

Meeting point



North

Economic regulation at Heathrow from April 2014: notice of the proposed licence

Economic regulation at Heathrow from April 2014: notice of the proposed licence

© Civil Aviation Authority 2013

All rights reserved. Copies of this publication may be reproduced for personal use, or for use within a company or organisation, but may not otherwise be reproduced for publication.

To use or reference CAA publications for any other purpose, for example within training material for students, please contact the CAA at the address below for formal agreement.

Enquiries regarding the content of this publication should be addressed to:
Regulatory Policy Group, Civil Aviation Authority, CAA House, 45 - 49 Kingsway, London, WC2B 6TE

The latest version of this document is available in electronic format at www.caa.co.uk/publications

**Notice of licence grant under Section 15 of the Civil Aviation
Act 2012**

Heathrow Airport Limited

Civil Aviation Authority

January 2014

Table of Contents

Table of Contents	2
Executive Summary	3
Chapter 1: Introduction	8
Chapter 2: Proposed Licence Conditions	23
Chapter 3: Draft Licence	72
Appendix A: Form of Regulation	159
Appendix B: Traffic Forecasts	179
Appendix C: Capital Expenditure	203
Appendix D: Capital Efficiency	238
Appendix E: Operating Expenditure	254
Appendix F: Commercial Revenues	303
Appendix G: Other Revenues and Charges	317
Appendix H: Q6 Regulatory Asset Base	330
Appendix I: WACC, Calculation of a Price Cap and Financeability	334
Appendix J: Service Quality	351
Appendix K: Rolling forward the Regulatory Asset Base	407
Appendix L: List of Abbreviations	410

Executive Summary

1. This document gives notice under sections 15(1) and (3) of the Civil Aviation Act 2012 (the Act) that the CAA proposes to grant a licence to Heathrow Airport Limited (the Licensee or HAL) in relation to the core area of London Heathrow Airport. The CAA is issuing this notice pursuant to its powers and duties in the Act. This document sets out the conditions proposed to be included in the licence and the CAA's reasons for including those conditions. The CAA explains in Chapter 1 of this document how the proposal for a licence is grounded in its statutory duties.

HAL's licence

2. The proposed licence consists of the following parts:
 - Part A: Scope and Interpretation. This part of the proposed licence provides details of the airport, the airport operator, and the airport area for which the licence is granted. It also specifies the date on which the licence comes into force, and clarifies points of interpretation in the licence.
 - Part B: General Conditions (Payment of fees and licence revocation). This part requires HAL to pay to the CAA any charges that are set under a scheme made under section 11 of the Civil Aviation Act 1982 (the 1982 Act). It also sets out the circumstances under which the licence may be revoked.
 - Part C: Price Control Conditions. This part governs HAL's price control for Q6. It also contains a condition requiring HAL to secure its procurement of capital projects efficiently and economically, and a condition governing charges for cargo operators.
 - Part D: Service Quality Conditions. This part gives effect to the Statement of Standards, Rebates and Bonuses which would be included as a Schedule to the licence. It also includes a self-modification provision for agreed changes to the Schedule and a condition governing operational resilience.

- Part E: Financial Conditions. This part requires HAL to produce regulatory accounts. It also sets out a regulatory ringfence.
- Part F: Consultation Conditions. This part requires HAL to develop and agree with relevant parties protocols setting out how it will consult and take stakeholders' views into account.

Key features of the price control licence condition

3. The proposed price control licence condition contains a single-till, retail price index (RPI)-X control, to last for four years and nine months from 1 April 2014 (Q6). It is composed of the following key building blocks:
 - traffic forecasts of 347.7 million passengers;
 - operating expenditure (opex) of £4,731 million¹;
 - capital expenditure (capex) of £2,816 million;
 - a pre-tax, real weighted average cost of capital (WACC) of 5.35%;
 - commercial revenues of £2,790 million; and
 - other regulated charges (ORCs) of £1,004 million and other revenues of £675 million.
4. This gives an average per passenger yield of £19.74 over Q6. This compares with £23.43 in HAL's July 2013 Alternative Business Plan (ABP) and £15.56 suggested by the Heathrow airlines. The CAA's proposed price control, RPI-1.5% per year over Q6, compares with RPI+4.2% per year suggested by HAL in its July ABP and RPI-9.8% per year suggested by the Heathrow airlines in their response to the CAA's initial proposals. The main differences between the price control in the final proposals and this final view are:

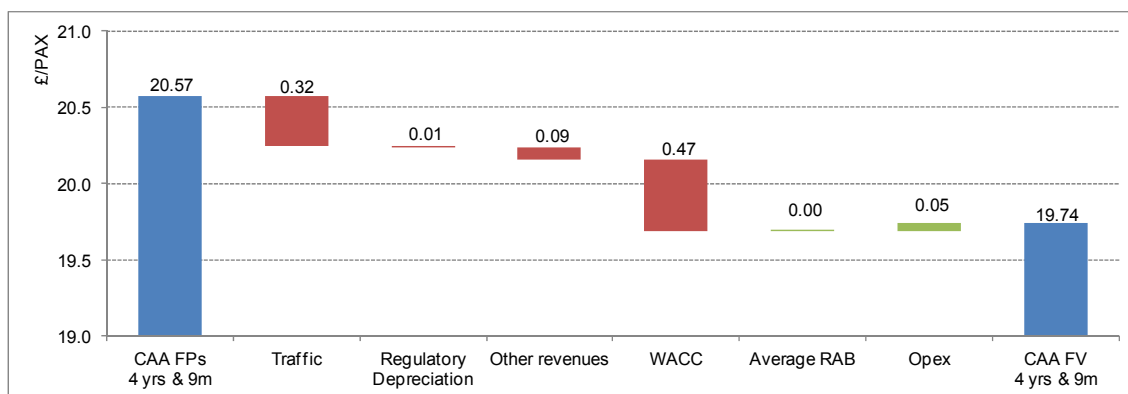
¹ All financial numbers in this document are in 2011/12 prices unless otherwise stated.

- The pre-tax real WACC has declined from 5.60% to 5.35%. This is due to a revised assessment of the estimate of the total market returns included in the cost of equity calculation. The CAA has reduced its estimate of the total market returns to reflect the additional evidence in the Competition Commission's (CC's) Northern Ireland Electricity (NIE) provisional findings and the greater emphasis the CC placed on the forward-looking estimates.
- Projected opex has risen from £4,944 million in the final proposals to £4,962 million in the final view on a five-year basis reflecting numerous changes, including a higher passenger forecast, an allowance for the CAA security charge and changes to Service Quality Rebate (SQR) measurement. This has been offset by a higher staff cost efficiency assumption. Adjusting this to reflect the four years and nine months duration of the control means that the CAA's opex forecast is reduced to £4,731 million.
- Forecast capex has been increased from £2,885 million to £2,953 million in the final view on a five-year basis. Adjusting this to reflect the four years and nine months duration of the control means that the CAA's capex forecast is reduced to £2,816 million. This reflects the elimination of £35 million of expenditure on the Terminal 3 Integrated Baggage project, reflecting airlines' concerns about the recent cost increases. The CAA will commission a study to determine whether HAL has incurred this additional expenditure efficiently and consider adjusting the RAB if it has not. The CAA has also allowed an extra £102 million to finance expenditure on fuel infrastructure to improve resilience. In addition, the CAA has adjusted the timing of HAL's £70 million contribution to the Crossrail project so that the expenditure is incurred in the final year of Q6.
- Traffic forecasts have increased by 1.6% from 359.2 million in the final proposals to 364.9 million due to higher than expected traffic growth in 2013/14 and stronger economic growth forecasts for the UK economy over the next two years. Adjusting this to reflect the proposed duration of the control reduces the Q6 forecast to 347.7 million passengers.

- Projected commercial revenues have increased from £2,880 million to £2,917 million on a five-year basis. Adjusting this to reflect the four years and nine months duration of the control means that the CAA's commercial revenues forecast is reduced to £2,790 million. The difference between the CAA's final proposals and final view is a result of the changes in the traffic forecasts described above slightly offset by the adjustment for Central Terminal Area Personal Rapid Transit (CTA PRT)-related revenues.
- Forecast revenue from ORCs has slightly decreased from £1,062 million to £1,058 million on a five-year basis. Adjusting this to reflect the four years and nine months duration of the control means that the CAA's ORCs forecast is reduced to £1,004 million. Forecast revenue from other charges remains at £708 million on a five-year basis, or £675 million for a four years and nine months control.
- The opening Regulatory Asset Base (RAB) is unchanged at £13,816 million.

5. The impact of these changes on the maximum average Q6 per passenger yield is set out in Figure Ex.1 below.

Figure Ex.1: Changes between the CAA's final proposals and final view



Source: CAA

N.B. The "Other revenues" category in the table above includes commercial revenues, ORCs and other income.

6. The CAA intends to build on the success of the Q5 SQR scheme with several enhancements that have, in most cases, broad stakeholder support. The substantive differences with the Q5 SQR scheme 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 where 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 pier-served stand usage.

CAA

January 2014

CHAPTER 1

Introduction

- 1.1 This introduction sets out:
- the notice which the CAA is publishing under section 15 of the Act;
 - the provisions for respondents to make representations;
 - the steps before the grant of the licence;
 - the process that has shaped the CAA's proposed licence conditions;
 - the statutory context to this process; and
 - the structure of the remainder of the document.

Notice under section 15 of the Act

- 1.2 This document gives notice under sections 15(1) and (3) of the Act that the CAA proposes to grant a licence to Heathrow Airport Limited (the Licensee or HAL) in relation to the core area of London Heathrow Airport (Heathrow). The CAA is making this notice pursuant to its powers and duties in the Act. The majority of the provisions in Part 1 of the Act came into force on 6 April 2013 and will replace the framework for airport economic regulation under the Airports Act 1986 (AA86) that has governed all previous quinquennial reviews.
- 1.3 The airport area for which the licence would be granted is located at London Heathrow Airport and comprises:
- 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 Northern Receipt Fuel Facility, the Southern Receipt Fuel Facility, the Sandringham Road Fuel Farm, the Perry Oaks Fuel Farm, the Airport Transfer Pipes and the Fuel Hydrant Systems);
 - the passenger terminals; and

- the cargo processing areas.
- 1.4 This document sets out the conditions proposed to be included in the licence and the CAA's reasons for including those conditions.
- 1.5 The CAA has already consulted extensively on the proposed licence conditions and the supporting analysis in its initial proposals in April 2013, in a letter to stakeholders in May 2013 and in its final proposals in October 2013.² The CAA has taken into account representations from all stakeholders in those consultations in developing the proposed licence conditions specified in this notice. During this process stakeholders have provided extensive representations on the individual RAB-based calculations and the CAA's price control policies. While new information may always come to light on these issues, for example as outturns become available or forecasts are updated, the CAA is mindful that this could create a never ending process. The CAA was also clear in its initial and final proposals and with stakeholders individually that this document would constitute the CAA's decision on economic regulation. The CAA considers that, at this late stage, and following extensive consultation on the substantive issues, it is in users' interests to see an orderly process that ensures regulatory licences come into force on 1 April 2014. Late submission of materials, or submissions that could have been submitted at an earlier stage in the consultation process, might put this goal at risk. The CAA therefore expects stakeholders to focus their responses on the technical aspects of the licence conditions, i.e. how they would operate, rather than the policies that stand behind them.
- 1.6 On 10 January 2014, the CAA made an operator determination³ that HAL does not have overall responsibility for the management of the fuel facilities within the airport area known as the Northern Receipt Fuel Facility, the Southern Receipt Fuel Facility, the Sandringham Road Fuel Farm, the Perry Oaks Fuel Farm, the Airport Transfer Pipes and the Fuel Hydrant Systems.
- 1.7 Recipients of this notice have until 24 January 2014 to make any

² All consultations, responses and associated documentation can be found on the CAA website at: <http://www.caa.co.uk/default.aspx?catid=78&pagetype=90&pageid=15152>

³ This can be found at: <http://www.caa.co.uk/default.aspx?catid=78&pagetype=90&pageid=15151>

representations on the proposal to grant the licence, including the proposed licence conditions. The CAA cannot commit to take into account representations received after this date. The CAA reserves the right not to take into account, or to place less weight on, information that is provided after 24 January 2014 that could have been provided earlier.

- 1.8 The CAA proposes to grant any licence by 14 February 2014, so that it may come into force on 1 April 2014.⁴ When it grants any licence, the CAA will give reasons for any differences between the proposed licence conditions in this document and the licence conditions included in the licence where those differences are not significant. If the CAA considers it necessary to make significant changes to the proposed licence conditions as a result of representations made in this consultation, the CAA will issue a further notice under section 15 proposing licence conditions that reflect those changes.
- 1.9 Alongside this document, the CAA has also published its market power determination in relation to Heathrow.⁵ Under the market power determination, the CAA has concluded that the market power test is met by HAL in relation to the core area of Heathrow and so HAL will require a licence.
- 1.10 This notice sets out the CAA's reasons for the proposed licence conditions. In coming to its decision on the proposed licence conditions, the CAA has taken into account the views of 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, it is open to the stakeholder to raise this with the CAA.
- 1.11 References in this document to 'the airlines' mean views submitted to the CAA by the representative body for airlines for the purposes of Constructive Engagement (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. The responses of some airlines did not comment on

⁴ A licence may not come into force before six weeks after the date the CAA has published its notice that it has granted the licence.

⁵ Available from the CAA's website: www.caa.co.uk

individual issues, but endorsed the response of the LACC, referred to in this document by its request as the Heathrow Airline Community. The CAA has taken note of such endorsements but has not noted them explicitly in this document.

- 1.12 This is a redacted version of the CAA's notice. Some information has been removed at the request of HAL and the airlines 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.

Representations

- 1.13 If you have any representations on the proposal to grant the licence and the proposed licence conditions, please email them to airportregulation@caa.co.uk. If you would like to discuss any aspect of this document with the CAA, please contact Peter John (peter.john@caa.co.uk). Representations must be received by no later than 24 January 2014.
- 1.14 The CAA will publish representations on its website shortly after the close of the consultation period. If there are parts of your representation 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 of, and Schedule 6 to, the Act and in the Freedom of Information Act 2000.

Next steps

- 1.15 There are a number of steps before HAL's licence comes into force on 1 April 2014.
- 10 January 2014: publication of this notice of the proposal to grant a licence and proposed licence conditions for HAL under section 15(1) of the Act. At the same time the CAA is publishing its decision on the market power test (MPT) in relation to Heathrow.

- 14 February 2014: publication of the grant notice and a copy of the licence under section 15(5) of the Act. The notice will specify, among other things, the date on which the licence will come into force, namely 1 April 2014. HAL and any other person with a qualifying interest (e.g. airlines) will have six weeks from the date of publication of the licence and notice to decide whether or not to seek permission to appeal with the CC or the Competition and Markets Authority (CMA).⁶
- 1 April 2014: the licence and, in the absence of any application to seek permission to appeal, the Q6 price control will come into force. If permission to appeal is sought and an application is made to the CC/CMA to suspend a condition within six weeks of the licence being granted, that condition is automatically suspended for 10 weeks from the date the licence was granted. The CMA's decision on the application for permission to appeal and suspend the condition beyond that 10-week period must be taken before the end of that period.
- The CMA has 10 weeks from the date of the publication of the notice granting the licence (not from the receipt of the stakeholder's decision to seek permission to appeal) to decide whether to give the stakeholder leave to appeal. The CMA then has 24 weeks (again, from the date of publication) to determine the appeal. The CMA may grant itself an eight-week extension to this deadline.
- Interested parties can also appeal the CAA's determination on whether the MPT is met to the Competition Appeal Tribunal (CAT) within 60 days of the publication of the CAA's reasons for the determination. The CMA may extend the period for considering an appeal on licence conditions if there is an appeal to the CAT which it considers relevant to the appeal on licence conditions.

⁶ The Competition and Markets Authority will take over the functions of the Competition Commission along with the competition and certain consumer functions of the Office of Fair Trading (OFT). The CMA is currently in operation as a shadow body but will take over any existing CC casework when it becomes fully operational on 1 April 2014.

