maximum rebate[131]	
						Annual ANNMAX$_i$	Monthly R$_{i,l}$ (for all j)
Passenger operational elements	12	PSE (priority)	% time serviceable and available for use, independent of any other element	Period agreed locally between the Licensee and the AOC	99.00%	0.35%	0.0583%
	13	Arrivals baggage carousels			99.00%	0.35%	0.0583%
	14a	Track transit system	% one train serviceable and available for use, independent of any other element				Not applicable
	14b		% two trains serviceable and available for use, independent of any other element				
Airline operational elements	15	Stands	% time serviceable and available for use, independent of any other element	Period agreed locally between the Licensee and the AOC	99.00%	0.25%	0.0417%
	16	Jetties			99.00%	0.25%	0.0417%
	17	Fixed electrical ground power			99.00%	0.20%	0.0333%
	18	Stand entry guidance			99.00%	0.25%	0.0417%
	19	Pre-conditioned air					Not applicable
	20	Pier-served stand usage	Moving annual average of % passengers served (last 12 months)	Unrestricted	95.00%[135]	0.30%	0.0500%

[135] Subject to exceptions to be agreed by the Licensee and the AOC.

Table 2: Terminal 2

Group	i	Element	Metric	Time of day over which performance counts for rebates [136]	Standard$_{i,j,t}$	Maximum rebate[137]	
						Annual ANNMAX$_i$	Monthly R$_{i,i}$ (for all j)
Passenger satisfaction elements	1	Departure lounge seating availability	Moving annual average QSM scores weighted by monthly passenger numbers	Unrestricted	3.80	0.36%	0.0600%
	2	Cleanliness			4.00	0.36%	0.0600%
	3	Way-finding			4.10	0.36%	0.0600%
	4	Flight information			4.30	0.36%	0.0600%
	5	Security			Publication only		
	6	Wi-fi			Publication only		
Security	*7a*	*Central search (interim)*[138]	*Percentage of queue times measured once every 15 minutes that are less than 5 minutes*	*05:00 to 22:30*	*95.00%*	*1.00%*	*0.1667%*
	7b		*Percentage of queue times measured once every 15 minutes that are less than 10 minutes*	*05:00 to 22:30*	*99.00%*		

[136] Where relevant, if the Licensee and the AOC fail to agree a period for a particular element, the default time period will be the period specified for central search.

[137] Maximum annual rebate is measured to two decimal places; maximum monthly rebate is measured to four decimal places.

[138] The central search (interim) metrics are adopted until the introduction of automatic queue measurements (see the section 'Central and transfer search – design of interim and automated measurement metrics' in chapter 11).

Group	i	Element	Metric	Time of day over which performance counts for rebates [136]	Standard$_{i,j,t}$	Maximum rebate[137]	
						Annual ANNMAX$_i$	Monthly R$_{i,j}$ (for all j)
Security	*8a*	*Transfer search (interim)*[139]	*Percentage of queue times measured once every 15 minutes that are less than 5 minutes*	*05:00 to 22:30*	*95.00%*	*0.50%*	*0.0833%*
	8b		*Percentage of queue times measured once every 15 minutes that are less than 10 minutes*	*05:00 to 22:30*	*99.00%*		
	7	Central search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	1.00%	0.1667%
	8	Transfer search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	0.50%	0.0833%
	9	Staff search	Percentage of queue times measured once every 15 minutes that are less than 10 minutes	Period agreed locally between the Licensee and the AOC	95.00%	0.38%	0.0633%
	10	Control posts	Percentage of vehicles waiting less than 15 minutes at each control post group[140]		95.00%	0.38%	0.0633%
Passenger operational elements	11	PSE (general)	% time serviceable and available for use, independent of any other element	Period agreed locally between the Licensee and the AOC	99.00%	0.35%	0.0583%
	12	PSE (priority)			99.00%	0.35%	0.0583%

[139] The transfer search (interim) metrics are adopted until the introduction of automatic queue measurements (see the section 'Central and transfer search – design of interim and automated measurement metrics' in chapter 11).

[140] The control post groups are: CTA (CP5, CP8); Cargo (CP10, CP10a, CP25a); Eastside (CP14, CP16); Terminal 5 (CP18, CP19, CP20); and Southside (CP24).

Group	i	Element	Metric	Time of day over which performance counts for rebates [136]	Standard$_{i,j,t}$	Maximum rebate[137]	
						Annual ANNMAX$_i$	Monthly R$_{i,i}$ (for all j)
Passenger operational elements	13	Arrivals baggage carousels	% time serviceable and available for use, independent of any other element	Period agreed locally between the Licensee and the AOC	99.00%	0.35%	0.0583%
	14a	Track transit system	% one train serviceable and available for use, independent of any other element				Not applicable
	14b		% two trains serviceable and available for use, independent of any other element				
Airline operational elements	15	Stands	% time serviceable and available for use, independent of any other element	Period agreed locally between the Licensee and the AOC	99.00%	0.20%	0.0333%
	16	Jetties			99.00%	0.20%	0.0333%
	17	Fixed electrical ground power			99.00%	0.15%	0.0250%
	18	Stand entry guidance			99.00%	0.25%	0.0417%
	19	Pre-conditioned air			98.00%	0.20%	0.0333%
	20	Pier-served stand usage	Moving annual average of % passengers served (last 12 months)	Unrestricted	95.00%[141]	0.25%	0.0417%

[141] Subject to exceptions to be agreed by the Licensee and the AOC.

Table 3: Terminal 3

Group	i	Element	Metric	Time of day over which performance counts for rebates [142]	Standard$_{i,j,t}$	Maximum rebate[143]	
						Annual ANNMAX$_i$	Monthly R$_{i,i}$ (for all j)
Passenger satisfaction elements	1	Departure lounge seating availability	Moving annual average QSM scores weighted by monthly passenger numbers	Unrestricted	3.80	0.36%	0.0600%
	2	Cleanliness			4.00	0.36%	0.0600%
	3	Way-finding			4.10	0.36%	0.0600%
	4	Flight information			4.30	0.36%	0.0600%
	5	Security			Publication only		
	6	Wi-fi			Publication only		
Security	*7a*	*Central search (interim)[144]*	*Percentage of queue times measured once every 15 minutes that are less than 5 minutes*	*05:00 to 22:30*	*95.00%*	*1.00%*	*0.1667%*
	7b		*Percentage of queue times measured once every 15 minutes that are less than 10 minutes*	*05:00 to 22:30*	*99.00%*		

[142] Where relevant, if the Licensee and the AOC fail to agree a period for a particular element, the default time period will be the period specified for central search.

[143] Maximum annual rebate is measured to two decimal places; maximum monthly rebate is measured to four decimal places.

[144] The central search (interim) metrics are adopted until the introduction of automatic queue measurements (see the section 'Central and transfer search – design of interim and automated measurement metrics' in chapter 11).

Group	i	Element	Metric	Time of day over which performance counts for rebates [142]	Standard$_{i,j,t}$	Maximum rebate[143]	
						Annual ANNMAX$_i$	Monthly R$_{i,i}$ (for all j)
Security	*8a*	*Transfer search (interim)*[145]	*Percentage of queue times measured once every 15 minutes that are less than 5 minutes*	*05:00 to 22:30*	*95.00%*	*0.50%*	*0.0833%*
	8b		*Percentage of queue times measured once every 15 minutes that are less than 10 minutes*	*05:00 to 22:30*	*99.00%*		
	7	Central search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	1.00%	0.1667%
	8	Transfer search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	0.50%	0.0833%
	9	Staff search	Percentage of queue times measured once every 15 minutes that are less than 10 minutes	Period agreed locally between the Licensee and the AOC	95.00%	0.38%	0.0633%
	10	Control posts	Percentage of vehicles waiting less than 15 minutes at each control post group[146]		95.00%	0.38%	0.0633%
Passenger operational elements	11	PSE (general)	% time serviceable and available for use, independent of any other element	Period agreed locally between the Licensee and the AOC	99.00%	0.35%	0.0583%
	12	PSE (priority)			99.00%	0.35%	0.0583%

[145] The transfer search (interim) metrics are adopted until the introduction of automatic queue measurements (see the section 'Central and transfer search – design of interim and automated measurement metrics' in chapter 11).