The process that has shaped the CAA's proposed licence conditions

- 1.16 The CAA's proposed licence conditions have been informed by a number of factors.
- Previous significant CAA consultations in July 2011 and May 2012 designed to establish the key issues of concern to stakeholders and explore the interpretation of the CAA's new duties under the Act.⁷
 - A process of CE between April 2012 and December 2012, overseen by the CAA, whereby HAL and the airlines discussed the main building blocks that could be used to calculate future charges. This process culminated in a report to the CAA approved by the Joint Steering Group.
 - An initial business plan (IBP) (April 2012) and full business plan (FBP) (January 2013) from HAL setting out its view on the main building blocks that could be used to calculate future charges in the period April 2014 to March 2019.
 - The CAA's initial proposals for HAL, published in April 2013, in which it proposed a RAB-based price control,⁸ and written representations from stakeholders in response to the CAA's initial proposals.⁹
 - Further submissions from the airlines and HAL in response to a CAA request to reach agreement on key issues on the service quality and capital expenditure regimes.
 - A stakeholder session with the CAA Board in July 2013 at which both HAL and representatives from the Heathrow airline community explained their respective positions on economic regulation at Heathrow.¹⁰

⁷ CAA, July 2011, Setting the Scene for Q6, <http://www.caa.co.uk/default.aspx?catid=2162&pageid=12352> and CAA, May 2012, Q6 Policy Update, <http://www.caa.co.uk/docs/5/Q6PolicyUpdate.pdf>

⁸ CAA, April 2013, CAP 1029: Economic Regulation at Heathrow from April 2014: Initial Proposals, <http://www.caa.co.uk/cap1027>

⁹ The responses to the initial proposals are published at: <http://www.caa.co.uk/default.aspx?catid=78&pagetype=90&pageid=14929>

¹⁰ CAA, July 2013, Minutes from Board stakeholder sessions for Heathrow,

- A revised business plan (RBP) in June 2013 and an ABP in July 2013, developed without consultation with the airlines.
- A consultation in October 2013 on the CAA's final proposals, including proposed licence conditions¹¹ and written representations in response to the CAA's final proposals and separate representations in response to developments in October and November 2013.
- Several independent studies commissioned by the CAA on the efficiency and appropriateness of HAL's business plan projections (see figure 1.1). In a number of cases the CAA commissioned updates to these reports to address the points raised by stakeholders in their responses to the initial proposals.
- Advice from the CAA's Consumer Panel.¹²

Figure 1.1: Independent consultancy studies commissioned by the CAA

Topic	Consultant
Cost of capital	PricewaterhouseCoopers
Scope for future efficiency gains at Heathrow, Gatwick and Stansted	Cambridge Economic Policy Associates
Q6 capex review	Alan Stratford Associates
Assessment of maintenance and renewal costs at Heathrow and Gatwick	Steer Davies Gleave
Assessment of commercial revenues at Heathrow and Gatwick	Steer Davies Gleave
Other operating expenditure at Heathrow and Gatwick	Steer Davies Gleave
Central support costs	Helios
Comparing and capping airport charges at regulated airports	Leigh Fisher
Employment cost study at Heathrow, Gatwick and Stansted	IDS Thomson Reuters
Q5 capex and consultation review, Heathrow	Alan Stratford Associates
Review of distribution of economic rents	SLG economics

<http://www.caa.co.uk/docs/78/CAA%20Board%20%20Heathrow%20Meeting04072013.pdf>

¹¹ CAA, October 2013, Economic regulation of Heathrow Airport Limited after April 2014: the CAA's final proposals, <http://www.caa.co.uk/cap1103>

¹² The minutes of the CAA Consumer Panel meetings are published at:

<http://www.caa.co.uk/default.aspx?catid=2488&pagetype=90&pageid=14123>

Topic	Consultant
Review of pension costs for Heathrow Airport	Government Actuary Department

Source: CAA

Note: These consultancy studies have been published on the CAA's [website](#).

- 1.17 The CAA is also under a duty, by virtue of section 73(2A) of the Regulatory Enforcement and Sanctions Act 2008, not to impose or maintain unnecessary burdens while performing its regulatory functions under Chapter 1 of Part 1 of the Act.

Statutory context to this process

Outline of the CAA's statutory duties

- 1.18 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 regulatory best practice. This includes the CAA having a single 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 services¹³ and the CAA must carry out its functions, where appropriate, in a manner that will promote competition in the provision of airport operation services. The CAA must also have regard to a range of matters (figure 1.2). The Act also enables the CAA to regulate through a flexible licensing approach.

¹³ Airport operation services are further defined in the Act at section 68.

Figure 1.2: The CAA's 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)	<p>In performing its duties under subsections (1) and (2) the CAA must have regard to:</p> <p>(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,</p> <p>(b) the need to secure that all reasonable demands for airport operation services are met,</p> <p>(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,</p> <p>(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,</p> <p>(e) any guidance issued to the CAA by the Secretary of State...,</p> <p>(f) any international obligation of the United Kingdom notified to the CAA by the Secretary of State..., and</p> <p>(g) the principles in subsection (4).</p>
(4)	<p>Those principles are that -</p> <p>(a) regulatory activities should be carried out in a way which is transparent, accountable, proportionate and consistent, and</p> <p>(b) regulatory activities should be targeted only at cases in which action is needed.</p>
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.

Source: The Act

Note: In performing its duties under sections 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 European Union (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.

Who should be regulated?

1.19 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. The MPT is met if Tests A to C are met by or in relation to the operator of the airport area:

- 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.

1.20 At the same time as publishing this document, the CAA has published its determination in relation to the MPT in relation to Heathrow.¹⁴ The CAA considers that the MPT is met in relation to the core area¹⁵ (as defined in section 5(4) of the Act) of London Heathrow Airport (Heathrow) and this is likely to endure over the period 2014 to 2019.

Furthering the CAA's statutory duties

1.21 The CAA considers that the final views contained in this document are best calculated to further its statutory duties in the Act. The CAA's primary 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, where necessary, by promoting competition. The CAA must also have regard to a range of matters and regulatory principles.

1.22 In assessing users' interests, the CAA has taken account of airlines' views (among others), recognising that airlines' interests often align

¹⁴ Available at www.caa.co.uk

¹⁵ The core area is defined in section 5(4)b 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.

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. More information on the CAA's consumer research is on the CAA's website.¹⁶

- 1.23 In assessing users' interests, the CAA must balance the interests 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.
- 1.24 The level of prices contained in this final view 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 final view is:
- Pro-investment. The 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.

¹⁶ <http://www.caa.co.uk/default.aspx?catid=1350&pagetype=90&pageid=14745>

- 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 promote competition and 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 declined compared to Q5, this reflects observable reductions in external costs (debt and equity market conditions and reductions in taxation). The CAA sees no merit in arguments that the allowed WACC is insufficient to support the capital plan envisaged 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 its final view is 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 the 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.

- 1.25 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 where necessary. 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 users and evolving market circumstances.
- 1.26 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.
- 1.27 As an airport area operated by HAL meets the MPT and it is a dominant area at a dominant airport, the CAA may include in a licence such conditions that it thinks are needed to prevent the risk of abuse of market power as well as any other condition that it thinks are necessary and expedient¹⁷ to secure its statutory duties under section 1 of the Act, to further the interests of users of air transport services and, where appropriate, promotes competition in the provision of airport operation services.
- 1.28 A licence must specify the airport area and the airport for which it is granted and it must include any price control conditions that the CAA decides are required, as well as provisions for revoking the licence.¹⁸ In addition, the licence may include obligations requiring payment of fees to the CAA.¹⁹ Licence conditions can also include provisions relating to activities carried on outside the airport area for which the licence is granted.
- 1.29 In January 2012, at the request of the Secretary of State to assist parliamentary scrutiny of the Act, the CAA published an indicative

¹⁷ Section 18 of the Act.

¹⁸ Sections 17 and 19 of the Act.

¹⁹ Section 20 of the Act.

licence setting out the types of licence conditions that it might include. The CAA has subsequently consulted on potential licence conditions as part of the initial proposals and in the final proposals. The conditions the CAA considers are required in the HAL licence are discussed in Chapter 2 and set out in Chapter 3.

- 1.30 HAL and the airlines have rights to appeal the CAA's final decision on the inclusion, or absence, of licence conditions to the CMA subject to certain qualifying criteria being met.²⁰ In the event an appeal is made that meets the qualifying criteria, the CAA's decision will stand until the CMA determines the appeal – unless it has granted interim relief or the appeal relates to specific financial arrangements. While CMA appeals should normally be determined within 24 weeks, this can be extended if a relevant appeal to the CAT is ongoing.²¹

Structure of the remainder of this document

- 1.31 Following this Introduction, the remainder of this decision is structured as follows:
- Chapter 2: Proposed licence conditions
 - Chapter 3: HAL licence.
- 1.32 There are 12 Appendices:
- Appendix A: Form of regulation.
 - Appendix B: Traffic forecasts.
 - Appendix C: Capital expenditure.
 - Appendix D: Capital efficiency.
 - Appendix E: Operating expenditure.
 - Appendix F: Commercial revenues.
 - Appendix G: Other revenues and charges.
 - Appendix H: Q6 Regulatory Asset Base.

²⁰ Section 24 of the Act. The appeal body is currently the CC but will be the CMA from April 2014.

²¹ Details of the CMA appeal process are set out in Schedule 2 to the Act.

- Appendix I: WACC, calculation of a price cap and financeability.
- Appendix J: Service quality.
- Appendix K: Rolling forward the RAB.
- Appendix L: Glossary.

1.33 In addition, the CAA is publishing a Technical Appendix on the WACC simultaneously with this decision document.²²

1.34 The CAA received many responses to its final proposals. It has carefully read and considered all the points made in each response. This document contains summaries of, and answers to, many of those points. Respondents should be assured that each point raised has been carefully considered, whether or not it is addressed specifically in this document.

²² Available from www.caa.co.uk

CHAPTER 2

Proposed Licence Conditions

- 2.1 This chapter sets out the conditions proposed for HAL's licence and the CAA's reasons for including those conditions. The proposed licence is set out in Chapter 3 of this document. It consists of the following parts:
- Part A: Scope and interpretation.
 - 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.
- 2.2 In developing the proposed licence conditions, the CAA has consulted stakeholders extensively, particularly in April 2013, May 2013 and October 2013,²³ and has taken into account any representations made to those consultations. Where appropriate, the CAA has also taken into account responses to other relevant consultations²⁴ for consistency. The CAA received ten²⁵ responses to the final proposals.
- 2.3 There will be a period of two weeks for stakeholders to make representations on the proposal to grant the licence, including the proposed licence conditions, which the CAA will consider before publishing the notice granting the licence on 14 February 2014. The CAA will specify the reasons for any differences from the conditions initially proposed. However, if the conditions differ significantly from

²³ All consultations on the proposed licence conditions and responses can be found at: <http://www.caa.co.uk/default.aspx?catid=78&pagetype=90&pageid=15151>

²⁴ Such as responses to the final proposals for Gatwick Airport Limited (GAL) which can be found at <http://www.caa.co.uk/default.aspx?catid=78&pagetype=90&pageid=15152>.

²⁵ HAL, BA, Heathrow Airline Community (AOC and LACC), Lufthansa, oneworld, BARUK, the Heathrow Unions, skyteam, Star Alliance and Virgin.

those on which it has consulted, the CAA intends to re-consult.

Part A: Scope and Interpretation

The proposed licence condition

2.4 This part of the proposed licence provides details of the airport, the airport operator, and the airport area for which the licence is granted. It also specifies the date on which the licence comes into force, as well as details on interpreting the licence. The airport is London Heathrow Airport. The airport area included in the proposed licence 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 Northern Receipt Fuel Facility, the Southern Receipt Fuel Facility, the Sandringham Road Fuel Farm, the Perry Oaks Fuel Farm, the Airport Transfer Pipes and the Fuel Hydrant Systems,
- the passenger terminals; and
- the cargo processing areas.

Reasons for the proposed licence condition

CAA's final proposals

2.5 The CAA is required under section 17 of the Act to include the details of the airport and airport area and these details are not licence conditions. All other details on interpreting the licence are included to provide clarity and certainty.

2.6 In proposing the airport area for the licence, the CAA considered 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 SMP. The CAA therefore took the airport area considered in the 'minded to' market power assessment as its starting point. This found that HAL has SMP in the market for airport services for full service carriers and associated feeder traffic and that these were delivered from the core area of the airport.²⁶

²⁶ 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

Given these findings, the CAA proposed to include in the airport area covered by the licence, all those parts of the core area of the airport except for any specific areas where the CAA has made an operator determination under section 10. An operator determination assesses whether an operator has overall responsibility for the management of an area based on the extent of control the operator has over the type, quality and price of services offered in that area, development of the area and access to that area.

- 2.7 In its response to the initial proposals, HAL considered that it was not the operator of the fuel farm and hydrant facilities for the purposes of the Act. The CAA reviewed the terms of the leases for the fuel facilities to determine whether the area should, or should not be included in the airport area covered by the licence. The CAA's initial findings were that HAL does not have overall responsibility for the management of the area and the CAA therefore proposed to exclude the fuel facilities from the airport area covered by the licence.²⁷
- 2.8 The CAA also noted that under section 18 of the Act, the CAA may include 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 SMP. Under section 21(1) (f) of the Act 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.

Stakeholders' views

- 2.9 HAL reiterated its view that it is not the operator of the fuel assets and does not operate in the fuel 'market'. It also considered that, if used appropriately, additional fuel storage could help improve the resilience of fuel supply, but the development of such infrastructure was removed from its Q6 plans as it had been unable to negotiate reasonable commercial terms with the operator and developer of the proposed fuel assets and it would therefore have been premature to commit to the delivery of enabling works. It also noted that existing

airport, passenger terminals and the cargo processing areas.

²⁷ <http://www.caa.co.uk/docs/33/CAP%201103.pdf>. See page 216 for further information.

fuel storage infrastructure had rarely been used to full capacity²⁸ and it therefore does not follow that new infrastructure will be filled to capacity.

- 2.10 British Airways (BA) agreed with the CAA that the burden of proof should lie with HAL in demonstrating a lack of control over services or development in these areas²⁹, and that this was particularly important in safeguarding core services and key areas of the airport. BA considered that whilst HAL provided the land and access to the fuel farm, it is not the operator and therefore cannot be held accountable for fuel provision in the same way as other core facilities. However, it also considered that as fuel provision is a critical function to an airport's efficient and resilient running, and a key piece of national infrastructure, the CAA must recognise HAL's obligation as a responsible airport operator in facilitating and ensuring a robust supply of fuel. Furthermore, given the focus that the CAA, its consumer panel and the government, have placed on improving operational resilience and the fact that Heathrow is currently operating at less than half of the International Air Transport Association (IATA) recommended standard of three days minimum fuel, BA considered that the CAA should include a licence condition requiring HAL to positively engage and support airlines in facilitating developments in fuel capacity. BA supported a RAB-based capital investment over any capital investment by the fuel companies, and would continue to actively participate to progress this debate.
- 2.11 The Heathrow Airline Community considered that the licence should apply to the airport area inclusive of the fuel farm. In particular, it noted:

²⁸ For example, HAL cited that existing storage had only been filled to the agreed target overnight stock holding 47% of the time over the last 12 months.

²⁹ As set out in paragraph 12.12 of the final proposals.

- The supply of fuel is an activity included in the servicing of aircraft as defined in section 67(8) of the Act, and an airport operation service (AOS)³⁰ includes permitting a person to access or use land that forms part of an airport, or its facilities, for the purpose of servicing aircraft. Under section 68(5) of the Act, a person who permits others to access or use land for such purposes is treated as providing AOS in that area.
- As an airport like Heathrow cannot be without a fuel farm, it is therefore evident that HAL must provide a fuel farm in order to be able to provide AOS, and in doing so HAL has 'overall responsibility' for at least access to the area, and the types and quality of services provided, in accordance with section 9(4) of the Act.
- The development of the fuel farm should be funded in the same manner as other infrastructure required for the 'manoeuvring, parking and servicing of aircraft'.³¹

2.12 The Heathrow Airline Community welcomed the CAA's recognition that a robust fuel infrastructure at Heathrow is critical for operational resilience and highlighted the urgent need to resolve fuel storage issues with reference to December 2012³² and July 2013 where fuel stocks became dangerously low.³³ Therefore the CAA should establish a new service quality measure for fuel storage requiring HAL to maintain a minimum of 3.5 days of fuel supply. See Appendix D for more information.

2.13 The Heathrow Airline Community welcomed the CAA's insistence that all parties should meet and agree a mutually acceptable way forward in developing fuel infrastructure. It considered that HAL should make the total investment required, using Heathrow Airport Fuel Company (HAFCO) as the design authority and designated supplier to provide a

³⁰ As defined in section 68 of the Act.

³¹ That is to say through a capital plan established by the CAA with assets delivered being added to, and remunerated through the RAB.

³² In December 2012 reserves fell to only 12m litres against a next day forecast demand of 20m litres before additional supplies were secured.

³³ On both of these occasions the fuel contingency plan was activated with the discussion between HAL, HAFCO and the airline community almost resulting in the rationing of fuel supply which would have had a serious impact on the planned flight schedule.

facility to specification. It also suggested that active facilitation may be required and this will be requested from the CAA if it appeared that any party is blocking the process. Further information can be found in Appendix D.

CAA's response to the stakeholders' views

- 2.14 The CAA has published its MPD which confirms the 'minded to' position, and is therefore including in the airport area covered by the licence, all those parts of the core area of the airport except for any specific areas where the CAA has made an operator determination that HAL is not the relevant operator. After considering further evidence from relevant parties which confirms the view set out in the final proposals, the CAA has made an operator determination³⁴ that HAL is not the operator of the fuel facilities as it does not have overall responsibility for the management of that area taking into account the matters set out in section 9(4) of the Act.
- 2.15 However, the CAA notes stakeholders' comments and has considered the wider implications of the airport area in more detail. Whilst the current fuel facilities will not be included in the licensed airport area, the CAA notes the important role that HAL has in leading on coordination and communication between itself and relevant parties³⁵ to ensure a more robust response to disruption. As part of this, the CAA considers that the effect on the airport of disruption to fuel supply can be mitigated through the licence, in the plans HAL must develop under the operational resilience licence condition. As set out in the section on operational resilience below, the CAA does not expect to hold HAL to account for activities outside its control, such as the supply of the fuel itself, but HAL, in collaboration with relevant parties, should manage the direct and indirect impact of disruption to fuel supply on its own activities. The CAA considers that, as disruption can best be managed effectively through collaboration by all parties with clear leadership from the central hub organisation, HAL is well placed to plan for the effect that disruption to fuel supply could have on its own services.
- 2.16 The CAA is working with HAL and the airlines on long-term solutions

³⁴ This can be found at <http://www.caa.co.uk/default.aspx?catid=78&pagetype=90&pageid=15151>.

³⁵ The airlines and groundhandlers (including fuel facility operators).

to fuel resilience and will continue to use its influence and, where necessary, its powers to ensure that the interests of passengers and cargo owners are protected. Although the fuel facilities are outside the licensed airport area, the Act allows the CAA to include conditions in the licence relating to activities carried on outside the airport area.

Part B: General Conditions

Payment of fees

The proposed licence condition

2.17 The proposed licence condition requires HAL to pay to the CAA any charges that are set under a scheme made under section 11 of the 1982 Act. HAL must pay these charges from the date on which the licence comes into force. Payment of fees is enforceable using civil sanctions as well as the enforcement powers in the Act. 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.

Reasons for the proposed licence conditions

CAA's final proposals

2.18 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. These charges are required to enable the CAA to carry out those functions. The CAA has general powers to determine charges under a scheme or regulations made under section 11 of the 1982 Act. The CAA has not received any evidence through the consultation process that a scheme of charges under the 1982 Act would not be appropriate and it therefore proposed to continue to rely on that scheme.

Stakeholders' views

2.19 There were no comments on this proposal.

CAA's response to the stakeholders' views

2.20 The CAA has included the condition on the payment of fees as consulted on in the final proposals with no further changes. The CAA is consulting separately on its scheme of charges from 1 April 2014, including charges to be paid by holders of a licence issued under the Act. The consultation runs until 13 February 2014 and the CAA will

publish its decision on charges during March 2014.

Licence revocation

The proposed licence condition

- 2.21 The proposed licence condition specifies that the grounds on which it can revoke HAL's licence are:
- where the licence is no longer required, including:
 - the Licensee requests or agrees to revocation;
 - the Licensee is no longer the operator of all of the airport area, or
 - either the airport and/or airport area is no longer dominant; or
 - where the Licensee fails to comply with an enforcement order³⁶ or pay a penalty³⁷ (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).

Reasons for the proposed condition

CAA's final proposals

- 2.22 The final proposals explained that the CAA is required under section 17(4) of the Act to include provisions about the circumstances in which it may be revoked. The licence is issued in perpetuity so provisions are needed to revoke it if it is no longer required, for example because the airport or the airport area is no longer considered to be dominant.
- 2.23 The CAA considers that licence revocation is a serious matter as the prohibition on charging in section 3 of the Act means it would not be lawful for HAL to charge for any airport operation services if its licence was revoked. In all likelihood, this means that HAL would have to cease operations.
- 2.24 However, the CAA considers that it should have the ability to revoke the licence if the behaviour of the licensee with regards to its regulatory obligations is such that the CAA no longer considers it is fit

³⁶ Within the meaning of section 33 of the Act, or an urgent enforcement order within the meaning of section 35 and 36 of the Act.

³⁷ Within the meaning of sections 39, 40, 51 or 52 of the Act.

to hold the licence. This should be treated as the ultimate sanction for a licence breach by a regulated company and should be used only as a last resort when all other channels have been exhausted. Other than in extreme circumstances, the CAA does not consider that revocation as a sanction is likely to be in the best interests of passengers and cargo owners. There are checks built into both the Act and the licence that give several opportunities for HAL to correct any failures and HAL is able to appeal the CAA's decision at each stage.

Stakeholders' views

2.25 There were no stakeholder comments on this part of the licence.

CAA's response to the stakeholders' views

2.26 The CAA has included the condition on revocation as consulted on in the final proposals with no further changes.

Part C: Price control conditions

Price Control

The proposed licence condition

2.27 The proposed licence condition governs HAL's price control for Q6 and is in many respects similar to HAL's price control in Q1 to Q5. The substantive changes are:

- the inclusion of a BR factor to pass the difference between forecast and outturn rates revaluation costs partially through to customers;
- the S factor has been made symmetrical, including unanticipated cost reductions as well as cost increases;
- the arrangements for the core and development capex mechanisms. The CAA has designed these to ensure that HAL was remunerated for investment undertaken. However, it would not recover a return on investment which is anticipated at the price control, but which it did not then undertake.

Reasons for the proposed licence condition

CAA's final proposals

2.28 The proposed price control condition is largely based on conditions included in previous price controls for HAL (Q1 to Q5) under earlier regulatory regimes, following a RAB-based structure. The principle of the condition is that, in setting charges in respect of relevant air transport services each year, HAL must ensure that its total revenue from those charges, divided by the number of passengers using the airport, does not exceed the maximum revenue yield per passenger. The maximum revenue yield calculation for the first year of Q6 includes a number of elements:

- a fixed per passenger yield;
- a bonus factor based on HAL's performance in the previous year;
- a cumulative development capex adjustment;
- a capital 'trigger' factor;
- the number of passengers using the airport; and
- a passenger correction factor.

2.29 In each subsequent year of Q6, the maximum revenue yield is calculated using:

- the revenue yield per passenger in the previous year, adjusted for RPI and any allowable increase in security costs per passenger arising as a result of changes to security standards;
- a bonus factor based on HAL's performance two years previously, adjusted for RPI;
- a cumulative development capex adjustment.

2.30 Further details on the features of the proposed licence condition, including more details on the reasons for the condition, are set out in the relevant Appendices of this document.

Stakeholders' views

2.31 HAL noted that it was unclear why the CAA proposed to change conditions C1.1 and C1.2 (relating to the recovery of the service quality bonus through the maximum revenue per passenger) from

forecast to actual (based on a two-year lag).

2.32 HAL considered condition C1.10 should be amended as follows:

" 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 , which includes the capital spend incurred during the development stages of projects, irrespective of whether projects have transitioned from development to core."

2.33 The Heathrow Airline Community's comments on the price control condition, including the S factor and core and development capex mechanism can be found in Appendix A to Appendix E.

2.34 The Heathrow Airline Community made the following comments on the definitions contained in condition C.1.12:

- In regards to 'core capex project' the Heathrow Airline Community considers that it would be better for this definition to be specific about a core capex project being one that has been approved at Gateway 3, rather than a project that has reached Gateway 3. The definition should refer to consultation and agreement in accordance with the governance arrangements to establish clarity of meaning in a way which ensures the benefits to passengers of establishing a core development mechanism delivered as was intended.
- The Heathrow Airline Community also considered that the previous inclusion of definitions for the 'price growth' factor and 'qualifying security claim per passenger' were useful and should be retained for clarity.

2.35 The Heathrow Airline Community also noted that the 'development capex condition' was not included in the final proposals or the draft licence. The Heathrow Airline Community considers that this condition is an important factor in protecting passengers' interests and should be reinserted.

2.36 Further responses on the substantive issues contained in the price control condition can be found in the relevant Appendices to this document.

CAA's response to the stakeholders' views

2.37 Since publication of the final proposals, the CAA has discussed the

proposed price control condition extensively with HAL and other stakeholders. On the specific issues mentioned by respondents:

- Regarding HAL's comment on the recovery of the service quality bonus, the CAA considers HAL can earn bonuses for performance of certain service quality elements above the baseline level. As HAL would not know whether it will earn bonuses when it sets its airport charges it can either (1) forecast bonuses when setting charges and correct for over- or under-recovery through the K factor two years later, or (2) recover the actual amount of bonuses in full two years in arrears. At present, HAL adopts option (2). The CAA's proposed changes to the B factor in conditions C1.1 and C1.2 aimed at formalising, rather than introducing changes to, the current arrangement.
- The CAA has agreed with the change proposed by HAL regarding the definition of *Ot* in condition C1.10.
- The 'price growth factor' was a term used to give meaning to 'X' in the price control formula, prior to the CAA's final estimate. As this has now been removed and replaced with a number, the CAA considers that retention of this term is unnecessary, as suggested by the Heathrow Airline Community.
- The CAA has agreed to amend the definition of core capex project as the Heathrow Airline Community proposes.
- The term 'qualifying security claim per passenger' was changed to 'allowable security claim per passenger' and is defined as follows:

“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.”

Charges for other services

The proposed licence condition

- 2.38 The proposed licence condition requires HAL to be transparent in how it sets charges for activities that are not otherwise covered by this licence through the price control. This condition is based on a similar condition in Q5. This is discussed in more detail in Appendix G.

Reasons for the proposed licence condition

CAA's final proposals

2.39 The CAA considered that the previous conditions imposed on HAL following public interest findings by the Monopolies and Mergers Commission on agency staff and information desks related to conduct that occurred in 1996 and was 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. As the CAA considered that this conduct was unlikely to recur, it would be disproportionate to replicate these particular public interest conditions in the licence. In the unlikely event that HAL repeated this conduct, the CAA could deal with the situation using its licensing powers if appropriate at the time. Therefore, the CAA did not propose including conditions on agency staff and information desks in the final proposals.

Stakeholders' views

- 2.40 HAL considered that the list of specified activities in condition C2.6 should be replaced with the list covering Other Regulated Charges in paragraph 8.3 of the final proposals.
- 2.41 The Heathrow Airline Community reiterated its response to the initial proposals in that it still considered that the substance of the two public interest findings on the provision of operational infrastructure³⁸ and agency staff should be retained in the licence to address any potential similar abuse by HAL of its SMP and to govern its behaviour in similar circumstances.
- 2.42 BA supported the concerns raised by IAPA³⁹ in relation to access to facility provision, and restrictions on forecourts activity and welcomes the statement by the CAA of an investigation into road and forecourt access. It requested that the CAA seek airline views on the subject in the terms of reference.

³⁸ The LACC considered that whilst the previous public interest finding was for information desks the principle applied wider to any charging proposals for operational infrastructure of which information desks were an example.

³⁹ See page 222, paragraph 12.37 of the CAA's final proposals.

CAA's response to the stakeholders' views

- 2.43 HAL's response on the list of specified activities in condition 2.6 is considered in Appendix G.
- 2.44 The CAA's view remains that it would be disproportionate to include licence conditions to address conduct that it considers HAL is unlikely to undertake. The CAA, therefore, is not including conditions on agency staff or information desks in the proposed licence.
- 2.45 The CAA welcomes BA's support for its planned investigation into road and forecourt access. The CAA will develop clearer timescales and seek stakeholders' views on the terms of reference for this review as soon as possible once the licence comes into force.

Procurement of capital projects condition**The proposed licence condition**

- 2.46 The proposed licence condition requires HAL to secure its procurement of capital projects efficiently and economically, so far as is reasonably practicable. In doing so, it must take account of a 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.
- 2.47 HAL is also required to publish a code of practice, setting out the principles, policies and processes by which it would meet its obligation to procure capital projects efficiently and economically.

Reasons for the proposed licence condition*CAA's final proposals*

- 2.48 The CAA considered that, where capital investments are ultimately being paid for by the airlines, it would be in the interests of those airlines, for their customers, to ensure that HAL carries out procurement for its capital investment projects efficiently and effectively. There was evidence that this has not always been done effectively in the recent past, although the CAA acknowledged that HAL had already made improvements to its processes. It was important, particularly where there was a large capital programme with many different contractors and operational constraints, to ensure these improvements were followed through and built upon through

clear processes and policies.

- 2.49 The CAA considered that the procurement code of practice would work better if developed and owned by HAL, rather than being imposed. The licence specified some elements that must be included but it would be up to HAL to ensure that the detail of these was enough to comply with the overall obligation.
- 2.50 The CAA recognised that there could be some projects where an alternative procurement method would be more effective. The draft licence required HAL to provide its reasons and justification to the CAA annually where this happened.

Stakeholders' views

- 2.51 The Heathrow Airline Community welcomed this condition and thought it would be useful for the CAA to indicate in the licence that the structure and content of the procurement code of practice will be periodically reviewed to identify areas where it may need to be developed in the interests of the airlines and its passengers.
- 2.52 The Heathrow Airline Community considered that it would be in the interests of the airlines and passengers if the CAA were to indicate that it expected any significant capital investment which is not procured in line with the procurement code of practice to be at a minimum level and to establish a definition of significant capital investment for further clarity. The Heathrow Airline Community also noted the importance of the procurement code of practice in the context of its review by the Independent Fund Surveyor (IFS).

CAA's response to the stakeholders' views

- 2.53 The CAA notes the Heathrow Airline Community's comments and considers that it would be sensible to include a requirement to review the code of practice from time to time or when required by the CAA. It has also included a definition of significant capital projects which is linked to the £15 million level at which the parties to CE agreed that projects should be triggered. However, it has not included an explicit limit on the number of projects that HAL can procure without following the code of practice. The code of practice will set out how HAL will comply with the overall efficiency obligation so there should be few circumstances where it is not appropriate to follow the code. Should the annual report on such projects show that capital expenditure is not

incurred in line with the code, the CAA can require HAL to review the effectiveness of the code.

Charges for cargo only operators

The proposed licence condition

2.54 The proposed licence condition retains the condition used in Q5 restricting HAL from charging cargo only operators more than equivalent passenger service operators. The price control calculation relates only to passenger airlines so this condition will ensure that cargo only operators are treated in an equitable manner.

Reasons for the proposed licence condition

CAA's final proposals

2.55 The CAA proposed to retain the condition used in Q5 restricting HAL from charging cargo only operators more than equivalent passenger service operators.

Stakeholders' views

2.56 The Heathrow Airline Community welcomed this condition, in that it restricted HAL from charging cargo only operators more than equivalent passenger services.

CAA's response to the stakeholders' views

2.57 The CAA has included the condition on charges for cargo only operators, as set out in the final proposals, with no further changes.

Part D: Service Quality Conditions

Service quality levels, rebates and bonuses

The proposed licence condition

2.58 The proposed licence condition gives effect to the Statement of Standards, Rebates and Bonuses which is included as a Schedule to the licence. The draft condition also includes a self-modification provision for changes to the Schedule where the CAA, HAL and the airlines agree to those changes.

2.59 The Statement of Standards, Rebates and Bonuses is based largely

on the statement included in Q5. The main difference is that bonuses have been moved from the price control condition into this statement. Appendix J gives more detail of this and other changes.

Reasons for the proposed licence condition

2.60 The reasons for the proposed licence condition and the inclusion of the Statement of Standards, Rebates and Bonuses in Schedule 1, including discussion of the CAA's final proposals, stakeholders' views and the CAA's response to those views, are set out in Appendix J.

Operational Resilience

The proposed licence condition

- 2.61 The proposed licence condition requires 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 owners⁴⁰ in accordance with best practice and in a timely, efficient and economical manner.
- 2.62 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;
 - 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 'rules of conduct' for airlines and groundhandlers, in consultation with those bodies, 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.

⁴⁰ See chapter 12 of the final proposals for more detail.

Reasons for the proposed licence condition

CAA's final proposals

- 2.63 The CAA considered that a licence condition on operational resilience is necessary as part of a wider industry framework for dealing with disruption, which can best be managed effectively through collaboration by all parties with clear leadership and coordination from HAL as the central hub organisation. More detailed reasons for including such conditions were set out in paragraphs 12.2 to 12.21 of the CAA's initial proposals published in April 2013.
- 2.64 The CAA expected the resilience plans to cover only those activities for which HAL is responsible and not for services provided by third parties, other than to have plans for the effect that disruption to those services would have on its own operations. HAL would be expected to liaise with its stakeholders about each other's resilience plans to ensure compatibility so far as necessary and reasonably practicable.
- 2.65 The CAA considered that some minimum standards or rules of conduct, setting out clearly the roles that each party will play, would be needed during disruption so that HAL could effectively coordinate and incentivise a response with other stakeholders. It suggested that any such rules should be negotiated voluntarily and agreed with the airlines and groundhandlers, and must be targeted at meeting the overarching obligation, proportionate and must not be unduly burdensome.
- 2.66 In the final proposals, the CAA said that where agreement could not be reached, the rules should not be imposed but that the CAA would look to the industry to continue to seek alternative solutions. The CAA recognised that this would be an ongoing process that would 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.
- 2.67 The rationale for requiring HAL to provide relevant information is so that passengers receive as much information as possible from both their airline and HAL so that they can make informed choices in the event of disruption.

Stakeholders' views

- 2.68 BA considered that the CAA had placed an appropriate degree of importance on the requirements for HAL to develop a full range of resilience plans for its business and the operation of the airport. It considered that this was a critical step in improving the resilience of the airport and safeguarding passenger experience in disruption.
- 2.69 BA considered that the CAA's position on the need for HAL to demonstrate how it had taken on board the views of consultation was not reflected in the licence condition itself. Therefore, given the inclusion of other consultation requirements within this section, that this be addressed as a supplementary condition to be inserted as condition D2.9:
- "The Licensee shall demonstrate in their findings, how they have taken into account the views expressed in the consultation."*
- 2.70 BA recognised the CAA's efforts in addressing its concerns over HAL imposing rules of conduct but considered that its position as set out in the final proposals had been significantly altered by the order and selection of text set, which is unrepresentative of the BA position. BA commented that it does not endorse HAL's Conditions of Use 2013 consultation which 'is already attempting' to mandate many new rules of conduct based on "compliance with the licence".'
- 2.71 BA's high level position on the rules of conduct is as follows:
- Rules of conduct are helpful and necessary to fully coordinate disruption and resilience responses.
 - Such rules must be balanced, proportionate, necessary, should not be burdensome or cause service providers to exceed their obligations under law
 - Certain elements of disruption management, specifically Heathrow ATM Demand and Capacity Balancing group (HADACAB), are currently voluntary, and BA considers that HAL should be able to oblige carriers to comply with this activity.