[146] The control post groups are: CTA (CP5, CP8); Cargo (CP10, CP10a, CP25a); Eastside (CP14, CP16); Terminal 5 (CP18, CP19, CP20); and Southside (CP24).

Group	i	Element	Metric	Time of day over which performance counts for rebates [142]	Standard$_{i,j,t}$	Maximum rebate[143]	
						Annual ANNMAX$_i$	Monthly R$_{i,i}$ (for all j)
Passenger operational elements	13	Arrivals baggage carousels	% time serviceable and available for use, independent of any other element	Period agreed locally between the Licensee and the AOC	99.00%	0.35%	0.0583%
	14a	Track transit system	% one train serviceable and available for use, independent of any other element				Not applicable
	14b		% two trains serviceable and available for use, independent of any other element				
Airline operational elements	15	Stands	% time serviceable and available for use, independent of any other element	Period agreed locally between the Licensee and the AOC	99.00%	0.20%	0.0333%
	16	Jetties			99.00%	0.20%	0.0333%
	17	Fixed electrical ground power			99.00%	0.15%	0.0250%
	18	Stand entry guidance			99.00%	0.25%	0.0417%
	19	Pre-conditioned air			98.00%	0.20%	0.0333%
	20	Pier-served stand usage	Moving annual average of % passengers served (last 12 months)	Unrestricted	95.00%[147]	0.25%	0.0417%

[147] Subject to exceptions to be agreed by the Licensee and the AOC.

Table 4: Terminal 4

Group	i	Element	Metric	Time of day over which performance counts for rebates[148]	Standard$_{i,j,t}$	Maximum rebate[149]	
						Annual ANNMAX$_i$	Monthly R$_{i,j}$ (for all j)
Passenger satisfaction elements	1	Departure lounge seating availability	Moving annual average QSM scores weighted by monthly passenger numbers	Unrestricted	3.80	0.36%	0.0600%
	2	Cleanliness			4.00	0.36%	0.0600%
	3	Way-finding			4.10	0.36%	0.0600%
	4	Flight information			4.30	0.36%	0.0600%
	5	Security			Publication only		
	6	Wi-fi			Publication only		
Security	*7a*	*Central search (interim)*[150]	*Percentage of queue times measured once every 15 minutes that are less than 5 minutes*	*05:00 to 22:30*	*95.00%*	*1.00%*	*0.1667%*
	7b		*Percentage of queue times measured once every 15 minutes that are less than 10 minutes*	*05:00 to 22:30*	*99.00%*		

[148] Where relevant, if the Licensee and the AOC fail to agree a period for a particular element, the default time period will be the period specified for central search.

[149] Maximum annual rebate is measured to two decimal places; maximum monthly rebate is measured to four decimal places.

[150] The central search (interim) metrics are adopted until the introduction of automatic queue measurements (see the section 'Central and transfer search – design of interim and automated measurement metrics' in chapter 11).

Group	i	Element	Metric	Time of day over which performance counts for rebates[148]	Standard$_{i,j,t}$	Maximum rebate[149]	
						Annual ANNMAX$_i$	Monthly R$_{i,i}$ (for all j)
Security	*8a*	*Transfer search (interim)*[151]	*Percentage of queue times measured once every 15 minutes that are less than 5 minutes*	*05:00 to 22:30*	*95.00%*	*0.50%*	*0.0833%*
	8b		*Percentage of queue times measured once every 15 minutes that are less than 10 minutes*	*05:00 to 22:30*	*99.00%*		
	7	Central search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	1.00%	0.1667%
	8	Transfer search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	0.50%	0.0833%
	9	Staff search	Percentage of queue times measured once every 15 minutes that are less than 10 minutes	Period agreed locally between the Licensee and the AOC	95.00%	0.38%	0.0633%
	10	Control posts	Percentage of vehicles waiting less than 15 minutes at each control post group[152]		95.00%	0.38%	0.0633%
Passenger operational elements	11	PSE (general)	% time serviceable and available for use, independent of any other element	Period agreed locally between the Licensee and the AOC	99.00%	0.35%	0.0583%

[151] The transfer search (interim) metrics are adopted until the introduction of automatic queue measurements (see the section 'Central and transfer search – design of interim and automated measurement metrics' in chapter 11).

[152] The control post groups are: CTA (CP5, CP8); Cargo (CP10, CP10a, CP25a); Eastside (CP14, CP16); Terminal 5 (CP18, CP19, CP20); and Southside (CP24).

Group	i	Element	Metric	Time of day over which performance counts for rebates[148]	Standard$_{i,j,t}$	Maximum rebate[149]	
						Annual ANNMAX$_i$	Monthly R$_{i,i}$ (for all j)
Passenger operational elements	12	PSE (priority)	% time serviceable and available for use, independent of any other element	Period agreed locally between the Licensee and the AOC	99.00%	0.35%	0.0583%
	13	Arrivals baggage carousels			99.00%	0.35%	0.0583%
	14a	Track transit system	% one train serviceable and available for use, independent of any other element				Not applicable
	14b		% two trains serviceable and available for use, independent of any other element				
Airline operational elements	15	Stands	% time serviceable and available for use, independent of any other element	Period agreed locally between the Licensee and the AOC	99.00%	0.25%	0.0417%
	16	Jetties			99.00%	0.25%	0.0417%
	17	Fixed electrical ground power			99.00%	0.20%	0.0333%
	18	Stand entry guidance			99.00%	0.25%	0.0417%
	19	Pre-conditioned air					Not applicable
	20	Pier-served stand usage	Moving annual average of % passengers served (last 12 months)	Unrestricted	95.00%[153]	0.30%	0.0500%

[153] Subject to exceptions to be agreed by the Licensee and the AOC.

Table 5: Terminal 5

Group	i	Element	Metric	Time of day over which performance counts for rebates [154]	Standard$_{i,j,t}$	Maximum rebate[155]	
						Annual ANNMAX$_i$	Monthly R$_{i,j}$ (for all j)
Passenger satisfaction elements	1	Departure lounge seating availability	Moving annual average QSM scores weighted by monthly passenger numbers	Unrestricted	3.80	0.36%	0.0600%
	2	Cleanliness			4.00	0.36%	0.0600%
	3	Way-finding			4.10	0.36%	0.0600%
	4	Flight information			4.30	0.36%	0.0600%
	5	Security			Publication only		
	6	Wi-fi			Publication only		
Security	*7a*	*Central search (interim)*[156]	*Percentage of queue times measured once every 15 minutes that are less than 5 minutes*	*05:00 to 22:30*	*95.00%*	*1.00%*	*0.1667%*
	7b		*Percentage of queue times measured once every 15 minutes that are less than 10 minutes*	*05:00 to 22:30*	*99.00%*		

[154] Where relevant, if the Licensee and the AOC fail to agree a period for a particular element, the default time period will be the period specified for central search.

[155] Maximum annual rebate is measured to two decimal places; maximum monthly rebate is measured to four decimal places.