- Given the historical abuse of Conditions of Use consultation process, where no user views are taken into account, BA would be very concerned if the rules of conduct were included in the Conditions of Use, particularly if HAL were able to introduce them unilaterally.
- Whilst its preference is that the rules of conduct are held in the licence, but separately to the Conditions of Use, it is critical that the licence specifies that such rules must be subject to thorough meaningful consultation and that HAL cannot implement any rules without the agreement of the airlines.

2.72 BA was highly supportive of and took some reassurance from the CAA statement that HAL will not be able to unilaterally impose un-agreed conditions following consultation, but this position needs to be reflected in the corresponding condition itself. Condition D2.13 should therefore read:

"The Licensee shall develop rules of conduct for airlines and suppliers....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) shall relate to the purpose in Condition D2.1; and

c) shall not be imposed without the agreement of the consulted airlines and suppliers."

2.73 BA welcomed the CAA's recognition of the HADACAB process and agreed that the current work around this should be allowed to mature but requested that the CAA outline a timetable to review progress of this work with a view to revisiting the need for an amendment of the licence to include HADACAB powers.

2.74 BA considered condition D2.15 as helpful in ensuring HAL's role in providing and ensuring coordination of information. However it was critical that in order for airlines and other relevant parties to make necessary operational decisions during disruption, they must also be in receipt of all necessary information surrounding the current operations of HAL.

2.75 BA also identified a gap that does not appear to oblige HAL to provide information on its own operation to airlines and other relevant

parties.⁴¹ It was unclear on whether 'coordination' under D2.15(a) referred to or included HAL's own operations, or just coordination or information about and between all other parties' operations. Therefore BA suggested an additional requirement echoing the provisions in D2.15(b) but in the context of airlines and other relevant parties:

"Provide or ensure the provision of timely, accurate, clear and relevant information about its operations to and adequate communication, with relevant parties."

- 2.76 HAL considered that the CAA's final proposals recognised the on-going collaboration across the community at Heathrow to improve resilience and the provision of welfare to passengers during disruption.
- 2.77 HAL reiterated its response to the initial proposals, in that it was still unclear on how the CAA would address situations where the airport operator is unable to agree voluntary 'rules of conduct'. To date, HAL stated that it has been unable to agree rules of conduct with the airlines through the Conditions of Use and the Groundhandling Licence. HAL considered that the CAA could help give effect to a more operable resilience condition, being well placed to influence a number of areas.⁴²
- 2.78 The Heathrow Airline Community welcomed the focus in the licence on operational resilience and its purpose as set out in conditions D2.1-D2.3. It also welcomed the word 'cooperation' in condition D2.6 which validated the work being undertaken by the airlines and HAL on the development of the passenger welfare protocol.
- 2.79 The Heathrow Airline Community considered the CAA struck the correct balance in not expecting to hold HAL accountable for activities outside its control whilst also recognising that HAL has a coordination role in the development on an industry wide response to disruption.

⁴¹ Whilst condition D2.15 (b) is clear on the obligation to ensure provision of information to air transport service users, D2.15(a) appears to focus on the coordination role of HAL in communication of operational information to relevant parties.

⁴² For example, HAL has no relationship with passengers until they arrive at the airport whereas airlines have a direct relationship with passengers and can do a great deal to influence a situation in terminals, through decisions relating to flights and advising passengers before they arrive.

- 2.80 The Heathrow Airline Community recognised the value in developing 'some minimum standards or rules of conduct' in coordinating responses to disruption, as long as these are agreed by, and developed collaboratively with the airlines. The Heathrow Airline Community therefore welcomed the clarity in the final proposals regarding the voluntary nature of the rules of conduct, but noted that this clarification was not evident in condition D2.13 itself which only refers to consultation. Accordingly, the Heathrow Airline Community considered that this condition should reference the requirement for the rules of conduct to be agreed with the airlines. It noted that the airlines have agreed a number of protocols with HAL in a number of areas. For example there is already a welfare protocol which is referred to the Conditions of Use, although it is not part of the Conditions of Use.
- 2.81 The Heathrow Airline Community considered that if condition D2.14 continued to require the rules of conduct to be included in the Conditions of Use, this would extend HAL's SMP by granting it the ability to make rules about the conduct of its customers without needing to reach agreement with its customers first. In particular, the Heathrow Airline Community drew upon specific clauses of the 2014/15 Conditions of Use to demonstrate the ways in which HAL sought to insulate itself from any liability from the airlines.⁴³ The Heathrow Airline Community therefore considered that the agreed rules of conduct should instead be recorded in a form of agreements document that could be agreed between the CAA, HAL and airlines. The Heathrow Airline Community considered the CAA phrase in 'any written agreements' in condition D2.13 would provide for this. The Heathrow Airline Community also considered that there was a significant risk that conditions D2.13 and D2.14 would act counter to EU regulations designed to promote liberalisation of groundhandling to promote competition, as it would extend HAL's SMP to areas where competition is emerging.

⁴³ Section 5 of the Conditions of Use: "When using our Facilities and Services at the Airport you must comply with...all rules of conduct relating to resilience (including without limitation rules of conduct relating to operations/snow clearing instructions/procedures). Section 5.9: "You shall agree that any ground handler which provides services to you at the Airport (shall in performance of such services) obtain and comply with the terms of the ground operations licence (and the minimum standards of performance and rules of conduct contained therein) issued by the Airport from time to time.

CAA's response to the stakeholders' views

- 2.82 The CAA said in both the initial proposals and the final proposals that operational resilience at airports needs strong, centralised leadership to coordinate planning for and response to disruption and it was clear that the airport operator is best suited to assume the role, with its direct links to all the service providers at the airport. In requiring HAL to take on this responsibility and associated accountability, the CAA recognises that HAL needs to be able to set out some reasonable expectations of what it requires from its partners in this area to ensure an effective whole industry response. As far as possible, these expectations should be developed jointly and agreed, on a more voluntary basis. However, the CAA cannot impose requirements on the airlines and groundhandlers (such as a requirement that agreement should not unreasonably be withheld) and there is a risk that only requiring HAL to agree the rules would create an unbalanced and dysfunctional system. Ultimately, the CAA considers that it should be up to HAL to understand the requirements of the airport and, as far as possible, its stakeholders during disruption and to take appropriate leadership decisions.
- 2.83 The CAA acknowledges the airlines' concerns that the provisions on the rules of conduct, as drafted, could allow HAL to exert its SMP, particularly in a way that is not in the interests of passengers. However, the condition makes clear that any 'rules of conduct' must be proportionate and relate specifically to the purpose of the licence condition to secure the availability and continuity of airport operations to further the interests of passengers and that HAL must consult on any rules.
- 2.84 By proportionate, the CAA means proportionate to the requirements of an event as well as proportionate to the services offered by each stakeholder. The interests of passengers are paramount, but where other legislation applies (such as welfare obligations under EU 261⁴⁴), the rules should not normally extend beyond the obligations of that other legislation.

⁴⁴ Regulation (EC) No 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.

- 2.85 The CAA has considered an option to require HAL to reach agreement with the airlines before it can impose the rules of conduct, with provision to refer any areas of disagreement to the CAA for determination. However, the CAA considers that this option would not be effective, risking further lengthy delays to resolving the problems caused by disruptive events.
- 2.86 The CAA has included provision in the consultation condition (Condition F1) that HAL must agree a protocol with the airlines on how it will consult on all its operational resilience activities under the operational resilience condition and how it will take into account the views expressed in that consultation. Where the parties cannot agree on the protocol, there is provision for the CAA to determine the matter. The CAA considers this gives interested parties enough input to the process for developing the rules whilst retaining HAL's ability to take strong leadership decisions.
- 2.87 With these limitations in place, the CAA believes it is unlikely that HAL would exert its SMP in this area in a way that was not in the interests of passengers. Should it try to do so, however, the CAA has concurrent powers under the Competition Act 1998 to address abuse, particularly where this distorts competition.
- 2.88 The CAA will continue to work closely with the industry in this area to use its influence and, where necessary, its powers under the licence or the Act to help find mutually acceptable solutions. However, it will be up to HAL to decide how to conduct its relations with airlines so as to comply with its licence requirements.
- 2.89 With regard to the scope of the resilience plans and the rules of conduct, the CAA set out its expectations in the final proposals, saying that it would expect the plans proposed in the licence to cover only those activities for which HAL is responsible. In particular, HAL should have contingency plans for loss, for whatever reason, of:
- access to key infrastructure at the airport (such as the terminals, runway or airfield);
 - IT systems;
 - key suppliers; or
 - key staff (including UK Border Force (UKBF)).

- 2.90 To clarify the expectations set out in the final proposals, the CAA notes that disruption can be caused by many different factors, including severe weather, industrial action, security incidents, cyber attack, accidents at the airport or even incidents at facilities remote from the airport upon which the airport relies⁴⁵. CAA would expect to see that HAL has risk assessments for the infrastructure under its control and for all the services it offers at the airport, with clear management processes and clear communication plans in place for remedying and dealing with the impacts of the loss of that infrastructure or service. These should also include dissemination of information to passengers and a provision of a 'backstop' level of passenger welfare where the airlines are slow or unable to do so. If these are in place, in the event of any investigation, the CAA would normally expect to concentrate on how well the company had reacted to, and managed the event. However, if the plans are not adequate, the CAA will take proportionate regulatory action, from requiring changes to the plans to taking enforcement action under the Act.
- 2.91 The CAA also stated in the final proposals that 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 it would expect HAL to have plans for the effect that disruption to those services would have on its own operations.
- 2.92 In the initial proposals published in April 2013, the CAA also made it clear that, in order for resilience plans to work effectively, within the high-pressure environment caused by disruption, they must be underpinned by solid day-to-day- working relations, possibly through the development of formal business continuity models. It noted that the government's guidance on resilience⁴⁶ states that "business continuity management must be regarded as an integral part of an organisation's normal on-going management processes." Therefore, the requirement goes wider than times of disruption and the CAA would expect HAL to maintain clear working arrangements with relevant parties.

⁴⁵ For example, an accident at a major oil storage depot or disruption to the fuel pipeline could have a significant effect on fuel supply to the airport.

⁴⁶ <https://www.gov.uk/resilience-in-society-infrastructure-communities-and-businesses>

- 2.93 In addition, the CAA would be content for HAL, in consultation with relevant parties, to develop Terminal specific plans and rules so long as these are proportionate and do not distort competition.
- 2.94 As part of the collaboration requirement within the licence condition, the CAA said in the final proposals that it 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.
- 2.95 Where the CAA expects HAL to liaise with its stakeholders about their own plans, to ensure compatibility, the CAA expects HAL to concentrate initially on key stakeholders. This would include stakeholders such as those airlines with a significant proportion of flights and passengers using the airport, those whose own actions may have a significant impact on HAL's operations (such as the police, UK Border Force (UKBF) etc) or those organisations on whom HAL may have to rely during disruption, such as local authorities. Where HAL has made reasonable attempts to invite a stakeholder to share and align their operational resilience plans, it will not be held to account if that stakeholder chooses not to engage. However, if a stakeholder wishes to involve HAL in its resilience plans, the CAA will expect HAL to engage positively and, so far as reasonably practicable, use its leadership and coordination role to help facilitate those plans if necessary.
- 2.96 The CAA considers that HAL is best placed to assess the detail of what is needed in its plans to meet the outcomes required under this condition. The CAA may issue guidance to HAL on the plans, following consultation. The CAA considers that the preceding paragraphs constitute guidance on what it expects HAL to include in its resilience plans. The CAA is not planning to issue any further guidance at this stage, beyond that set out in this notice, but may do so if the need arises. In addition to issuing guidance, the CAA considers that it should retain a right to be able to require HAL to review and revise its resilience plan(s) if it considered that the plan(s) are likely to fall short of meeting the high level outcome or has been found wanting following practical experience.
- 2.97 The CAA reiterates that it expects this to be an ongoing process that

will take some time to develop. HAL has already made significant progress since the disruption during the snow events in 2009 and 2010, but there is still more that can be done by both HAL and the other service providers at the airport. The CAA will continue to work with HAL and other service providers to develop a more robust response to disruption.

- 2.98 The CAA notes BA's concerns about provision of operational information under condition D2.15. The CAA considers that this condition does require HAL to pass on information about its own activities and operations, as well as coordinating what it knows about other service providers' requirements, plans and activities. D2.15(a) relates to the coordination and communication of relevant information to all relevant parties, as defined in the condition as including airlines, groundhandlers, NATS, fuel and energy suppliers and the border agency. The CAA considers that relevant information would by necessity include information about HAL's own operations and decisions as well as providing a central hub for the dissemination of information provided by others. D2.15(b) is explicitly about ensuring passengers and cargo owners have adequate access to the information they need in relation to HAL's own operations.⁴⁷ D2.15(c) is more specifically about ensuring passengers have access to information about their rights from as many sources as possible to avoid any potential gaps during disruption.
- 2.99 In the final proposals, the CAA said that it would initiate development of guidance on the operation of Heathrow's HADACAB process, which is an industry forum chaired by HAL and attended by all airlines and NATS for agreeing the necessary reduction in capacity during forecast disruption.
- 2.100 The CAA has been working closely with the industry on changes to the HADACAB process to allow for planned part-day disruption as well as full day disruption and has been encouraged by the close collaboration from all parties. However, there is still evidence that the current process does not work that well in practice, with disagreements over whether the shares of cancellations between airlines is proportionate and complaints that some airlines are not

⁴⁷ For example, information on closures, delays, evacuation plans etc through channels such as HAL's own website, electronic boards at the airport or informed staff in the terminals.

honouring their agreement to cancel flights. The CAA will consider whether HAL should take a more decisive role in determining how capacity will be reduced, in a similar way to some other airports in Europe such as Schiphol, rather than leaving it to the airlines to agree.

2.101 The CAA considers that this proposal could be implemented through guidance issued by the CAA under the current operational resilience obligation to have resilience plans and to take a leadership role in coordinating the planning for, and management of disruption. The CAA proposes to start engaging with relevant parties as soon as possible after the licence comes into force in April 2014, with a view to having guidance in place in time for winter 2014/15. The CAA understands that HAL has started implementing a new, more effective process and will look at this as part of this engagement. The CAA will initially consider:

- whether it would be in the interests of passengers to change the current arrangements;
- what changes would be required;
- whether there should be sanctions for not following the rules;
- links with requirements under EU 261; and
- whether guidance under the operational resilience condition would be the most effective method of implementing any changes.

Part E: Financial conditions

Regulatory accounting requirements

The proposed licence condition

2.102 The proposed licence condition formalises the existing process by combining the current regulatory accounts process with other financial reporting information provided by HAL.⁴⁸

⁴⁸ This will require HAL to produce audited regulatory accounts in accordance with regulatory accounting guidelines.

Reasons for the proposed licence condition

CAA's final proposals

- 2.103 The CAA considered that the proposed licence condition was unlikely to create additional costs and may give the opportunity for further streamlining.
- 2.104 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.

Stakeholders' views

- 2.105 The CAA did not receive any responses to this licence condition.

CAA's response to the stakeholders' views

- 2.106 The CAA has included the condition on the regulatory accounting requirements as consulted on in the final proposals with no further changes.

Financial resilience

The proposed licence condition

- 2.107 The following elements of the standard regulatory financial ringfence are included in HAL's licence;
- a requirement to provide an annual certificate of adequate resources;⁴⁹
 - a requirement to provide an annual restrictions on business activity;⁵⁰

⁴⁹ HAL's company directors must 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 be informed as soon as possible. The CAA proposed that this requirement can be designed to reduce any administrative burdens.

⁵⁰ The proposed condition sets the restriction quite widely to cover 'the business activities of Heathrow airport'. The proposed condition also includes a de minimis qualification and/or provision for the CAA to grant exemptions, where this would be in passengers' interests.

- a requirement for an ultimate holding company undertaking; and⁵¹
- an obligation to report changes in banking ringfence.

Reasons for the proposed licence condition

CAA's final proposals

2.108 The CAA assessed, during the course of the consultation process, the implications of introducing either a full regulatory ringfence provision, or a more tailored provision 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 ringfence⁵², the CAA does not consider that it is necessary since the incremental benefits to users could be significantly outweighed by the incremental costs.⁵³ It is therefore likely to be in passengers' interests that any ring fencing provisions do not cut across HAL's current financial conditions;⁵⁴
- if the CAA is to rely on HAL's banking ringfence, 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 ringfence provision but derogate those aspects that cut across existing financial arrangements.⁵⁵

Stakeholders' views

2.109 HAL considered that the CAA's overall approach to financial resilience

⁵¹ The proposed condition places 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.

⁵² Financial distress could cause detriment to passengers' interests, reduce expenditure and impact future service quality.

⁵³ Other reasons include: HAL is already very financially secure and its existing financial arrangements are not compatible with a full regulatory ringfence, 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.

⁵⁴ This is consistent with the government's policy.

⁵⁵ 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.

was pragmatic and would help ensure requisite measures are in place to protect the interests of users whilst maintaining existing financial structures. However, it was still 'extremely concerned' with the proposal requiring adequate resources for 24 months as there was no evidence that this would deliver incremental benefits to passengers. HAL considered a 12-month requirement would provide a more efficient outcome for all stakeholders, and be less burdensome as HAL is already obliged to hold resources for 12 months under its financing covenants.

- 2.110 The Heathrow Airline Community continued to advocate a financial ringfence but noted the complications associated with the introduction of a full ringfence. It also considered that in time a full financial ringfence would be in passengers' best interests and urged the CAA to publish guidance on how it intends to progress to this end state to provide greater certainty to the financial resilience framework. It would therefore be appropriate to include a reference in the draft licence to a future policy statement from the CAA on these matters.

CAA's response to the stakeholders' views

- 2.111 The CAA notes HAL's concerns with the adequacy of resources certificate requirement to be issued annually and covering 24 months. The CAA understands that HAL's banking and bond covenants require it to maintain 12 months' liquidity. However, the CAA's licence condition for adequate resources covers something slightly different – it is not a liquidity requirement but rather that management has the reasonable expectation that it has adequate financial and other resources, including financial and operational facilities, for the next two years. This does not mean that it has to have cash in place today, for example, to redeem a bond in 23 months time, but rather that it has the reasonable expectation that it will have resources in place in time. In effect, management would be confirming that they expect over the next 24 months that the business has sufficient resources to operate.
- 2.112 The licence condition also requires the licensee to bring to the attention of the CAA as soon as possible if it has reasons to believe that the latest certificate no longer holds true. Combined with the annual certificate this means that the CAA has early sight of any issues and can work with stakeholders to minimise any disruption or deterioration in service and thus act in passengers' interests.

- 2.113 The annual certificate covering 24 months means that the minimum oversight is approximately 12 months (i.e. the day before the next certificate is produced). If an annual certificate was provided covering only 12 months then towards the end of those 12 months the CAA would have very little forward visibility.
- 2.114 The CAA has considered whether an alternative formulation could meet its needs. Alternatives included:
- a certificate covering 12 months but produced quarterly;
 - a 12-month certificate, but a requirement to assess whether the latest certificate still holds true if issued today;
 - a requirement for a tougher requirement covering the first 12 months and a looser requirement covering the subsequent 12 months.
- 2.115 The CAA considers that none of these provide any material benefit to passengers compared to the CAA's proposals but all were more complex and/or burdensome than the final proposals.
- 2.116 The CAA also considers that the financial resilience licence conditions should be considered as a whole. Other regulated sectors, such as water, energy and NATS, have more extensive financial resilience licence conditions and special administration regimes. For airports there is no special administration regime and the proposed resilience conditions do not go as far as other sectors (for the reasons explained in the initial and final proposals). As a consequence, the CAA needs to place greater reliance on this licence condition and therefore it is appropriate that it covers a longer period than found in some other sectors.

Continuity of service plan (CSP)

The proposed licence condition

- 2.117 The proposed licence condition requires HAL to have and maintain a continuity of service plan to describe the legal, regulatory, operational and financial information that an administrator, receiver, new management or similar could reasonably be expected to need to carry out its functions and remain compliant with this licence and HAL's aerodrome licence. This reduces the risk of service disruption whilst issues relating to financial distress are being resolved.

Reasons for the proposed licence condition

CAA's final proposals

2.118 The CAA considered that HAL should determine how it meets its licence obligations in an efficient manner. The CAA was 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 required specific activities and information to be included in the CSP for different purposes to the resilience plans, therefore the CAA retained the separate obligations in the final proposals.

Stakeholders' views

2.119 The CAA received no stakeholder responses.

CAA's response to the stakeholders' views

2.120 The CAA has included the condition on the CSP as consulted on in the final proposals with no further changes.

Part F: Consultation Conditions

The proposed licence condition

2.121 The proposed licence condition requires HAL to develop and agree with relevant parties protocols setting out how it will consult and take stakeholders' views into account in a number of areas. Where the parties cannot reach agreement on the consultation protocols, the CAA may determine the matter.

Reasons for the proposed licence condition

CAA's final proposals

2.122 The CAA considered 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. The CAA noted that Annex G of the Q5 price settlement concentrates on consultation for future planning. However, this licence required consultation in a number of areas and it would benefit all parties if these consultations were also backed by clear processes. The CAA therefore included a condition that required HAL to consult relevant stakeholders on a variety of

matters⁵⁶ so that those stakeholders would 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.

2.123 The CAA considered that these processes would work best if they are developed and owned by the Licensee rather than having rules imposed. The licence condition therefore specified 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.⁵⁷ 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 could not agree the protocols, the CAA would determine the outstanding issues.

2.124 The CAA considered that the protocols currently in use for many of these matters⁵⁸ were a good starting point, although these would need to be updated to reflect the requirements of the Act and the Q6 price control. The CAA also noted that HAL was already developing others such as the Q6 Governance arrangements for individual capex projects. However, in order to allow HAL sufficient time to develop and agree the protocols once the licence is in place, the condition required HAL to publish them no later than six months after the licence comes into force.

Stakeholders' views

2.125 HAL considered that the CAA's proposal requiring HAL to agree certain protocols for information and consultation with airlines is effectively obliging HAL to agree or risk breach of the condition and appears to be binding third parties. HAL considered that such a requirement is not needed as the current approach to consultation is working effectively.⁵⁹ HAL also considered that existing disagreements known to the CAA must be addressed in advance of

⁵⁶ Such as future investment, delivery of capital projects, non-regulated charges, SQR, traffic forecasts and operational resilience.

⁵⁷ 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.

⁵⁸ 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>

⁵⁹ HAL cited consistently positive assessments by the CAA's consultants (Currie and Brown, Steer Davies Gleave and Alan Stratford Associates) as evidence of this.

the licence coming into force.

- 2.126 HAL noted some discrepancies that required clarification:
- Condition F1.2 required that protocols must be consulted on and published by October 2014, whereas paragraph 5.19 on capital efficiency required HAL to follow governance protocols to be agreed before the start of Q6. HAL assumed the draft licence condition provided the correct statement of policy.
 - Condition F1.1 (iv) suggested that HAL must consult on changes to the service quality regime in D1, whereas condition D1 states that HAL and airlines can only consult on changes to the schedule.
- 2.127 BA recognised the CAA's positive intent in requiring HAL to develop its own consultation principles. In particular, it supported the proposal compelling HAL to demonstrate how it had taken the views of its consulted users into account and the proposal that, where HAL cannot agree the protocols, the CAA may determine the outstanding issues.
- 2.128 BA considered that as the specification of the relevant parties for HAL to consult would vary considerably by subject, a clear requirement in the licence was needed for HAL to record, in the consultation, their targeted audience and the organisations approached for input.
- 2.129 BA supported the CAA's recognition of the need to balance giving HAL sufficient time to develop the protocols whilst still ensuring a finite time available to ensure plans are in place. Bearing this in mind, BA urged the CAA to remain positively engaged in monitoring the process of the development of these plans to ensure that such matters are dealt with as a matter of priority and in a timely and diligent manner.
- 2.130 BA raised the issue of HAL imposing operational trials on the passengers of Heathrow's airlines without prior consultation, which it considered proved to be highly detrimental⁶⁰ to both passengers and front line staff.
- 2.131 As there is currently no CAA guidance on requirements for HAL to

⁶⁰ BA commented that HAL unilaterally imposed a trial of different baggage delivery information in the arrivals reclaim at each terminal, which gave inaccurate anticipated delivery times. These proposals had not been discussed with BA, the published data was not in line with agreed BA delivery standards, and BA was unprepared to deal with the large volume of passenger demand at the service desks created as a result.

consult and agree with the airlines any trials that impact airline operations or passengers, BA proposed that the CAA includes a condition requiring that HAL consults with affected airlines within each terminal before implementing any trial, which involves an airline operational process, and/or will impact the passenger experience of an airline process or service. Recognising that it may be difficult to engage with every airline, BA proposed that in the first instance such trials should be raised at the terminal Airline Operators Committee (AOC) to discuss HAL's proposals and gauge levels of agreement to proceed to terms of reference before moving to any more detailed work. BA would expect HAL not to proceed if a significant level of support from airlines directly impacted or involved was not obtained.

- 2.132 The Heathrow Airline Community welcomed the inclusion of this condition and in particular noted the importance of there being agreement between HAL and the airlines on the process and substance of consultation as well as the requirement for HAL to consult on, agree and then publish consultation protocols. The Heathrow Airline Community also welcomed that the licence recognises the number of protocols already in place between HAL and the airlines.
- 2.133 The Heathrow Airline Community welcomed condition F1.7 requiring HAL to attempt to reach agreement with the airlines in fulfilling conditions F1.2 and F1.6. It also considered the requirement for HAL to refer disagreements to the CAA rather than undertake unilateral action is an important safeguard to promote passengers' interests. However the Heathrow Airline Community considered that it would further promote these interests if the CAA required HAL to agree relevant investment and development plans consulted on under F1.1a (i) and (ii).
- 2.134 The Heathrow Airline Community submitted a further response⁶¹ in regards to the conduct of operational trials at Heathrow. It considered that any operational trials proposed by HAL need to be planned, consulted on and agreed with the airlines before proceeding and requested that the CAA considered including an additional subsection

⁶¹ See 18 November 2013 letter on Part F Consultation Condition:
<http://www.caa.co.uk/docs/78/Draft%20Licence%20%20Part%20F%20Consultation%20Conditions.pdf>

under condition F1.1(a), which reads as follows:

"The nature and scope of operational trials when these impact or interface with airline systems for the processing of the passenger journey".

CAA's response to the stakeholders' views

- 2.135 The CAA notes HAL's requests for clarity. With regards to all the protocols, the CAA has allowed a maximum of six months from the date the licence comes into force for HAL to publish the agreed protocols, including seeking determination from the CAA. However, protocols that are already agreed and in use should continue to be used and, if not published already, should be published immediately. The CAA is aware that work on the Q6 governance arrangements is well advanced and it has written to HAL on the likely determination it will make with regards to areas where no agreement has been reached.
- 2.136 The Heathrow Airline Community has suggested that the CAA should require HAL to agree relevant investment and development plans consulted on under this condition. However, this is not the intention of the condition. The condition requires HAL to try to reach agreement through negotiation on the consultation process for each area, including any arrangements for approval at specified stages. The CAA can only intervene in this process formally if invited by HAL to make a determination where it cannot reach agreement with the airlines. However, the CAA will continue to work with all parties to use its influence to help achieve agreed solutions where possible.
- 2.137 The CAA has not included a specific requirement for HAL to consult on operational trials as these are likely to be very case-specific and so the rules and requirements for these should be built into the different protocols for the different work areas.
- 2.138 The consultation condition does not prevent relevant parties from agreeing protocols in addition to those listed in Condition F1.1, such as a protocol on operational trials. To make this clear, the CAA has amended the drafting of the consultation condition to indicate that the areas listed are a minimum requirement. Should relevant parties wish to negotiate and agree additional protocols, the CAA would expect HAL to approach this in a consistent and proportionate manner. The CAA will keep this matter under review and, if necessary, can consult

on and issue guidance or make a determination to resolve any problems.

Other licence conditions to be considered and developed once the licence is in force

Capital expenditure programme condition

Final proposals

- 2.139 In its final proposals, the CAA said that it intended to develop an additional licence condition relating to HAL's capex programme. The CAA considered that the interests of passengers and cargo owners are generally best served when the airport operator and airlines are working constructively together but following the CAA's initial proposal it became clear that CE had not worked as well as had been expected.
- 2.140 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 discussions on the proposed capex for Q6. HAL then reopened negotiations with a substantially reduced programme.
- 2.141 The CAA considered that this action highlighted the need for greater accountability for HAL with regards to the development and delivery of its capital spend. The CE process was developed and agreed to ensure the capex for Q6 was based on the needs of all parties, including end users, and the airlines' willingness to pay for those projects. The CAA said that HAL should not be able unilaterally to determine the level of capital expenditure having gone through such an extensive CE process.
- 2.142 As discussed in the final proposals and the WACC Appendix I, the CAA considered that it had 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 users, proposals for which have been discussed and agreed through the CE process.
- 2.143 The CAA therefore proposed to develop a new licence condition that would ensure that the appropriate level of capex required, consistent with users' interests, was delivered efficiently. The CAA's initial

thinking was that this licence condition would 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;
- requiring HAL to deliver the agreed output from the CE process over the course of the control period; and
- the CAA would also consider whether it would be necessary to include additional obligations similar to those in other regulated sectors relating to enhancements.

2.144 Given the timing of this in relation to the Q6 and licence development processes, the CAA did not consider that it would be reasonable or practicable to develop such a condition to take effect on 1 April 2014. However, it committed to beginning 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 was in place and allowing for any appeals to be determined.

Stakeholders' views

2.145 HAL considered that the CAA's proposal to consult on modifications to the licence in early Q6 on the management of capital expenditure was flawed. It considered that:

- The proposed condition is not consistent with the CAA's statutory powers in that it undermines incentive based regulation and may actually force HAL to make unnecessary and inefficient capex investments.
- The proposed capex condition is effectively irrational and/or unreasonable in that it is inconsistent with other aspects of the CAA's price control decision. For example, the CAA's price control is intended to reflect an "incentives based" framework: HAL is required to generate certain outputs within agreed capex and opex envelopes, but within those envelopes is free to choose the manner in which it achieves the outputs.

- The CAA would err in the exercise of its discretion in that the proposed condition is disproportionate. There are already existing safeguards in place e.g. capital triggers, discretion to consider spend at the end of the period, the IFS and other factors bearing on the capital programme and process.
- In addition, imposing such a condition would effectively undermine HAL's legitimate expectations. HAL has undertaken a consultation and process over a number of years on the capex programme, in reliance on the expectation that it would retain flexibility within the control period to respond to changing conditions and business needs and the ability, through innovation and efficiency, to benefit from outperformance. If the CAA 'locks in' the capex programme, it would undermine the basis on which HAL agreed the capital programme.

2.146 HAL commented on each of the proposed elements of the condition:

- It considered that the high-level proposal to 'maintain and enhance the airport efficiently and economically' added no incremental value, was not proportionate or targeted and would be almost impossible to comply with. It noted that the requirement was already covered under the operational resilience condition (D2.1) and said the CAA would need to provide a more detailed and evidence-based understanding of what it considers to be in passengers' interest.
- It considered that it had fully complied with the CAA's processes and policies for CE⁶² and said the CAA must give evidence to the contrary before imposing a condition of this type. In particular, it noted that CE discussions concluded in December 2012 and the CAA's own correspondence in February 2013 described the future works programme as being 'post CE'. HAL also noted that it had consulted airlines on its proposed reduction in the size of the capital plan.⁶³

⁶² As set out in guidance provided by the CAA in the 'Setting the Scene for Q6' consultation in July 2011, and the 'Mandate for Constructive Engagement at Heathrow' in March 012.

⁶³ In December 2011 HAL consulted airlines on the strategic options plan (SOP) which included scenario A - capital investment of £2 billion.

- It considered the requirement to deliver agreed output from the CE process over the course of Q6 was outside the CAA's mandate⁶⁴ and that the CAA could not expect it to ignore market demands, exogenous changes requiring adjustments to agreed outputs or the allowed cost of capital when determining how to invest.
- It considered the proposal relating to enhancements duplicated the requirements outlined in the first proposed element of the condition. It considered that enhancements would need to be understood in the context of capacity and other constraints at the airport.

- 2.147 The Heathrow Airline Community welcomed the CAA's proposal, which it felt would ensure that the level of capex consistent with users' interests was delivered efficiently. In particular, the Heathrow Airline Community welcomed the requirement for HAL to deliver the agreed output from the CE process over the course of the control period. The Heathrow Airline Community disagreed with HAL's views, considering that the proposed condition was consistent with the CAA's statutory powers and that it was not irrational or inconsistent with the rest of the price control. It also disagreed that the condition would be disproportionate, but thought it would protect passengers and would ensure that HAL did not proceed with projects without airline support.
- 2.148 BA supported the position that additional measures are required to ensure HAL continues to invest in the airport, and stated its view that unilateral decisions on the level of capital investment are neither in the interests of the customer, nor in the remit of HAL to decide. It did not consider that such a condition would be inappropriate in an incentives-based regulatory regime.
- 2.149 BA considered the four elements to be included in the proposed licence⁶⁵ highly relevant and necessary in safeguarding passengers' interest. It considered that the use of triggers to refund money that was not spent was not enough to incentivise HAL to invest as such mechanisms only prevent HAL from earning a return on money it does not invest but they do not require investment to be made.

⁶⁴ HAL noted that its CE agreements were based on a set of assumptions (including the requirements of airlines, the return from commercial revenues and the appropriate WACC) and that the CAA cannot ignore these without following due process.

⁶⁵ As set out in paragraphs 12.134 and 12.135.

- 2.150 In terms of timing, whilst BA understood the need to develop these conditions fully, it agreed with HAL that it would have been better to have included the condition from the start, rather than waiting until the licence is granted. It considered that the CAA should make an explicit statement of intent to avoid any potential stalemate should HAL refuse to engage in the initiation of capex work at the start of Q6 pending resolution of the contents of the condition. The statement should:
- Proceed on the understanding that a condition along these lines will be implemented.
 - That HAL will be expected to offset any shortfall in investment during the consultation period, by increased activity through the rest of period.

CAA's response

- 2.151 The CAA notes HAL's comments regarding its compliance with the CE process. However, it remains of the view that HAL's immediate reaction to the CAA's initial proposal to suspend negotiations on the capital programme and issue a significantly revised programme at that stage of the process was at odds with the intentions of CE and significantly undermined the collaborative approach by all parties that had been the key to the process up to then. It is clear from the airlines' responses to HAL and the CAA at the time, and their responses to the final proposals, that they also consider the CE process has not worked as intended. The CAA therefore remains of the view that there should be more formal accountability on HAL through the licence.
- 2.152 The CAA acknowledges that proposing to introduce a new licence condition as a modification to the new licence could lead to some uncertainty. However, any licence condition needs to be considered carefully with full consultation on the options. The CAA considers that, as any condition included in the new licence would not be in force in time to influence the development of the current capital programme, it would be better to wait to ensure that the issues were fully aired and debated. However, the CAA acknowledges HAL's concerns about regulatory certainty so will therefore start to develop and consult on its proposals as soon as possible once the licence is in force.
- 2.153 The new condition is likely to address processes for the next round of CE for Q7, but the CAA will also explore how it can be used to

influence the current capital programme and incentivise HAL to carry forward the full programme within the amount allowed under the Q6 price control.