[156] The central search (interim) metrics are adopted until the introduction of automatic queue measurements (see the section 'Central and transfer search – design of interim and automated measurement metrics' in chapter 11).

Group	i	Element	Metric	Time of day over which performance counts for rebates [154]	Standard$_{i,j,t}$	Maximum rebate[155]	
						Annual ANNMAX$_i$	Monthly R$_{i,j}$ (for all j)
Security	*8a*	*Transfer search (interim)*[157]	*Percentage of queue times measured once every 15 minutes that are less than 5 minutes*	*05:00 to 22:30*	*95.00%*	*0.50%*	*0.0833%*
	8b		*Percentage of queue times measured once every 15 minutes that are less than 10 minutes*	*05:00 to 22:30*	*99.00%*		
	7	Central search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	1.00%	0.1667%
	8	Transfer search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	0.50%	0.0833%
	9	Staff search	Percentage of queue times measured once every 15 minutes that are less than 10 minutes	Period agreed locally between the Licensee and the AOC	95.00%	0.38%	0.0633%
	10	Control posts	Percentage of vehicles waiting less than 15 minutes at each control post group[158]		95.00%	0.38%	0.0633%
Passenger operational elements	11	PSE (general)	% time serviceable and available for use, independent of any other element	Period agreed locally between the Licensee and the AOC	99.00%	0.25%	0.0417%
	12	PSE (priority)			99.00%	0.25%	0.0417%

[157] The transfer search (interim) metrics are adopted until the introduction of automatic queue measurements (see the section 'Central and transfer search – design of interim and automated measurement metrics' in chapter 11).

[158] The control post groups are: CTA (CP5, CP8); Cargo (CP10, CP10a, CP25a); Eastside (CP14, CP16); Terminal 5 (CP18, CP19, CP20); and Southside (CP24).

Group	i	Element	Metric	Time of day over which performance counts for rebates [154]	Standard$_{i,j,t}$	Maximum rebate[155]	
						Annual ANNMAX$_i$	Monthly R$_{i,j}$ (for all j)
Passenger operational elements	13	Arrivals baggage carousels	% time serviceable and available for use, independent of any other element	Period agreed locally between the Licensee and the AOC	99.00%	0.25%	0.0417%
	14a	Track transit system	% one train serviceable and available for use, independent of any other element	Period agreed locally between the Licensee and the AOC	99.00%	0.30%	0.0500%
	14b		% two trains serviceable and available for use, independent of any other element		97.00%		
Airline operational elements	15	Stands	% time serviceable and available for use, independent of any other element	Period agreed locally between the Licensee and the AOC	99.00%	0.25%	0.0417%
	16	Jetties			99.00%	0.25%	0.0417%
	17	Fixed electrical ground power			99.00%	0.20%	0.0333%
	18	Stand entry guidance			99.00%	0.30%	0.0500%
	19	Pre-conditioned air			98.00%	0.25%	0.0417%
	20	Pier-served stand usage	Moving annual average of % passengers served (last 12 months)	Not applicable[159]			

[159] Subject to change should there be a change in operation control of stand allocation or terminal occupancy or both.

Table 6: Aerodrome congestion term rebates

Maximum cumulative movements deferred per day	0 – 3	4 – 5	6 – 7	8 – 9	10 – 11	12 – 13	14 – 15	16 – 17	18 – 19	20 or more
Rebates in thousands[160] (£'000 in 2013/14 prices)	–	12.11	19.61	28.09	38.87	51.94	67.20	84.88	104.73	121.08

Table 7: Bonuses

k	Specified Element	Metric	Lower performance limit (LPL_k)	Upper performance limit (UPL_k)	Maximum annual bonus (MAB_k)[161]
1	Departure lounge seating availability	Moving annual average QSM scores weighted by monthly passenger numbers in the relevant terminal	4.10	4.50	0.36%
2	Cleanliness		4.20	4.50	0.36%
3	Way-finding		4.20	4.50	0.36%
4	Flight information		4.40	4.70	0.36%

[160] Aerodrome congestion term rebates in thousands are measured to two decimal places.

[161] Maximum annual bonus terms are measured to two decimal places.

Table 8: Publication

Terminal	Group	i	Element	Metric	Terminal (monthly)	Website (monthly and annual)	Regulatory accounts (annual)
All	Passenger satisfaction elements	1	Departure lounge seating availability	Moving annual average QSM scores weighted by monthly passenger numbers in the relevant terminal	Performance and standard	Performance, standard, estimated rebates and bonuses	Audited rebates and bonuses
		2	Cleanliness				
		3	Way-finding				
		4	Flight information				
		5	Security		Performance	Performance	Not applicable
		6	Wi-fi				
All	Security	*7a*	*Central search (interim)*[162]	*Percentage of queue times measured once every 15 minutes that are less than 5 minutes*	Performance and standard	Performance, standard, estimated rebates	Audited rebates
		7b		*Percentage of queue times measured once every 15 minutes that are less than 10 minutes*			
		8a	*Transfer search (interim)*[163]	*Percentage of queue times measured once every 15 minutes that are less than 5 minutes*			

[162] The central search (interim) metrics are adopted until the introduction of automatic queue measurements (see the section 'Central and transfer search – design of interim and automated measurement metrics' in chapter 11).

[163] The transfer search (interim) metrics are adopted until the introduction of automatic queue measurements (see the section 'Central and transfer search – design of interim and automated measurement metrics' in chapter 11).

Terminal	Group	i	Element	Metric	Terminal (monthly)	Website (monthly and annual)	Regulatory accounts (annual)
All	Security	*8b*		*Percentage of queue times measured once every 15 minutes that are less than 10 minutes*			
		7	Central search	Percentage of passengers queuing less than 10 minutes	Performance and standard	Performance, standard, estimated rebates	Audited rebates
		8	Transfer search	Percentage of passengers queuing less than 10 minutes			
		9	Staff search	Percentage of queue times measured once every 15 minutes that are less than 10 minutes	Not applicable		
		10	Control posts	Percentage of vehicles waiting less than 15 minutes at each control post group[164]			
All	Passenger operational elements	11	PSE (general)	% time serviceable and available for use, independent of any other element	Not applicable	Performance, standard, estimated rebates	Audited rebates
		12	PSE (priority)				
		13	Arrivals baggage carousels				
T5		14a	Track transit system	% one train serviceable and available for use, independent of any other element			
		14b		% two trains serviceable and available for use, independent of any other element			

[164] The control post groups are: CTA (CP5, CP8); Cargo (CP10, CP10a, CP25a); Eastside (CP14, CP16); Terminal 5 (CP18, CP19, CP20); and Southside (CP24).

Terminal	Group	i	Element	Metric	Terminal (monthly)	Website (monthly and annual)	Regulatory accounts (annual)
All	Airline operational elements	15	Stands	% time serviceable and available for use, independent of any other element	Not applicable	Performance, standard, estimated rebates (monthly), actual rebates (annual)	Audited rebates
		16	Jetties				
		17	Fixed electrical ground power				
		18	Stand entry guidance				
T2, T3, T5		19	Pre-conditioned air				
T1, T2, T3, T4		20	Pier-served stand usage	Moving annual average of % passengers served (last 12 months)			
Airfield	ACT		Aerodrome congestion term	As defined in section 2.D in Schedule 1	Not applicable	Performance, standard, estimated rebates (monthly), actual rebates (annual)	Audited rebates

Appendix B

Rolling forward the Regulatory Asset Base

Purpose and basis of the calculation

This Appendix specifies the detail of the formulae that the CAA intends to use for tracking the regulatory asset base. The purpose of this Appendix is to describe how to calculate the regulatory asset bases (RAB) for Heathrow airport respectively.