- 2.154 In developing any such licence condition the CAA will balance its duties to have regard to the need to promote efficiency and economy on the part of the licence holder and to ensure that the licence holder is able to finance its activities and that all reasonable demands for airport operation services are met. Its aim will be to further the interests of users by ensuring that the right projects are included at an efficient and economical price.

Responses on Licence conditions that the CAA decided not to include in the final proposals

- 2.155 The CAA had included a number of potential licence conditions in the initial proposals that it decided not to take forward in the final proposals. The reasons for these decisions are set out in the final proposals. Several consultees commented on these decisions and their responses are included here for consistency and transparency.

Revocation upon insolvency

- 2.156 The Heathrow Airline Community agreed that it is most likely to be in the interests of passengers to keep the airport running in the event of insolvency whilst response actions could be implemented. It welcomed the alternative condition requiring the licensee to inform CAA if it were to seek advice on insolvency.

Re-opening the price control

Stakeholders' views

- 2.157 HAL considered that the CAA's proposal to use the section 22 of the Act licence modification process was confusing and in effect was not a re-opener as it would require CAA, HAL and airline support to proceed, and that it would be almost impossible to imagine a scenario in which all parties would agree to raise prices mid-quinquennium. HAL considered that the only valid alternative would be a prescribed trigger point with established consequences, as exists in some other regulated sectors. HAL noted that this would need to be formally

consulted upon.

- 2.158 The Heathrow Airline Community continues to believe that any re-opening of the price cap should only be in extreme circumstances. Note that the CAA is not proposing to include a price cap re-opening provision but that stakeholders can request the CAA use its section 22 modification powers. The airlines were satisfied that the section 22 modification provision offered sufficient opportunity for any party to request a modification of the licence.

CAA's response

- 2.159 The CAA notes that section 22 requires the CAA to consult on modifications but does not require the CAA to seek the agreement of any particular person. If a person is not content with the CAA's decision, they may apply to appeal against it to the CMA.

Non-discrimination

Stakeholders' views

- 2.160 The Heathrow Airline Community considers that it would not be in passengers' interests to omit a non-discrimination clause. Whilst other legislation is available to address discrimination, such as section 41 of AA86, this is a cumbersome and time-consuming process and it would serve the interests of passengers better if HAL faced an ex-ante incentive in the licence not to discriminate.
- 2.161 Such a condition could be applied with greater immediacy to circumstances in which airport users considered HAL to be acting in a discriminatory manner and would also empower the CAA to apply breach of licence conditions on the licensee as remedial actions. Furthermore such a condition would not add to HAL's burdens, rather it would simply be available for the CAA to use if required. It would only be a burden to HAL if it considered that it was likely to act in a discriminatory manner and would seek to avoid any legislation which empowered the CAA to more readily to address such behaviours on the part of HAL.

CAA's response

- 2.162 The CAA notes that section 41 of AA86 will not be available from April 2014 as the CAA's new concurrency powers will be in force. The CAA considers that these new powers will provide a proportionate and

effective way of dealing with discriminatory behaviour, along with the Airport Charges Regulations (ACRs) and Groundhandling Regulations (GHRs). Therefore the CAA continues to consider that including additional protection within the licence would not 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.

Complaints Handling

- 2.163 The Heathrow Airline Community welcomes the indication by the CAA that it will review if such a provision is needed in the future.

Sunset clause

Stakeholders' views

- 2.164 HAL noted that the CAA incorrectly stated that sunset provisions are included in the licence when such provisions appear not to have been included. HAL was keen for the CAA to include such provisions.

CAA's response

- 2.165 In the executive summary of the final proposals, the CAA set out its overarching policy in developing the licences⁶⁶ and stated that where appropriate it would consider such conditions to give effect to this policy by ensuring the licence does not become out of date and can be refreshed, modified or removed in light of the interests of passengers and market circumstances. However, the CAA does not intend to include such provisions at this stage but will rely on the modification provisions in section 22 of the Act. Once the new regulatory regime has bedded in, the CAA will consider the use of sunset clauses where appropriate.

Liability in Conditions of Use

Stakeholders' views

- 2.166 The Heathrow Airline Community considered that HAL's insulation of itself from liability through its Conditions of Use to absolve itself of any responsibilities for services or facilities operated against the public

⁶⁶ Paragraph 8 of the executive summary stated that "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".

interest. The airlines were disappointed that the CAA had not addressed this in the current licence but welcomed recognition of this issue by the CAA and its indication that debate on this needs to take place once the licence is in place.

- 2.167 BA understood the CAA's reluctance to be involved in the determination of liability and act as an arbiter on matters outside the licence. As an alternative it considered the CAA should revisit the Heathrow Airline Community's proposal to include within the licence, an obligation on HAL to include within their agreements a liability condition in line with what would be found between a competitive commercial supplier and customers.

CAA's response

- 2.168 The CAA notes the above responses and continues to consider it is not appropriate for the CAA to act as an arbiter, and that any licence condition that potentially cuts across existing contractual arrangements would need to be considered very carefully. The CAA considers this debate should be carried out at a later date, once the licence is in place, in light of parties' experience of the new regulatory regime.

Summary of the proposed licence conditions

Part A: Scope and Interpretation

The proposed licence condition

- 2.169 The CAA will link the airport area in the licence to the airport area covered in the MPD. Therefore, the airport area to be covered by the licence will cover:
- 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 Northern Receipt Fuel Facility, the Southern Receipt Fuel Facility, the Sandringham Road Fuel Farm, the Perry Oaks Fuel Farm, the Airport Transfer Pipes and the Fuel Hydrant Systems;
 - the passenger terminals; and

- the cargo processing areas.

Part B: General Conditions

The proposed licence conditions

- 2.170 *Payment of fees condition:* this condition requires HAL to pay charges under a scheme made under section 11 of the 1982 Act. The CAA is not proposing any changes to this condition compared to the final proposals.
- 2.171 *Revocation condition:* this condition sets out the circumstances in which the CAA can revoke the licence. The CAA is not proposing any changes to this condition compared to the final proposals.

Part C: Price Control Conditions

The proposed licence conditions

- 2.172 *Price control:* this condition sets the charges HAL can charge and is based largely on previous price controls (Q1 to Q5). Changes to the condition following the final proposals include changes to allow a change of regulatory year from April to March to now be January to December each year (so the review will now last for 4 years and 9 months), clarification of definitions and changes to the workings of the rates revaluation factor.
- 2.173 *Charges for other services:* this condition sets out the requirements for HAL in how it charges others for activities not covered by the price control condition. The CAA is proposing to change the list of activities covered by this condition compared to its final proposals.
- 2.174 *Procurement condition:* the CAA is including 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. Following the final proposals, the CAA has included a requirement to review and update the policies and procedures as necessary, and has specified that significant capitals works are those projects with a value over £15 million.
- 2.175 *Cargo condition:* The CAA has included a condition relating to charges for cargo only carriers. The CAA has not made any changes to this condition compared to the final proposals.

Part D: Service Quality Conditions

The proposed licence conditions

- 2.176 *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. Following the final proposals, the CAA has only amended the list of tables in the Schedule that cannot be changed through the self modification provision, to reflect changes in the schedule.
- 2.177 *Operational resilience:* this condition sets out the requirements for HAL in relation to planning for and coordinating the response to disruption at the airport. The CAA is not proposing any changes to this condition compared to its final proposals.

Part E: Financial Conditions

The proposed licence condition

- 2.178 The CAA is not proposing to make any changes to the regulatory accounts, financial resilience or continuity of service plans conditions from its final proposals.

Part F: Consultation Conditions

The proposed licence condition

- 2.179 The CAA is including a licence condition requiring HAL to consult stakeholders on a number of issues. HAL will have to publish protocols setting out how it will do this. Following the final proposals, the CAA has made minor amendments to make clear that the list of activities covered is a minimum requirement.

Other conditions

- 2.180 In addition, the CAA has identified a possible need for a new licence condition, to be developed 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.

HAL's Licence

2.181 The CAA's proposals for HAL's licence are contained in Chapter 3.

CHAPTER 3
Draft Licence

Licence granted to

HEATHROW AIRPORT LIMITED

by the Civil Aviation Authority

under section 15 of the Civil Aviation Act 2012

on [date]

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 10 January 2014 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 (as defined in sections 66 and 67 of the Act) is London Heathrow Airport.
- A1.3 The Airport Area is those areas of the Airport, that comprise:
- (a) the land, buildings and other structures used for the purposes of the landing, taking off, manoeuvring, parking and servicing of aircraft, excluding the Northern Receipt Fuel Facility, the Southern Receipt Facility, the Sandringham Road Fuel Farm, the Perry Oaks Fuel Farm, the Airport Transfer Pipes and the Fuel Hydrant Systems;
 - (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.

- 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) airport charges has the meaning assigned to it by regulation 3(1) of the Airport Charges Regulations 2011 (2011 No.2491);
 - b) the CAA means the Civil Aviation Authority
 - c) the Act means the Civil Aviation Act 2012;
 - d) airlines means providers of air transport services;
 - e) 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;

- f) the Regulatory Period means the period of nine months between 1 April 2014 and 31 December 2014 and this period shall also be considered to be the Licensee's financial year for the purposes of this Licence; and
- g) the Regulatory Year means for each of the four years from 2015 to 2018, the twelve month period beginning on 1 January and ending on 31 December. These years shall also be considered to be the Licensee's financial year for the purposes of this Licence.

Part B: General Conditions

B1 Payment of fees

B1 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

B2 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:

(iii) 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);

- (iv) 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 Regulatory Period it shall fix those charges at the levels best calculated to secure that; in the Regulatory Period, 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:

$$M_{2014} = \text{£}20.398(1 + B_{2012/13}) + \frac{D_{2014}}{Q_{2014}} - \frac{T_{2014}}{Q_{2014}} - K_{2014}$$

Where:

- M_{2014} is the maximum revenue yield per passenger using the Airport in the Regulatory Period expressed in pounds;
- $B_{2012/13}$ is the bonus factor in the Regulatory Period based on the Licensee's performance in 2012/13, as defined in condition C1.8;
- D_{2014} is the cumulative development capex adjustment in the Regulatory Period defined in condition C1.9;
- T_{2014} is the capital 'trigger' factor in the Regulatory Period defined in condition C1.7;
- Q_{2014} is passengers using the Airport in the Regulatory Period; and
- K_{2014} is the per passenger correction factor in the Regulatory Period 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 Regulatory Years beginning with 1 January 2015, the Licensee shall fix those charges at the levels best calculated to secure that, in each relevant Regulatory 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 Regulatory 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 April in year $t-1$ and the immediately preceding April;
- $X = -1.5\%$;
- B_{t-2} is the bonus factor in Regulatory 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 Regulatory Period or Regulatory Year $t-1$ defined in condition C1.3;
- D_t is the cumulative development capex adjustment in Regulatory Year t defined in condition C1.9;
- T_t is the capital 'trigger' factor in Regulatory Year t defined in condition C1.7;
- Q_t is passengers using the Airport in Regulatory Year t ;
- BR_t is the business rate revaluation factor in Regulatory Year t defined in condition C1.11; and
- K_t is the per passenger correction factor in Regulatory 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 Regulatory Period or Regulatory 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:

- $Y_{2014} = £20.398 + S_{2014}$
- RPI_{t-2} is the percentage change (positive or negative) in the Retail Price Index between that published with respect to April in Regulatory Period or Regulatory Year $t-2$ and that published with respect to the immediately preceding April;

- $X = -1.5\%$
- S_{t-1} is the allowable security cost per passenger defined in condition C1.4.

St-1: allowable security cost per passenger

C1.4 S_{t-1} is the allowable security cost per passenger in Regulatory Period or Regulatory 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 £19,000,000 "deadband" figure; or
- (b) below a cumulative - £19,000,000 "deadband" figure

S_{t-1} is calculated in accordance with the following formulae expressed in pounds:

For each relevant Regulatory Period or Regulatory Year t-1, in the case that EC is a positive value, with reference to the absolute value of EC:

If: $|EC_{t-1}| > £19,000,000$; and
 $|EC_{t-2}| > £19,000,000$

Then: $S_{t-1} = 0.9C_{t-1}$

Or if: $|EC_{t-1}| > £19,000,000$; and
 $|EC_{t-2}| < £19,000,000$

Then: $S_{t-1} = 0.9 \frac{(EC_{t-1} - £19,000,000)}{(t^*)Q_{t-1}}$

Or if: $|EC_{t-1}| < £19,000,000$; and
 $|EC_{t-2}| > £19,000,000$

$$\text{Then: } S_{t-1} = -0.9 \frac{(EC_{t-2} - \pounds 19,000,000)}{(t^*)Q_{t-1}}$$

$$\text{Otherwise: } S_{t-1} = 0$$

For each relevant Regulatory Period or Regulatory Year t-1, if EC is a negative number, with reference to the absolute value of EC:

$$\text{If: } |EC_{t-1}| > \pounds 19,000,000; \text{ and} \\ |EC_{t-2}| > \pounds 19,000,000$$

$$\text{Then: } S_{t-1} = 0.9C_{t-1}$$

$$\text{Or if: } |EC_{t-1}| > \pounds 19,000,000; \text{ and} \\ |EC_{t-2}| < \pounds 19,000,000$$

$$\text{Then: } S_{t-1} = 0.9 \frac{(EC_{t-1} + \pounds 19,000,000)}{(t^*)Q_{t-1}}$$

$$\text{Or if: } |EC_{t-1}| < \pounds 19,000,000; \text{ and} \\ |EC_{t-2}| > \pounds 19,000,000$$

$$\text{Then: } S_{t-1} = -0.9 \frac{(EC_{t-2} + \pounds 19,000,000)}{(t^*)Q_{t-1}}$$

$$\text{Otherwise: } S_{t-1} = 0$$

Where:

- Q_{t-1} is passengers using the Airport in Regulatory Period or Regulatory Year t-1.
- t^* is a time variable, which is defined for each Regulatory Period or Regulatory Year in table C.1 below:

Table C.1: Time variable

Period t =	t* =
9mo. 2014	57/9
2015	4
2016	3
2017	2

- C_{t-1} is the total allowable security cost per passenger using the Airport in Regulatory Period or Regulatory Year t-1 (whether of a positive or negative value) expressed in pounds relative to the previous Regulatory Period or Regulatory Year;
- EC_t is the expected cumulative security cost over the relevant Regulatory Period and four Regulatory Years starting on 1 April 2014, in period t, which shall be calculated in accordance with table C.2 below:

Table C.2: Calculation of annualised allowable security costs

Period t =	2013	9mo. 2014	2015	2016	2017
Changes in 2014	0	$6.33 * C_{2014} * Q_{2014}$	$6.33 * C_{2014} * Q_{2014}$	$6.33 * C_{2014} * Q_{2014}$	$6.33 * C_{2014} * Q_{2014}$
Changes in 2015	0	0	$4 * C_{2015} * Q_{2015}$	$4 * C_{2015} * Q_{2015}$	$4 * C_{2015} * Q_{2015}$
Changes in 2016	0	0	0	$3 * C_{2016} * Q_{2016}$	$3 * C_{2016} * Q_{2016}$
Changes in 2017	0	0	0	0	$2 * C_{2017} * Q_{2017}$
$EC_t =$	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 Regulatory Period or Regulatory Year t (whether of a positive or negative value) expressed in pounds, relative to security costs per passenger in the previous period; and

- Q_t is the actual number of passengers using the Airport in Regulatory Period or Regulatory 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 Regulatory Period or Regulatory Year t , which is calculated as follows:

Where: $t = 2014$

$$K_t = \frac{R_{t-2} - (Q_{t-2}M_{t-2})}{Q_t} \left(1 + \frac{I_{t-2}}{100}\right)^{21/12}$$

Where: $t \neq 2014$

$$K_t = \frac{R_{t-2} - (Q_{t-2}M_{t-2})}{Q_t} \left(1 + \frac{I_{t-2}}{100}\right)^2$$

Where:

- R_{t-2} is total revenue from airport charges in respect of relevant air transport services levied at the Airport in Regulatory Period or Regulatory Year $t-2$ expressed in pounds;
- Q_t is passengers using the Airport in Regulatory Period or Regulatory Year t ;
- M_{t-2} is the maximum revenue yield per passenger using the Airport in Regulatory Period or Regulatory Year $t-2$;
- I_{t-2} is the appropriate interest rate for Regulatory Period or Regulatory 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 Regulatory Period and the Regulatory Year 2015, 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. In the case of

the Regulatory Period, t-2 refers to the 12-month period from 1 April 2012 to 31 March 2013.

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 Regulatory Period or Regulatory 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 Regulatory Period or Regulatory Year t, up to a maximum of 12. In 2014 TF_{it} is restricted to a maximum of 9.
- TM_{it} is the trigger payment associated with each trigger in Regulatory Period or Regulatory Year t;

Where: $TM_{ti} = MTP_i \frac{P_{t-1}}{222.80}$

- 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 April in Regulatory Period or Regulatory Year t-1;
- The triggers, milestone month and monthly trigger payments are defined in the Q6 Capital Investment Triggers Handbook and may be modified in accordance with the modification processes set out in that handbook.