The equations set out below are based on the projections made by the CAA in reaching its final decision on the charge conditions for the control period 1 April 2014 to 31 March 2019.

Inflation indices

Each year, each RAB is expressed in actual end year price levels. The modelling used fixed 2011/12 price levels and the figures below must be uplifted to current price terms each year.

Retail Price Index ("RPI") Growth t from 2011/12	=	The RPI (as defined in the Condition) at the end of the financial year t divided by the average of the monthly RPI figures for the financial year 2011/12,which (based on the All Items index[165] and based on 13 January 1987 = 100) equals 237.3
Annual RPI Growth t	=	The RPI at the end of the financial year t divided by The RPI at the end of the financial year t-1
Within Year RPI	=	The RPI at the end of the financial year t

[165] All Items (CHAW) index, source: Office for National Statistics (ONS).

Growth t		divided by the average of the monthly RPI figures for the financial year t

Heathrow Airport RAB

This section describes how the Heathrow Airport RAB will be rolled forward from one year to another.

RAB t	=	(Basic RAB) t
	+	(Cumulative Profiling Adjustment)t

Both the Basic RAB and the Cumulative Profiling Adjustment are to be separately identified. This is to allow full visibility to interested parties.

Closing (Basic RAB) t	=	Opening RAB t
	+	(Total Actual Capex t x Within Year RPI Growth t)[166]
	-	(Proceeds from Disposals t)
	-	(CAA's Assumed Ordinary Depreciation t x RPI Growth from 2011/12)

Opening (Basic RAB) t	=	For the financial year 2014/15, this figure will be set according to the following formula: £ 13,815.828 million x RPI Growth from 2011/12
	+	Actual Capex 2013/14 x RPI Growth from 2013/14
	-	£ 1,292.874 million x RPI Growth from 2011/12
	-	(Actual proceeds from Disposals 2013/14) x RPI Growth from 2013/14)
	=	For the remaining financial years, this figure will be set according to the following formula: Closing RAB t-1 x Annual RPI Growth t

Assumed Ordinary Depreciation t in	=	For each financial year this figure will be fixed at the following values: Financial year 2014/15: £ 628.870 million Financial year 2015/16: £ 645.896 million

[166] Accrued Capital expenditure with no adjustment for movements in working capital.

2011/12 prices	Financial year 2016/17:	£ 657.083 million
	Financial year 2017/18:	£ 675.850 million
	Financial year 2018/19:	£ 676.361 million

Appendix C

Other service quality issues

1. The CAA considers that the issues concerning service quality regulation for Q6 that it needs to resolve are shown in figure 11.2 and figure 11.3 in chapter 11. The most significant issues are covered in that chapter, and the remainder here. Figure 11.3 summarising these issues is reproduced below.

Figure 11.3 Service quality issues discussed in Appendix C (reproduced)

Nature of issue	Issue
General issues on the SQRB scheme	Publication of results and record keeping
	Definitions
	Averaging and precision of measurements
	Subjective and objective measures
Specific elements in the SQRB scheme	Passenger satisfaction – removal/retention of standards
	Passenger satisfaction – service standards and bonus arrangements
	Staff search
	Control posts
	Passenger operational elements
	Airline operational elements – pier service
	Airline operational elements – others
	Aerodrome congestion term

Source: CAA

2. This appendix discusses these other service quality issues in turn.

Publication of results and record keeping

Issue

3. The CAA considers that transparency of information provides an important non-financial incentive in the area of airport service quality. Therefore, the CAA's Q5 decision required HAL to “publish monthly, from April 2008, via a readily accessible part of its website, its

performance against the specified service standards and details of the specified rebates paid and payable in respect of each terminal and for each category of service".

CAA's initial proposals

4. The CAA proposed to maintain the Q5 requirement for Q6, alongside further requirements as follows:

   - on a monthly basis, identify those services by terminal where performance will lead to inclusion within the bonus calculation, with an estimate thereof; and
   - within two months of the regulatory year end to publish the full detail of the final bonus calculation for the year, disaggregating by month and element.

5. The CAA considered that the information published within the terminal building should be a limited subset of the measures in order to help focus passenger attention. The CAA proposed the inclusion of the monthly target and performance of the following measures (to two decimal places), to be published within four weeks of the month end:

   - departure lounge seating availability;
   - cleanliness;
   - way-finding;
   - flight information; and
   - security (performance as per the moving annual average QSM score and the objective queue time metric).

6. The posters should give clear directions to passengers as to where they can find the full performance publication on the website, and instructions as to how passengers can provide feedback to HAL.

Stakeholder views

7. The CAA received two responses commenting on the publication requirements.

   - HAL was broadly content with publication requirements.

- The LACC welcomed the enhanced transparency on the bonuses earned by HAL, and considered that HAL should also publish passengers' feedback on SQR scores and the performance of PSE within each terminal. It supported the requirement on HAL to maintain records of service level and rebates, and assumed that the CAA intended this requirement to apply to the bonus calculation.

CAA's final proposals

8. In light of the importance of transparency of information to passengers and the value of publication as a non-financial incentive, the CAA maintains its position as in the initial proposals, with the addition of one further measure on Wi-fi provision.

9. The CAA proposes that HAL should publish within the terminal building and on its SQR website a QSM measure on Wi-fi provision (see the section on 'Passenger satisfaction – Wi-fi' in chapter 11).

10. There is a provision in the service quality licence conditions that HAL "shall maintain records of the actual quality of service, rebates and bonuses in such form and detail that the performance can be independently audited against the standards set out in the Statement". To further enhance transparency, the CAA proposes that HAL should report audited rebates paid and audited bonuses earned annually in the regulatory accounts.

11. Section 5 and Table 8 of the Statement set out the publication requirements are set out in detail in the Statement.

Definitions

Issue

12. Part of the CE discussions focused on clarifying both parties' understanding of the wording used in the SQR scheme. This brought out a specific disagreement on interpretation of the phrase 'time available', which was used in Q5 for a number of asset measures (figure C1).

Figure C1: Views on definitions

	HAL	Airlines
Serviceable	Serviceable and available for use, independent of any other element	Working as required in order to be used for the purpose intended
Available	Serviceable and available for use, independent of any other element	Available for use as intended and at the time required
Useable	Serviceable and available for use, independent of any other element	Able to be used for the purpose intended

Source: CAA

13. The airlines consider that 'time available' should mean that an element is “available for use as intended and at the time required”. This gives rise to two issues. First, an asset may be available (e.g. a passenger lift), but not useable (e.g. due to building works). During Q5, this has been dealt with under the Exclusions Policy[167] in the SQR.

14. Second, the airlines’ interpretation potentially links a number of SQR elements together (e.g. a jetty may be operational, but if the stand is out of use, the jetty is no longer 'available for use' by the airline).

15. In order to avoid being penalised twice for the failure of a single SQR element, HAL argued that each asset must be considered independently of the others. The elements to which this relates are: PSE, arrivals baggage carousels, stands, jetties, FEGP, stand entry guidance and PCA.

16. The CAA considered that for practical reasons the elements of the SQR must be treated separately. Otherwise, the interdependencies will affect the levels of risk attached to failure adding impractical complexity to setting service standards.

CAA's initial proposals

17. In its initial proposals, the CAA supported HAL’s views that asset availability should be defined as “serviceable and available for use, independent of any other element”.

Stakeholder views

18. The CAA received two responses on the definitions of serviceability.

[167] Paragraph H.14 of Annex H to Economic Regulation of Heathrow and Gatwick Airports 2008-2013, CAA Decision.

- BA, while acknowledging the CAA's position on definitions, pointed out that there were circumstances under which failures were not captured under another service quality standard. For example, an adjustment factor should be applied to pier service. BA commented that all failures should be captured, and that there are occasions where the current definitions do not capture failures, e.g. when aircraft were placed on an on-pier stand but passengers were required to be bussed for a reason not of the airlines' choosing.
- The LACC disagreed with the CAA's initial proposals, as the definition of 'available' did not reflect the fact that some assets were not available for use even though their availability was being paid for without any benefit for the passenger being obtained.

CAA's final proposals

19. The CAA considers that, if the elements of the SQRB are not treated separately, the interdependencies will affect the levels of risk attached to failure adding impractical complexity to the target setting. It proposes that asset availability should be defined as “serviceable and available for use, independent of any other element”.

Averaging and precision of measurements

Issue

20. In Q5, performance metrics used for the QSM and pier service elements of the SQR were based on moving annual averages.

21. The airlines would prefer to move to monthly measures, on the basis that they would be more reflective of the actual service quality experienced by passengers, and that good performance (over and above an acceptable baseline) in one month should not compensate for poor performance (below the baseline) in another.

22. HAL considered that a change to monthly measures would lead to a change in the variability of the reported measures, and thus would affect the probability of failing to meet targets and associated risk of HAL paying rebates.

23. A move to a monthly measure would affect the sampling error of the estimate due to the reduced sample size. This is turn would make the measure more volatile and would increase the chances of generating rebates or bonuses. Further, the use of a moving annual average

removes the impact of seasonality from the measures.

24. A further measurement issue related to the number of decimal places reported for rebate calculations for QSM elements. The airlines proposed two decimal places; HAL argued for retention of one decimal place.

25. The precision of the QSM measures for rebates and bonuses needs to be rationalised to address an asymmetry evident in Q5 which arose from rebates being based on measures calculated to one decimal place, but bonuses to two decimal places. This had the effect of creating an effective reduction in the targets set. For example, if the target was 4.0, 3.95 would not generate a rebate, but 4.01 would generate a bonus.

CAA's initial proposals

26. The CAA proposed that the moving annual average measure for the QSM and pier service elements of the SQR should be retained. The QSM measures were to be reported to two decimal places (both on the website and in the terminal), and also for the purposes of rebate and bonus calculation.

Stakeholder views

27. The CAA received the following responses commenting on this issue.

- HAL responded that the CAA's proposal to measure performance to two decimal places for QSM elements translated to more stretching targets to achieve than in Q5. It would have failed in departure lounge seating in Terminal 3 for December 2012 had the standard been measured to two decimal places.
- The LACC welcomed the CAA's position that QSM be reported to two decimal places.

CAA's final proposals

28. After considering the responses, the CAA maintains the same view as in its initial proposals. While the move to two decimal places may translate into slightly more stretching targets for HAL, the CAA believes that this effect is unlikely to be inappropriately large in any element of the mechanism. The CAA proposes that the moving annual average measure for the QSM and pier service elements of the SQRB should be retained. The QSM measures are to be reported

to two decimal places (both on the website and in the terminal), and also for the purposes of rebate and bonus calculation.

Subjective and objective measures

Issue

29. The Q5 SQR scheme comprises subjective and objective measures. QSM scores subjectively measure passengers' perception of seating availability, cleanliness, way-finding and flight information. Other elements include objective measures of availability of assets and security queue times.

30. On security queue processing, HAL was keen to blend objective and subjective measures in the standard, whereas the airlines were concerned that the subjective measures could be influenced by many things unrelated to HAL's actual performance.

31. The CAA agreed that for security queue rebate purposes, an objective measure is preferable when it is available. At the same time, the CAA acknowledged the importance of passenger satisfaction with security screening.

CAA's initial proposals

32. The CAA proposed that the Q5 subjective and objective measures in the SQR would be retained for Q6. In addition, the airport operator should publish, on its website and at the terminal, passenger satisfaction with security from the QSM survey, together with other QSM elements. This QSM measure on security would not be subject to financial incentives.

Stakeholder views

33. The CAA received the following responses commenting on the balance between subjective and objective measures.

- BA considered that passengers' interests were best served by actual measurable performance of services and facilities. It did not support the use of qualitative measures in determining standards and bonus payments. Qualitative measures could be useful in gauging passengers' feelings about their experiences, and these measures should only act as informative supplements alongside the existing quantitative measures, and are most useful for determining areas where HAL should focus staff training, process

improvements or investment.

- HAL supported the CAA's proposal to introduce QSM reporting on security processing.
- The LACC considered that measurements based on perception were open to influence by factors outside of the actual performance, and therefore would not support a measure based on passenger perception of satisfaction with security search queuing being used as a determinant of the quality.

CAA's final proposals

34. After considering the responses, the CAA proposes to retain the Q5 mix of subjective and objective measures in the SQRB for Q6. In addition, the airport operator should publish, on its website and at the terminal, passenger satisfaction with security and Wi-fi provision from the QSM survey, together with other QSM elements. This QSM measure on security will not be subject to financial incentives.

Passenger satisfaction – removal/retention of standards

Issues

35. HAL proposed the removal of two of the four Q5 QSM standards from the SQR – departure lounge seating availability and flight information. The airlines argued for retention of all four of the current standards.

36. Given that during Q5 significant rebates have been paid out due to underperformance of the departure lounge seating availability measure in Terminal 3, and over time performance has not consistently reached the target set across all terminals, the CAA did not consider it to be in passengers' interests to remove this measure from the SQR.

37. The flight information standard is based on passenger satisfaction levels with the flight information displays within the airport. This measure has performed consistently above the CAA's standard for some time. The CAA considered the views of the CAA's Consumer Panel and the indications from passenger research regarding the importance of information to passengers (especially during times of disruption).[168]

[168] SHM, Issues facing passengers during the snow disruption, final report, April 2011, available

CAA's initial proposals

38. On balance, the CAA considered that departure lounge seating availability and flight information were important for passengers, and proposed the retention of these two standards within the SQRB for Q6.

Stakeholder views

39. The CAA did not receive any responses that contained substantive comments on this issue.

CAA's final proposals

40. The CAA's final proposal is that departure lounge seating availability and flight information standards should be retained in the SQRB for Q6.

Passenger satisfaction – service standards and bonus arrangements

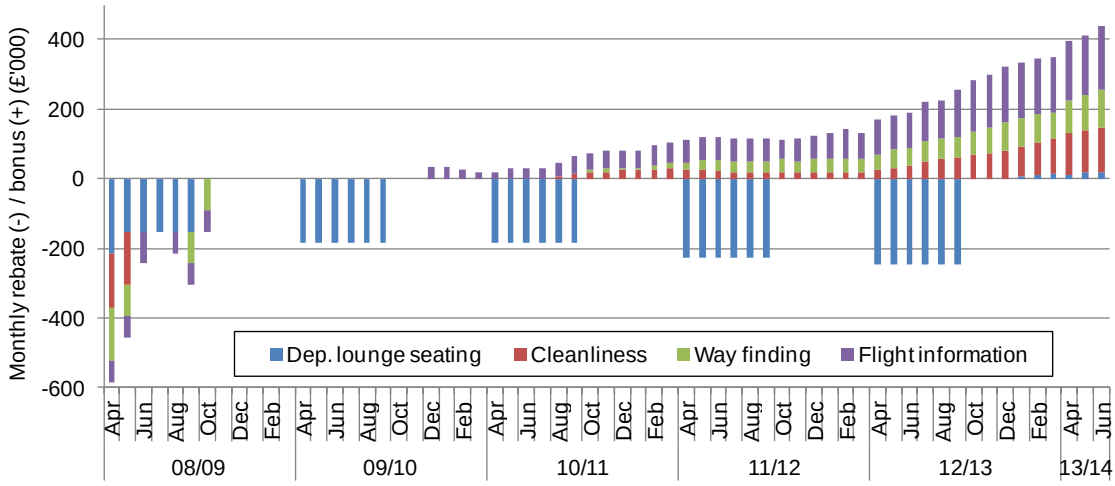
Issue

41. In Q5, passenger satisfaction has been captured by QSM scores in the SQR. HAL's performance on the QSM elements has improved during Q5. At the start of Q5 it was paying rebates on all four standards (for two months), but HAL had earned bonuses in all areas as at June 2013 (figure C2).[169] HAL has improved on departure lounge seating availability, paying maximum rebates for four regulatory years since 2009/10, but started earning bonuses every month since January 2013.

at: http://www.caa.co.uk/docs/5/CAA%20Issues%20facing%20passengers%20during%20the%20snow%20disruption%20FINAL.pdf

[169] Rebates are only paid for a maximum of six months of failure in a regulatory year, even if performance remains below target.