B_{t-2}: bonus factor

C1.8 B_{t-2} is the bonus factor based on performance achieved in respect of specified elements k of the Licensee's service quality rebates and bonuses scheme (SQRB) as defined in Condition D1. 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 Regulatory Period or Regulatory 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.3 below.

Table C.3: Development capex adjustment

Period $t =$	9mo. 2014	2015	2016	2017	2018
Additional revenue requirement in 2014	$0.5 * d_{2014}$	$d_{2014} *$ $P_{t-1} / 222.80$	$d_{2014} *$ $P_{t-1} / 222.80$	$d_{2014} *$ $P_{t-1} / 222.80$	$d_{2014} *$ $P_{t-1} / 222.80$
Additional revenue requirement in 2015	0	$0.5 * d_{2015}$	$d_{2015} *$ $P_{t-1} / 222.80$	$d_{2015} *$ $P_{t-1} / 222.80$	$d_{2015} *$ $P_{t-1} / 222.80$
Additional revenue requirement in 2016	0	0	$0.5 * d_{2016}$	$d_{2016} *$ $P_{t-1} / 222.80$	$d_{2016} *$ $P_{t-1} / 222.80$
Additional revenue requirement in 2017	0	0	0	$0.5 * d_{2017}$	$d_{2017} *$ $P_{t-1} / 222.80$
Additional revenue requirement in 2018	0	0	0	0	$0.5 * d_{2018}$
$D_t =$	Sum Rows * W	Sum Rows * W	Sum Rows * W	Sum Rows * W	Sum Rows * W

Where:

- W is the Weighted Average Cost of Capital which shall have a value of 5.35%;
- d_t is the annual development capex adjustment in Regulatory Period or Regulatory Year t defined in condition C1.10; and
- P_{t-1} is the value of the ONS CHAW Retail Price Index in April in Regulatory Period or Regulatory Year $t-1$.

d_t : annual development capex adjustment

C1.10 The annual development capex adjustment in Regulatory Period or Regulatory Year t is an amount equal to the net difference between the development capex allowance included in the Q6 settlement and the total capex associated with new core capex projects in Regulatory

Period or Regulatory Year t , to be calculated as follows:

$$d_t = O_t - \left(V_t * \frac{P_{t-1}}{222.80} \right)$$

Where:

- O_t is the total capex in Regulatory Period or Regulatory Year t associated with all development capex projects that have transitioned to core capex project status after the settlement either during or before Regulatory Period or Regulatory Year t , as determined through the governance arrangements.
- V_t is the development capex allowance in Regulatory Period or Regulatory Year t ; and
- P_{t-1} is the value of the ONS CHAW Retail Price Index in April in Regulatory Period or Regulatory Year $t-1$.

BR_t: business rate revaluation factor

C1.11 BR_t is the business rate revaluation factor in Regulatory Period or Regulatory Year t , calculated in accordance with the following formulae.

If: $t = 2018$;

Then:

$$BR_t = 0.8[(Z_{2017}) * (1 + RPI_{t-1}) + Z_{2018}]$$

Otherwise: $BR_t = 0$

Where:

- RPI_{t-1} is the percentage change (positive or negative) in the ONS CHAW Retail Price Index between April in Regulatory Period or Regulatory Year $t-1$ and the immediately preceding April.
- Z_t is the business rate forecast variance in Regulatory Period or Regulatory Year t , calculated in accordance with table C.4 below:

Table C.4: Business rate forecast variance

Period t =	Zt =
9mo. 2014	0
2015	0
2016	0
2017	$(U_t - £136,900,000) * \frac{P_{t-1}}{222.80}$
2018	$(U_t - £136,800,000) * \frac{P_{t-1}}{222.80}$

Where:

- U_t is the regulatory allowance for business rates (that is £136,900,000 in 2017 and £136,800,000 in 2018) multiplied by the revaluation impact.
- P_{t-1} is the value of the ONS CHAW Retail Price Index in April in Regulatory Period or Regulatory Year t-1.

Definitions

C.1.12 In this Condition C.1:

- allowable security claim per passenger** means the annual equivalent of the increase or decrease in security costs at the Airport in the relevant Regulatory Period or Regulatory 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 Regulatory Period or Regulatory Year;
- average revenue yield per passenger** means the revenue from airport charges levied in respect of relevant air transport services in the relevant Regulatory Period or Regulatory Year, before any deduction of rebates under the Service Quality Rebates and Bonuses Scheme, divided by the total number of passengers using the Airport in the relevant Regulatory Period or Regulatory Year;
- 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;

- (d) **core capex project** is any project that has passed Gateway 3, being taken forward for implementation in accordance with the governance arrangements;
- (e) **development capex allowance** is a capex allowance included in the Q6 RAB based on the sum of development capex project P80 cost estimates as set out in the governance arrangements;
- (f) **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;
- (g) **Gateway 3** has the meaning set out in the governance arrangements;
- (h) **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;
- (i) **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;
- (j) **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 through the governance arrangements;
- (k) **the Q6 Capital Investment Triggers Handbook** means the handbook in existence when this Licence comes into force, having been agreed by the Licensee and the airlines. This handbook contains details of the triggers, milestone months and monthly trigger payments for core capex projects and details of how future changes to those elements can be made with the agreement of the Licensee and the airlines;
- (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) **revaluation impact is equal to one plus the difference between the actual increase in rateable value** measured as a percentage change and +9%, (being the percentage increase assumed in the regulatory allowance) occurring as a result of the rate revaluation undertaken by the Valuation Office Agency in 2017. The actual change will be calculated by multiplying the actual percentage increase in the Cumulo Rateable Value due to the revaluation and the actual percentage increase in the national Uniform Business Rate.
- (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 May in Regulatory Period or Regulatory Year t-2 to the end of April in Regulatory Period or Regulatory Year t-1.

C2 Charges for other services

- C2.1 By 30 September 2014 and by 30 September 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 December prior to each charging year commencing on 1 January.
- C2.2 By 30 September 2014 and by 30 September 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 December.
- C2.3 By 31 December 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 relevant Regulatory Period or Regulatory 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 December 2018 (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.

Definitions

- C2.6 In this Condition C2 the Specified Facilities are:

- (a) check-in desks;
- (b) baggage systems;
- (c) services for PRMs;
- (d) staff car parking;
- (e) staff ID cards;
- (f) fixed electrical ground power;
- (g) pre-conditioned air;
- (h) airside licences;
- (i) waste, recycling and refuse collection;
- (j) taxi feeder park;
- (k) heating and utility services (including electricity, gas, water and sewerage);
- (l) facilities for bus and coach operators;
- (m) common IT infrastructure; and
- (n) HAL contribution to the funding of the AOC.

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, in consultation with airlines, review the Procurement Code of Practice from time to time and update it as

necessary, or if directed by the CAA by notice to do so.

- C3.7 The Licensee shall publish by 1 February 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.

Definitions

- C3.8 In this Condition C3, significant capital investment work means a capital project with a value of over £15 million.

C4 Charges for cargo only operators

- C4.1 In the Regulatory Period and the subsequent four Regulatory Years, the 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 D1.8 are any modifications to Schedule 1 except:
- a) any modifications to the elements listed in the ‘Element’ columns of Table 1a to Table 5d and Table 9a to Table 9e;
 - b) any modifications to the table of bonuses (Table 7) and to the calculation of the bonus factor set out in the Statement; and

c) any modifications to Table 8.

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 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 plan(s) 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 plan(s) 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 UKBF.

Part E Financial conditions

E1 Regulatory accounting requirements

- 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 Regulatory Period and each subsequent Regulatory Year, regulatory accounts in conformity with the Regulatory Accounting Guidelines for the time being in force in accordance with this Condition.
- 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 Regulatory Period or Regulatory 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 subparagraph 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 Regulatory Period or Regulatory 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

relevant Regulatory Period or Regulatory 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:

“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.”

“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.....”

“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.
- 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
- the Licensee’s financial position or ability to continue to trade; or
 - 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:
- the Permitted Business; and/or
 - 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:

- deliver to the CAA, within seven days of obtaining the undertaking required by Condition E2.8, a copy of such undertaking;
- 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
- comply with any direction from the CAA to enforce any such undertaking.

Change to banking ringfence

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:

- notify the CAA of the possibility of any such Variation; and
- 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 regulatory asset base (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 relevant Regulatory Period or Regulatory 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, as a minimum:
 - (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.i.(1)
 - (iii) charges that are subject to Condition C2;
 - (iv) the service quality regime in Condition D1, including the Statement of Standards, Rebates and Bonuses in Schedule 1 to this Licence;
 - (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;
- (b) so that those parties have sufficient information to take an informed view; and
- (c) 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
 - a) Quality of Service Monitor (QSM)
 - b) Queue times
 - c) Availability
 - d) Aerodrome congestion term (ACT)
3. Rebates
 - a) Payment
 - b) Calculation
4. Bonuses
 - a) Payment
 - b) Calculation
5. Publication
6. General Matters
 - a) Rounding
 - 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 1a to Table 9e of this Schedule. In these tables and in this Schedule:

- 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 (relate to air transport services for the carriage of passengers for the relevant terminal) payable by the Licensee as rebates for any service failure in element i in the relevant Regulatory Period or Regulatory Year as specified in Table 1a to Table 5d of this Schedule;
- f) $R_{i,j,RP}$ is a proportion of ANNMAX $_i$ for any service failure in element i in month j for the Regulatory Period as specified in Table 1a to Table 5d of this Schedule;
- g) $R_{i,j,RY}$ is a proportion of ANNMAX $_i$ for any service failure in element i in month j for any relevant Regulatory Year as specified in Table 1a to Table 5d of this Schedule;
- h) Passenger-sensitive equipment (PSE) 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;
- i) Specified element identifies the relevant element k of service for which bonuses shall be recovered by the Licensee;
- j) MB $_k$ is the maximum percentage of Airport Charges (relate to air transport services for the carriage of passengers for the relevant terminal) recoverable by the Licensee as bonuses for performance of specified element k in the relevant Regulatory

Period or Regulatory Year as specified in Table 7 of this Schedule;

- k) LPL_k is the lower performance limit for specified element k used in the calculation of bonuses as specified in section 4(b). It has the values assigned in Table 7 of this Schedule; and
- l) UPL_k is the upper performance limit for specified element k used in the calculation of bonuses as specified in section 4(b). It has the values assigned in Table 7 of this Schedule.

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 1a to Table 5d 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:

$$\text{Performance}_{i,j,a} = \frac{\sum_{m=1}^{m=12} [\pi_{j-m+1,a} \text{Monthly performance}_{i,j-m+1,a}]}{\sum_{m=1}^{m=12} \pi_{j-m+1,a}}$$

- (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:

$$\text{Performance}_{i,j,2} = \frac{\sum_{m=1}^{m=\mu} [\pi_{j-m+1,2} \text{Monthly performance}_{i,j-m+1,2}]}{\sum_{m=1}^{m=\mu} \pi_{j-m+1,2}}$$

where:

$\pi_{j,a}$ is the number of passengers in month j in terminal a;

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, and/or other locations as agreed by the Licensee, the AOC and the CAA;
- f) arriving passengers shall be interviewed on the arrivals concourse just before leaving the terminal building, and/or other locations as agreed by the Licensee, the AOC and the CAA;

- 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 arriving 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 1a to Table 5d 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:

$$PPM = \sum_m \frac{Pax_m}{\sum_m Pax_m} \cdot C_m$$

where:

Pax_m is the estimated number of passengers using the search facility in period m ;

C_m is the proportion of measurements under a defined number of minutes in period m as specified in Table 1a to Table 5d 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.⁶⁷

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 1a to Table 5d of this Schedule.

2.22 Availability of relevant facilities is defined for element i in month j in terminal a as:

$$\text{Availability}_{i,j,a} = 100 \cdot \left(1 - \frac{\sum_{k=1}^{n_{i,a}} TU_{b,j,a}}{n_{i,a} \cdot \text{Time}_j} \right)$$

where:

$\text{Availability}_{i,j,a}$ is the percentage availability of element i in month j in terminal a ;

$TU_{b,j,a}$ is the relevant time elapsed in month j during which asset b 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

⁶⁷ 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).

Time_j is the total relevant time in month j as defined in Table 1a to Table 5d 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 **Exclusions** are 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 as
- 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 Regulatory Period or Regulatory 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(g) and 6.3(h), and the exclusion is not more than 30 days over any relevant Regulatory Period or Regulatory 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 and staff search for two hours following evacuations in the relevant terminal(s), and control post search for two hours following evacuations in the relevant control post(s);

- 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 condition of the equipment 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 Licensee 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 Rebate_{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 Groundhandling

Directive⁶⁸); and this has generated a **Material Operational Impact** as defined in paragraph 2.30.

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 such as 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:

- a) Low visibility procedures:
 - i) Instrument Landing System (ILS), Instrumented Runway Visual Range (IRVR) system, Surface Movement Radar (SMR), Microwave Landing System (MLS) (where

⁶⁸ 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).

- 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 (Air Transport Flow Management (ATFM) or local⁶⁹) 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** during the period before the flow rate restriction is removed.
- b) For departures:

⁶⁹ 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.

- 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:

$$= A_d \times \sum_{s=1}^{s=\theta} (\text{Expected ARR}_s - \text{Actual ARR}_s)$$

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 2.39;

Actual ARR_s is the number of actual arrivals in the **Relevant Measurement Period** s ; and

A_d is the **Proportion of Responsibility** for the d^{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:

$$= A_d \times \sum_{s=1}^{s=\theta} (\text{Expected DEP}_s - \text{Actual DEP}_s)$$

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 2.39;

Actual DEP_s is the number of actual departures in the **Relevant Measurement Period** s ; and

A_d is the **Proportion of Responsibility** for the d^{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 Licensee 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 2.27. The

Licensee shall provide evidence to support its consideration of such contributory causes.

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** as defined in paragraph 2.27; 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** as defined in paragraph 2.27.

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 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 Regulatory Period or Regulatory 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 Regulatory Period or Regulatory 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 Regulatory Period or Regulatory Year. This is likely to lead to the sum of the monthly rebates paid during the course of the relevant Regulatory Period or Regulatory Year being less or more than the rebates required by this Schedule for the relevant Regulatory Period or Regulatory Year as a whole. Therefore,

- a) where the amount of rebates paid during the course of the relevant Regulatory Period or Regulatory 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 Regulatory Period or Regulatory 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 and no more than three calendar months 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 Regulatory Period or Regulatory 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:

$$\text{Total rebate} = \text{Rebate}_{P\&A} + \text{Rebate}_{ACT}$$

where:

Total rebate is the total aggregate percentage rebate payable for the Regulatory Period and each subsequent Regulatory Year;

$\text{Rebate}_{P\&A}$ is the aggregate percentage rebate in the relevant Regulatory Period or Regulatory Year relating to the 'Passenger' and 'Airline' elements (P&A) set out in Table 1a to Table 5d of this Schedule and calculated in accordance with section 3(b)(1) of this Schedule; and

Rebate_{ACT} is the aggregate percentage rebate in the relevant Regulatory Period or Regulatory Year relating to the Aerodrome Congestion Term as calculated in accordance with section 3(b)(2) of this Schedule.

3(b)(1) $\text{Rebate}_{P\&A}$

3.6 Except where explicitly stated, $\text{Rebate}_{P\&A}$ 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 $\text{Rebate}_{P\&A}$ for the Regulatory Period shall be calculated as follows:

$$\text{Rebate}_{P\&A} = \sum_a \sum_i \text{MIN} \left[\sum_j R_{i,j} \text{RP} \cdot x_{i,j,a}, \text{ANNMAX}_i \right]$$

where:

$R_{i,j} \text{RP}$ is defined in paragraph 2.1(f);

$x_{i,j,a} = 0$ if Standard $_{i,j,a}$ in month j is met as defined in paragraph 3.9; or
 $= 1$ otherwise; and

ANNMAX $_i$ is defined in paragraph 2.1(e).

3.8 The Rebate $_{P\&A}$ for any Regulatory Year shall be calculated as follows:

$$\text{Rebate}_{P\&A} = \sum_a \sum_i \text{MIN} \left[\sum_j R_{i,j} \text{RY} \cdot x_{i,j,a}, \text{ANNMAX}_i \right]$$

where:

$R_{i,j} \text{RY}$ is defined in paragraph 2.1(g);

$x_{i,j,a} = 0$ if Standard $_{i,j,a}$ in month j is met as defined in paragraph 3.9; or
 $= 1$ otherwise; and

ANNMAX $_i$ is defined in paragraph 2.1(e).

3.9 The 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:

Monthly performance $_{i,j,a}$ is the recorded monthly performance of element i in month j in terminal a ;

Performance $_{i,j,a}$ is the moving annual average 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

Standard $_{i,j,a}$ is the relevant standard of element i in month j in terminal a as defined in Table 1a to Table 5d of this Schedule.

3.10 The performance for the elements 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}

3.11 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:

$\text{Rebate}_{ARR} = \sum_{\text{All material events}} V_{ARR_d}$ is the element of this term related to arrival movements at the airport;

$\text{Rebate}_{DEP} = \sum_{\text{All material events}} V_{DEP_d}$ is the element of this term related to departure movements at the airport;

R_t is the total revenue from Airport Charges in respect of relevant air services levied at the relevant airport in the relevant Regulatory Period or Regulatory Year t ; and

MAXRebate_{ACT} is the maximum percentage rebate (1.00%) for the relevant Regulatory Period or Regulatory Year for the aerodrome congestion term.