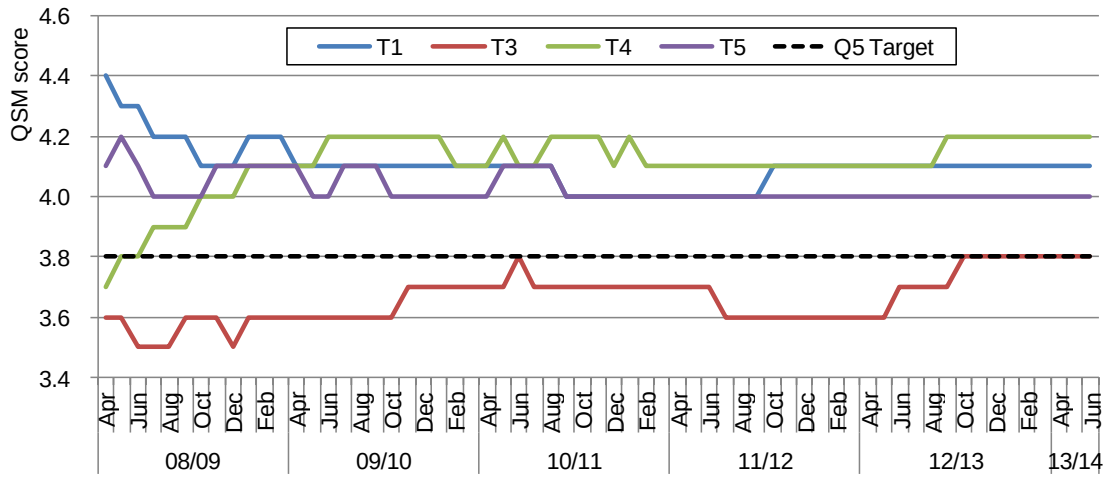
Figure C2: HAL monthly rebate and bonus position on QSM elements



Source: HAL

42. Variations in performance across the terminals made it difficult to capture the improvements in service quality effectively whilst maintaining equivalent standards across the terminals. Among the SQR elements, departure lounge seating availability showed the highest degree of variation across the terminals (figure C3).

Figure C3: Q5 Departure lounge seating availability by terminal



Source: HAL

43. HAL's performance against the QSM standards is as follows:

Figure C4: Q5 standards and performance

Element	Q5 standard	Performance							
		December 2012				July 2013			
		T1	T3	T4	T5	T1	T3	T4	T5
Departure lounge seating availability	3.8	4.1	3.8	4.2	4.0	4.1	3.8	4.2	4.0
Cleanliness	3.9	4.1	4.0	4.1	4.2	4.1	4.1	4.1	4.2
Way-finding	4.0	4.1	4.1	4.2	4.2	4.1	4.2	4.2	4.2
Flight information	4.2	4.3	4.4	4.3	4.4	4.3	4.4	4.3	4.4

Source: HAL

CAA's initial proposals

44. The CAA's initial proposals (which will also apply to Terminal 2 when opened) are summarised in figure C5 below.

Figure C5: CAA's initial proposals on QSM standards and bonus limits

	Q6 standard	Rebate	Bonus		
		Annual max	Lower limit	Upper limit	Annual max
Departure lounge seating availability	3.80	0.36%	4.10	4.50	0.36%
Cleanliness	4.00	0.36%	4.20	4.50	0.36%
Way-finding	4.10	0.36%	4.20	4.50	0.36%
Flight information	4.30	0.36%	4.40	4.70	0.36%

Source: CAA

45. The CAA proposed standards that aimed to balance 'locking in' Q5 improvements to ensure passengers continue to experience the current level of service quality, to encourage a more consistent baseline standard across the terminals, and to avoid incentivising HAL to spend money on improving service to a level over and above that for which passengers would be willing to pay.

46. The CAA's initial proposals on bonuses were as follows.

- The introduction of a deadband above the target before bonuses can be earned, so that HAL would not be rewarded with immediate bonuses.

- HAL should benefit from bonuses only when all the terminals meet the standard.
- The retention of the sliding scale nature of bonuses within an upper and lower performance limit.
- The lower limit for bonuses had been set at the level for the best performing terminal in December 2012 (except for departure lounge seating availability).
- The upper limit for the bonuses had been set such that the range for each element is 0.3 (apart from departure lounge seating availability). This smaller range (compared with that in Q5) would allow for a larger bonus for each 0.01 increase in the performance of the QSM scores above the lower limit. This reflected the increased difficulty in achieving these higher levels of performance, and to a degree offsets the removal of bonuses from the asset availability measures of PSE (general) and arrivals reclaim (baggage carousels).

47. It should be noted that HAL is planning to make changes to the structure of the QSM survey in the near future. This could impact the level of the scores achieved if there is evidence in a step-change in the scores recorded, the Q6 standards may need to be re-calibrated to maintain consistency. The re-calibration could be processed through the self-modification mechanism or a licence modification as specified in section 22 of the Act.

Stakeholder views

48. The CAA received two responses containing substantive comments on passenger QSM service standards and bonus arrangements.

- HAL supported retention of bonuses on QSM, but considered that in some cases the bonus lower limits had been set at a level too high to act as a meaningful incentive. It proposed that the lower performance limit before a bonus can be earned be set at 0.1 points above the December 2012 level of performance in the worst performing terminal.
- The LACC supported the CAA's proposed QSM standards. It opposed bonuses but suggested (if the CAA was minded to keep them) that the ‘deadband’ should be extended in order for there to be a substantial improvement in QSM scores before HAL qualified

for a possible bonus.

49. Figure C6 shows the proposed QSM standards for Q6.

Figure C6: CAA, HAL and LACC proposals for the four QSM standards

	Q6 standard			Lower bonus limit			Upper bonus limit		
	CAA	HAL	LACC	CAA	HAL	LACC	CAA	HAL	LACC
Departure lounge seating availability	3.80	3.8	3.80	4.10	3.9	4.30	4.50	4.3	4.60
Cleanliness	4.00	4.0	4.00	4.20	4.1	4.40	4.50	4.4	4.70
Way-finding	4.10	4.1	4.10	4.20	4.2	4.40	4.50	4.5	4.70
Flight information	4.30	4.3	4.30	4.40	4.4	4.60	4.70	4.7	4.90

Source: CAA, HAL, LACC

Note: The standards and bonus limits proposed by the CAA and LACC are measured to two decimal places; those proposed by HAL are measured to one decimal place.

CAA's final proposals

50. The CAA is keen to avoid setting lower bonus limits too high such that they incentivise performance over and above the level passengers for which are willing to pay. On the other hand, to encourage consistent good performance across the terminals and to ensure that HAL is not immediately earning bonuses, the lower bonus limit should be set higher compared with the improved performance towards the end of Q5. After taking stakeholders' responses into account, the CAA proposes to maintain the Q6 rebate and bonus allocations, standards, upper and lower bonus limits as per its initial proposals, reproduced in figure C6.

Staff search

Issue

51. Whilst under the definitions in the Act, staff search might not necessarily fall under 'airport operation services', the CAA considered this process to be essential to on-time performance of airline services, and hence it was in passengers' interests to continue to incentivise the service quality of this element.

52. The airlines proposed an improvement over the Q5 standard, moving from 95% of 15-minute measurements within 10 minutes to 95% of 15-minute measurements within 5 minutes. The airlines considered

there should be a restriction that staff search could not be closed during operational hours.

53. HAL proposed that standards should be maintained as in Q5, but with a bonus for performance over 97% of 15-minute measurements within 10 minutes.

54. The CAA had not seen evidence that there would be an increase in passenger benefit commensurate with the cost of providing a higher level of service in staff search, and thus did not propose to increase the standard or to introduce a bonus in this area. Thus, the CAA proposed to keep the standard as it was in Q5 (with 95% of 15 minute measurements within 10 minutes).

CAA's initial proposals

55. The CAA proposed that rebates allocated to staff search remain in line with Q5. The CAA sought views as to whether there should be a restriction that staff search must remain open during operational hours.

Stakeholder views

56. The CAA received two responses commenting on staff search standards.

- HAL supported the CAA's proposal to maintain the Q5 standard for staff search, and stated that a measure about opening times of staff search should not be introduced.
- The LACC responded that the CAA should base the staff search measures on a percentage of the staff waiting less than a definite time, in order to avoid staff search suffering during times of disruption. The staff search facilities should always be open as they are a critical element of quality enabling airlines to deliver customer services to passengers.

57. The CAA also received evidence on flight delays and delay of airline crew at gates contributed partly to the closure of staff search lanes.

CAA's final proposals

58. The CAA acknowledges the importance of staff search in the smooth operation of the airlines, and that this ultimately benefits passengers. The CAA also notes the sustained deterioration of performance in

staff search since early 2011/12 across all Heathrow terminals (although acknowledging that Q5 standards were still met). It proposes to maintain the Q5 service standard for Q6 and expects this to limit any further falls in performance.

Control posts

Issue

59. As with staff search, control posts might not necessarily fall under 'airport operation services' under the definitions in the Act. However, the CAA considered this process to be essential to on-time performance of airline services, and hence it was in passengers' interests to continue to incentivise the service quality of this element.

60. The airlines proposed an improvement in the standard from 95% of vehicles within 15 minutes to 95% of vehicles within 10 minutes. The airlines also felt that the performance of the control posts should be disaggregated to ensure consistent performance.

61. HAL proposed the standard remains at that agreed for Q5+1 of 95% of vehicles within 15 minutes, with the performance averaged across all the control posts. The CAA has not seen evidence that there would be an increase in passenger benefit commensurate with the cost of providing a higher level of service at the control posts, and proposes to keep the standard at 95% of vehicles within 15 minutes.

CAA's initial proposals

62. The CAA proposed that rebates allocated to control posts remain in line with Q5. In order to ensure consistent service delivery, the CAA proposed to amend the metric so that it would apply to each group of control posts separately. The groups were defined as per figure C7.

Figure C7: Proposed control post groups

Group	Control posts
CTA	CP5, CP8
Cargo	CP10, CP10A, CP25A
Eastside	CP14, CP16
Terminal 5	CP18, CP19, CP20
Southside	CP24

Source: CAA

Stakeholder views

63. The CAA received three responses commenting on the service standard for control posts.

- BA believed that the standards should be raised, and that control post performance should be measured and reported individually and should not be averaged. HAL should fully utilise the number plate recognition technology in Q6 for which HAL had received the capex funding to deliver in Q4/5. BA stated that this technology was vital in improving the offering at control points.
- HAL, while agreeing with the CAA's proposal to retain the Q5 standard, rejected the CAA's proposal to apply to each group of control posts separately. It stated that the proposal would reduce flexibility in operation, and would require an extra cost of £1.6 million per annum to keep additional lanes open. HAL would need to apply for more SQR exclusions in future, and might need to put in place a slot booking process. It noted that the standard was improved from 20 minutes to 15 minutes since April 2013. HAL also proposed to continue publishing individual control post performance on a monthly basis.
- The LACC considered the control post search standard of 15 minutes should be tightened, and it welcomed disaggregation of measurements. It also believed that the CAA could improve the control post standards.

CAA's final proposals

64. The CAA notes that, while some control posts are used as alternatives for each other, some are not substitutable when they are designed for different types of traffic or are far apart from each other, or both. Averaging the performance of non-substitutable control posts potentially masks the actual performance for specific types of traffic and at different locations.

65. The CAA therefore proposes to apply the Q5 standard of 95% of vehicles waiting less than 15 minutes to control post groups individually as set out in its initial proposals rather than across Heathrow. In meeting this target, HAL must not risk meeting its other legal commitments especially in relation to safety and security.

Passenger operational elements

Issue

66. Passenger operational elements are those which cover HAL's performance on the provision of passenger-facing equipment. They consisted of PSE (general), PSE (priority), arrivals reclaim (baggage carousels) and the track transit system.

CAA's initial proposals

67. With the exception of the removal of bonuses from PSE (general), the CAA proposed to retain the Q5 financial incentives on these elements. The allocation of the rebate is adjusted in Terminal 5 to allow for the inclusion of the measure of track transit availability.

Stakeholder views

68. The CAA received two responses commenting on passenger operational elements.

- BA considered that recent issues at Terminal 5B and 5C had highlighted that the current track transit standard was ineffective at capturing real passenger experience. BA stated that it should be amended to a measure of passenger waiting time for Q6, so that it was more aligned with the passenger experience.
- The LACC considered it important to review the list of PSE, especially in new Terminal 2.

CAA's final proposals

69. The CAA considers that BA’s proposed new standard for the track transit system, being a more complex and costly measure, would introduce disproportionate regulatory burden. The CAA therefore proposes that for Q6, the Q5 standards and financial incentives for all passenger operational elements are to be retained.

Airline operational elements – pier service

Issue

70. HAL proposed that this element is removed from the SQR and replaced with amended measures for jetty availability and stand availability for pier-served stands only. At the time of the CE report, the airlines were still considering this proposal.

71 The CAA considers that the purpose of the SQR is to incentivise the provision of essential services across the airport. Thus it does not consider it appropriate to remove the measure of pier-served stand availability from the SQR.

CAA's initial proposals

72. The CAA proposed to retain the Q5 standards, subject to exceptions to be agreed by HAL and the AOC to reflect operational issues.

Stakeholder views

73. The CAA received three responses commenting on pier-served stand usage standards.

- BA fully supported the retention of pier service in SQR, and that in the interest of equivalence both the standard and the application of a measure should be maintained across each terminal. It proposed to introduce an alternative for Terminal 5 subject to agreement between the CAA, the airlines and HAL. It believed that the CAA should introduce an additional adjustment factor to pier service standard where “uncaptured” usability features were identified and agreed between the airlines, HAL and the CAA.
- HAL believed that pier service standard should be removed from the SQR, as it was influenced by airlines’ demand and was dependent on infrastructure. HAL also considered that pier service at Terminal 5 should be excluded from the measurement as it had been managed by BA. The standard should be consistent with the Q6 capital plan. The standard of 95% might not be appropriate as it was dependent on airline terminal occupancy decision. If agreements with airlines could not be reached, HAL presumed that the CAA would be the arbiter.
- The LACC welcomed the retention of the same standard of pier service standards in the SQR for Q6.

CAA's final proposals

74. The CAA considers that the party who has operational control of stand allocation should be responsible for meeting the service quality standard. Therefore, the CAA proposes that the standard for pier service at Terminal 5 be removed for Q6 if an airline or a group of airlines (BA in this case) continues to perform stand allocation at Terminal 5. This standard will remain in place at the other terminals.

75. The CAA proposes that the rebates attached to this element at Terminal 5 should be reweighted across other airline operational elements, so as to maintain the same overall rebate level and the same proportion of rebates among the passenger satisfaction elements, security, passenger operational elements and airline operational elements across the terminals.

76. In addition, the CAA proposes to re-name pier service 'pier-served stand usage' to reflect this service element more accurately.

Airline operational elements – others

Issue

77. Apart from pier service, there are a number of other airline operational elements, including stands, jetties, FEGP, PCA and stand entry guidance.

78. During Q5, the performance of PCA was monitored and reported, but it had no financial incentives attached to it. HAL and the airlines agreed that PCA, where it was available should have SQR attached. There was disagreement over the standard and the metric, as well as whether it should sit within the SQR or as part of a voluntary service charter.

79. Given PCA is only available on the pier-served stands at Terminal 5, and Pier 6 at Terminal 3, there was an argument that as it was not consistent with the principle of terminal equivalence it should not be included within the SQR. Nevertheless, it is an important service where it is provided.

CAA's initial proposals

80. The CAA proposed the inclusion of PCA (for those terminals it applies to) and the retention of other airline operational elements in the SQR. The CAA proposed to reweight the allocation of rebates slightly to reflect the (new) financial incentivisation of PCA in the relevant terminals and maintain the same overall rebate across the terminals.

Stakeholder views

81. The CAA received one response commenting on PCA. The LACC agreed with the proposed PCA standards, and believed that the SQR scheme should be modified if PCA becomes available in more terminals than at present.

CAA's final proposals

82. Given the reasons stated in the initial proposals, and after considering the response received, the CAA proposes the inclusion of PCA and the retention of other airline operational elements in the SQRB. The CAA proposes to reweight the allocation of rebates slightly to reflect the (new) financial incentivisation of PCA in the relevant terminals and maintain the same overall rebate across the terminals.

Aerodrome congestion term

Issue

83. HAL and the airlines agreed that the ACT was an area for further discussion. The Q5 rebate was a maximum of £100,000 (in 2007/08 prices) per 'event', up to a maximum of 1% of airport charges per year. During Q5, rebates had been generated in only a few months, and the level of rebate was below the 1% cap (figure C8).

Figure C8: ACT rebates in Q5

£	2008/09	2009/10	2010/11	2011/12	2012/13	Apr – Jun 2013
Rebates paid	0	0	194,980	54,435	130,376	0

Source: HAL

CAA's initial proposals

84. The CAA proposed the retention of ACT in the SQR in line with the Q5 standard. Given the importance passengers place on on-time performance, the CAA considered this an important element of the SQR, and one that should continue to be incentivised. Although there had only been a few months where rebates have been generated, when this occurred it was possible for passengers to experience considerable detriment.

Stakeholder views

85. The CAA received two responses commenting on the ACT.

- While agreeing with the CAA that ACT should be retained in SQR, BA requested the CAA to clarify the full extent of responsibility placed on the airport operator to demonstrate adherence to disruption and resilience plans. BA would also like to have more clarity on the escalation process and consultation requirements.

- The LACC supported the retention of the ACT in the scheme, as it could inform HAL's investment decisions. However, it considered the rebate level too low to incentivise HAL to avoid lost movements. It also requested specific guidance from the CAA on the determination of responsibility for the occurrence of material events, and a clear escalation process for outstanding issues.

CAA's final proposals

86. After considering stakeholders' responses, the CAA proposes the retention of this element of the SQR in line with the Q5 standard. The CAA acknowledges that escalation and consultation processes are areas worth further deliberation and clarification. It intends to discuss this with HAL and the LACC in due course.

Appendix D

List of abbreviations

Abbreviation	
AA86	Airports Act 1986
ABP	Alternative Business Plan
ACD	Airport Charges Directive
ACR	Airport Charges Regulation
ACT	Aerodrome congestion term
Adjusted ICR	Adjusted Interest Cover
ANS	Air Navigation Service
AOC	Airline Operators Committee
AOS	Airport Operation Services
ASA	Alan Stratford Associates
ASQ	Airport Service Quality
ATMs	Air Transport Movements
ATRS	Air Transport Research Society
BA	British Airways
CA98	Competition Act 1988
capex	Capital Expenditure
CC	Competition Commission
CE	Constructive Engagement
CEPA	Cambridge Economic Policy Associates
CIP	Capital Investment Plan
CMA	Competition and Markets Authority
COPI	Construction Price Inflation
CSP	Continuity of Service Plan
CTA	Central Terminal Area
CUSS	Common User Self Service
DB	Defined Benefit
DC	Defined Contribution

Abbreviation	
DfT	Department for Transport
EA02	Enterprise Act 2002
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
FBP	Full Business Plan
FEGP	Fixed Electrical Ground Power
FFO	Funds From Operations
GAD	Government Actuary Department
GAL	Gatwick Airport Limited
GDP	Gross Domestic Product
GHRs	Groundhandling Regulations
HACC	Heathrow Airport Consultative Committee
HAFCO	Heathrow Airport Fuelling Company
HAL	Heathrow Airport Limited
Heathrow	Heathrow Airport
HHOPCO	Heathrow Hydrant Operating Company
IAPA	Independent Airport Parking Association
IBP	Initial Business Plan
ICR	Interest Cover Ratio
IDS	IDS Thomson
IFRS	International Financial Reporting Standards
IFS	Independent Fund Surveyor
KPI	Key Performance Indicator
LACC	London Airline Consultative Committee
LHR	London Heathrow Airport
MPT	Market Power Test
NATS	NATS Holdings
NERL	NATS (En Route) plc
NPV	Net Present Value
OBR	Office of Budget Responsibility
ONS	Office for National Statistics
opex	Operating Expenditure

Abbreviation	
ORCs	Other Regulated Charges
ORR	Office of Rail Regulation
ORs	Other Revenues
pax	Passengers
PCA	Pre-Conditioned Air
PCRs	Profit Centre Reports
PMICR	Post-Maintenance Interest Cover Ratio
PRMs	Passengers with Reduced Mobility
PRT	Personal Rapid Transit
PSE	passenger-sensitive equipment
Q5/Q5+1	the fifth Quinquennium
Q6	the sixth Quinquennium
QSM	Quality of Service Monitor
RAB	Regulatory Asset Base
RAR	Regulatory Asset Ratio
RBP	Revised Business Plan
RPI	Retail Price Index
SDG	Steer Davis Gleave
SMP	Substantial Market Power
SQR	Service Quality Rebate
SQRB	Service Quality Rebate and Bonuses
T3IB	Terminal 3 Integrated Baggage
TDA	Tobacco Display Act
TFP	Total Factor Productivity
the 1982 Act	Civil Aviation Act 1982
the Act	Civil Aviation Act 2012
the airlines	the airlines operating at Heathrow
the Statement	the Statement of Standards, Rebates and Bonuses
UKBF	UK Border Force
Virgin	Virgin Atlantic Airways
WACC	Weighted Average Cost of Capital

Abbreviation	
WDF	World Duty Free
WHO	World Health Organization
WtP	Willingness-to-Pay