3.12 For each **Material Event** d :

- a) V_{ARR_d} is the value in Table 6 of this Schedule, dependent on the **Maximum Cumulative Arrival Movements Deferred** for the d^{th} relevant **Material Event** as adjusted by inflation specified in paragraph 3.13; and
- b) V_{DEP_d} is the value in Table 6 of this Schedule, dependent on the **Maximum Cumulative Departure Movements Deferred** for the d^{th} relevant **Material Event** as adjusted by inflation specified in paragraph 3.13.

3.13 For Rebate_{ACT} incurred in the relevant Regulatory Period or Regulatory Year t (i.e. $\text{Rebate}_{ACT,t}$), the amount payable shall be inflated to outturn prices by the formula:

$$\text{Rebate}_{\text{ACT},t} = \text{Rebate}_{\text{ACT},2013/14} \times \left(\frac{P_t}{P_{2013/14}} \right)$$

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 is the value of the CHAW series of the Retail Price Index published by the Office for National Statistics with respect to April in the relevant Regulatory Period or Regulatory Year t ; 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 April 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 , the bonus factor as specified in Condition C1, is based on performance achieved in respect of specified elements in the relevant Regulatory Period or Regulatory 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, the corresponding periods for which bonuses are recoverable by the Licensee to be included in the calculation of M_t are set out in Table 8 of this Schedule.

4.4 For the purposes of calculating M_t for the Regulatory Period, $B_{t-2} = B_{2012/13}$ is set to zero; for the purposes of calculating M_t for the Regulatory Year t starting on 1 January 2015, $B_{t-2} = B_{2013/14}$ is set to zero. This is because bonuses earned in 2012/13 and 2013/14 should have been recovered through the K factor as specified in Condition C1.

4.5 B_t for the Regulatory Period, i.e. B_{2014} , shall be calculated as follows:

$$B_t = \sum_{j=\text{April}}^{j=\text{December}} \sum_k \text{Max} \left[0, \text{Min} \left[\text{BNS}(\text{T1})_{kj}, \text{BNS}(\text{T2})_{kj}, \text{BNS}(\text{T3})_{kj}, \text{BNS}(\text{T4})_{kj}, \text{BNS}(\text{T5})_{kj} \right] \right]$$

For each month j and specified element k ;

$$\text{BNS}(\text{T1})_{kj} = \frac{1}{9} \times \text{MB}_k \frac{\text{Min}[\text{UPL}_k, \text{MP}(\text{T1})_{kj}] - \text{LPL}_k}{\text{UPL}_k - \text{LPL}_k}$$

$$\text{BNS}(\text{T2})_{kj} = \frac{1}{9} \times \text{MB}_k \frac{\text{Min}[\text{UPL}_k, \text{MP}(\text{T2})_{kj}] - \text{LPL}_k}{\text{UPL}_k - \text{LPL}_k}$$

$$\text{BNS}(\text{T3})_{kj} = \frac{1}{9} \times \text{MB}_k \frac{\text{Min}[\text{UPL}_k, \text{MP}(\text{T3})_{kj}] - \text{LPL}_k}{\text{UPL}_k - \text{LPL}_k}$$

$$\text{BNS}(\text{T4})_{kj} = \frac{1}{9} \times \text{MB}_k \frac{\text{Min}[\text{UPL}_k, \text{MP}(\text{T4})_{kj}] - \text{LPL}_k}{\text{UPL}_k - \text{LPL}_k}$$

$$\text{BNS}(\text{T5})_{kj} = \frac{1}{9} \times \text{MB}_k \frac{\text{Min}[\text{UPL}_k, \text{MP}(\text{T5})_{kj}] - \text{LPL}_k}{\text{UPL}_k - \text{LPL}_k}$$

where:

MB_k , LPL_k and UPL_k are defined in paragraphs 2.1(j), 2.1(k) and 2.1(l) respectively; and

$\text{MP}(\text{T1})_{kj}$, $\text{MP}(\text{T2})_{kj}$, $\text{MP}(\text{T3})_{kj}$, $\text{MP}(\text{T4})_{kj}$ and $\text{MP}(\text{T5})_{kj}$ 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.

- 4.6 B_t for any subsequent relevant Regulatory Year t shall be calculated as follows:

$$B_t = \sum_{j=\text{January}}^{\text{December}} \sum_k \text{Max} \left[0, \text{Min} \left[\text{BNS}(\text{T1})_{kj}, \text{BNS}(\text{T2})_{kj}, \text{BNS}(\text{T3})_{kj}, \text{BNS}(\text{T4})_{kj}, \text{BNS}(\text{T5})_{kj} \right] \right]$$

For each month j and specified element k;

$$\text{BNS}(\text{T1})_{kj} = \frac{1}{12} \times \text{MB}_k \frac{\text{Min}[\text{UPL}_k, \text{MP}(\text{T1})_{kj}] - \text{LPL}_k}{\text{UPL}_k - \text{LPL}_k}$$

$$\text{BNS}(\text{T2})_{kj} = \frac{1}{12} \times \text{MB}_k \frac{\text{Min}[\text{UPL}_k, \text{MP}(\text{T2})_{kj}] - \text{LPL}_k}{\text{UPL}_k - \text{LPL}_k}$$

$$\text{BNS}(\text{T3})_{kj} = \frac{1}{12} \times \text{MB}_k \frac{\text{Min}[\text{UPL}_k, \text{MP}(\text{T3})_{kj}] - \text{LPL}_k}{\text{UPL}_k - \text{LPL}_k}$$

$$\text{BNS}(\text{T4})_{kj} = \frac{1}{12} \times \text{MB}_k \frac{\text{Min}[\text{UPL}_k, \text{MP}(\text{T4})_{kj}] - \text{LPL}_k}{\text{UPL}_k - \text{LPL}_k}$$

$$\text{BNS}(\text{T5})_{kj} = \frac{1}{12} \times \text{MB}_k \frac{\text{Min}[\text{UPL}_k, \text{MP}(\text{T5})_{kj}] - \text{LPL}_k}{\text{UPL}_k - \text{LPL}_k}$$

where:

MB_k , LPL_k and UPL_k are defined in paragraphs 2.1(j), 2.1(k) and 2.1(l) respectively; and

$\text{MP}(\text{T1})_{kj}$, $\text{MP}(\text{T2})_{kj}$, $\text{MP}(\text{T3})_{kj}$, $\text{MP}(\text{T4})_{kj}$ and $\text{MP}(\text{T5})_{kj}$ 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.

4.7 The calculations set out in paragraphs 4.5 and 4.6 are subject to the following conditions:

- a) For the months including or after ‘Such time when Terminal 1 is decommissioned’, $\text{BNS}(\text{T1})_{kj} = 0.36\%$; and

- b) For the months before or including 'Such time when air transport services for the carriage of passengers commence at Terminal 2', $BNS(T2)_{kj} = 0.36\%$.

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 9a to Table 9e of this Schedule; and
- ii) the estimated amount of rebates and bonuses, generated by the performance relating to all elements specified in Table 9a to Table 9e of this Schedule.
- b) within two months of the end of the relevant Regulatory Period or Regulatory 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 9a to Table 9e of this Schedule; and
 - ii) the estimated amount of rebates and bonuses, generated by the performance relating to all elements specified in Table 9a to Table 9e 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 9a to Table 9e of this Schedule split by relevant element.
- 5.4 Detailed publication requirements are set out in Table 9a to Table 9e 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 1a to Table 5d of this Schedule, the maximum rebates for the relevant Regulatory Period or Regulatory Year 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 $\text{Rebate}_{\text{ACT}}$ in thousands are measured to two decimal places. In Table 7 of this Schedule, the maximum 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 (2011 No. 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) **the Regulatory Period has the meaning set out in Part A of this Licence;**
- d) **the Regulatory Year has the meaning set out in Part A of this Licence;**
- e) the AOC means the Airline Operators Committee;
- f) Terminal excludes general aviation facilities and facilities for the handling of cargo; and
- g) 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.
- h) Dates that fall outside of the periods as defined in paragraph 6.3(g) shall not be regarded as falling in a dead-band period.

7. Tables⁷⁰

Table 1a: Terminal 1 – passenger satisfaction elements

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY	
1	Departure lounge seating availability	Moving annual average QSM scores weighted by monthly passenger numbers	Unrestricted	3.80	0.36%	0.0800%	0.0600%	
2	Cleanliness			4.00	0.36%	0.0800%	0.0600%	
3	Way-finding			4.10	0.36%	0.0800%	0.0600%	
4	Flight information			4.30	0.36%	0.0800%	0.0600%	
5	Security			Publication only				
6	Wi-fi			Publication only				

⁷⁰ In Tables 1a to Table 5d, for the time of day over which performance counts for rebates, 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. ANNMAX_i is defined in paragraph 2.1(e) and is measured to two decimal places. R_{i,j}RP and R_{i,j}RY are defined in paragraphs 2.1(f) and 2.1(g) respectively and are measured to four decimal places. In Table 6, the calculation of ACT rebates in thousands is specified in section 2(d) and is measured to two decimal places. In Table 7, MB_k, LPL_k and UPL_k are defined in paragraphs 2.1(j), 2.1(k) and 2.1(l) and are measured to two decimal places.

Table 1b: Terminal 1 – security⁷¹

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY
7a	Central search (interim)	Percentage of queue times measured once every 15 minutes that are less than 5 minutes	05:00 to 22:30	95.00%	1.00%	0.2222%	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%			
8a	Transfer search (interim)	Percentage of queue times measured once every 15 minutes that are less than 10 minutes	05:00 to 22:30	95.00%	0.50%	0.1111%	0.0833%
7	Central search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	1.00%	0.2222%	0.1667%
8	Transfer search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	0.50%	0.1111%	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%	0.0844%	0.0633%
10	Control posts	Percentage of vehicle queue times measured once every 15 minutes that are less than 15 minutes at each control post group		95.00%	0.38%	0.0844%	0.0633%

⁷¹ In this table, the metrics for central search (interim) (Elements 7a and 7b) and transfer search (interim) (Element 8a) are adopted until the introduction of automatic queue measurements (see the section 'Central and transfer search – design of metrics' in Appendix J. The groups for the control posts (Element 10) are: CTA (CP5, CP8), Cargo (CP10, CP10a, CP25a), Eastside (CP14, CP16), Terminal 5 (CP18, CP19, CP20) and Southside (CP24).

Table 1c: Terminal 1 – passenger operational elements

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY
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%	0.0778%	0.0583%
12	PSE (priority)			99.00%	0.35%	0.0778%	0.0583%
13	Arrivals baggage carousels			99.00%	0.35%	0.0778%	0.0583%
14a	Track transit system	% one train serviceable and available for use, independent of any other element	Not applicable	Not applicable			
14b		% two trains serviceable and available for use, independent of any other element					

Table 1d: Terminal 1 – airline operational elements⁷²

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY
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%	0.0556%	0.0417%
16	Jetties			99.00%	0.25%	0.0556%	0.0417%
17	Fixed electrical ground power			99.00%	0.20%	0.0444%	0.0333%
18	Stand entry guidance			99.00%	0.25%	0.0556%	0.0417%
19	Pre-conditioned air		Not applicable	Not applicable			
20	Pier-served stand usage	Moving annual average of % passengers served (last 12 months)	Unrestricted	95.00%	0.30%	0.0667%	0.0500%

⁷² In this table, the standard for pier-served stand usage (Element 20) is subject to exceptions to be agreed by the Licensee and the AOC.

Table 2a: Terminal 2 – passenger satisfaction elements

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY	
1	Departure lounge seating availability	Moving annual average QSM scores weighted by monthly passenger numbers	Unrestricted	3.80	0.36%	0.0800%	0.0600%	
2	Cleanliness			4.00	0.36%	0.0800%	0.0600%	
3	Way-finding			4.10	0.36%	0.0800%	0.0600%	
4	Flight information			4.30	0.36%	0.0800%	0.0600%	
5	Security			Publication only				
6	Wi-fi			Publication only				

Table 2b: Terminal 2 – security⁷³

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY
7a	Central search (interim)	Percentage of queue times measured once every 15 minutes that are less than 5 minutes	05:00 to 22:30	95.00%	1.00%	0.2222%	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%			
8a	Transfer search (interim)	Percentage of queue times measured once every 15 minutes that are less than 10 minutes	05:00 to 22:30	95.00%	0.50%	0.1111%	0.0833%
7	Central search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	1.00%	0.2222%	0.1667%
8	Transfer search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	0.50%	0.1111%	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%	0.0844%	0.0633%
10	Control posts	Percentage of vehicle queue times measured once every 15 minutes that are less than 15 minutes at each control post group		95.00%	0.38%	0.0844%	0.0633%

⁷³ In this table, the metrics for central search (interim) (Elements 7a and 7b) and transfer search (interim) (Element 8a) are adopted until the introduction of automatic queue measurements (see the section 'Central and transfer search – design of metrics' in Appendix J. The groups for the control posts (Element 10) are: CTA (CP5, CP8), Cargo (CP10, CP10a, CP25a), Eastside (CP14, CP16), Terminal 5 (CP18, CP19, CP20) and Southside (CP24).

Table 2c: Terminal 2 – passenger operational elements

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY
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%	0.0778%	0.0583%
12	PSE (priority)			99.00%	0.35%	0.0778%	0.0583%
13	Arrivals baggage carousels			99.00%	0.35%	0.0778%	0.0583%
14a	Track transit system	% one train serviceable and available for use, independent of any other element	Not applicable	Not applicable			
14b		% two trains serviceable and available for use, independent of any other element					

Table 2d: Terminal 2 – airline operational elements⁷⁴

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY
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%	0.0444%	0.0333%
16	Jetties			99.00%	0.20%	0.0444%	0.0333%
17	Fixed electrical ground power			99.00%	0.15%	0.0333%	0.0250%
18	Stand entry guidance			99.00%	0.25%	0.0556%	0.0417%
19	Pre-conditioned air			98.00%	0.20%	0.0444%	0.0333%
20	Pier-served stand usage	Moving annual average of % passengers served (last 12 months)	Unrestricted	95.00%	0.25%	0.0556%	0.0417%

⁷⁴ In this table, the standard for pier-served stand usage (Element 20) is subject to exceptions to be agreed by the Licensee and the AOC.

Table 3a: Terminal 3 – passenger satisfaction elements

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY	
1	Departure lounge seating availability	Moving annual average QSM scores weighted by monthly passenger numbers	Unrestricted	3.80	0.36%	0.0800%	0.0600%	
2	Cleanliness			4.00	0.36%	0.0800%	0.0600%	
3	Way-finding			4.10	0.36%	0.0800%	0.0600%	
4	Flight information			4.30	0.36%	0.0800%	0.0600%	
5	Security			Publication only				
6	Wi-fi			Publication only				

Table 3b: Terminal 3 – security⁷⁵

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY
7a	Central search (interim)	Percentage of queue times measured once every 15 minutes that are less than 5 minutes	05:00 to 22:30	95.00%	1.00%	0.2222%	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%			
8a	Transfer search (interim)	Percentage of queue times measured once every 15 minutes that are less than 10 minutes	05:00 to 22:30	95.00%	0.50%	0.1111%	0.0833%
7	Central search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	1.00%	0.2222%	0.1667%
8	Transfer search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	0.50%	0.1111%	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%	0.0844%	0.0633%
10	Control posts	Percentage of vehicle queue times measured once every 15 minutes that are less than 15 minutes at each control post group		95.00%	0.38%	0.0844%	0.0633%

⁷⁵ In this table, the metrics for central search (interim) (Elements 7a and 7b) and transfer search (interim) (Element 8a) are adopted until the introduction of automatic queue measurements (see the section 'Central and transfer search – design of metrics' in Appendix J. The groups for the control posts (Element 10) are: CTA (CP5, CP8), Cargo (CP10, CP10a, CP25a), Eastside (CP14, CP16), Terminal 5 (CP18, CP19, CP20) and Southside (CP24).

Table 3c: Terminal 3 – passenger operational elements

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY
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%	0.0778%	0.0583%
12	PSE (priority)			99.00%	0.35%	0.0778%	0.0583%
13	Arrivals baggage carousels			99.00%	0.35%	0.0778%	0.0583%
14a	Track transit system	% one train serviceable and available for use, independent of any other element	Not applicable	Not applicable			
14b		% two trains serviceable and available for use, independent of any other element					

Table 3d: Terminal 3 – airline operational elements⁷⁶

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY
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%	0.0444%	0.0333%
16	Jetties			99.00%	0.20%	0.0444%	0.0333%
17	Fixed electrical ground power			99.00%	0.15%	0.0333%	0.0250%
18	Stand entry guidance			99.00%	0.25%	0.0556%	0.0417%
19	Pre-conditioned air			98.00%	0.20%	0.0444%	0.0333%
20	Pier-served stand usage	Moving annual average of % passengers served (last 12 months)	Unrestricted	95.00%	0.25%	0.0556%	0.0417%

⁷⁶ In this table, the standard for pier-served stand usage (Element 20) is subject to exceptions to be agreed by the Licensee and the AOC.

Table 4a: Terminal 4 – passenger satisfaction elements

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY	
1	Departure lounge seating availability	Moving annual average QSM scores weighted by monthly passenger numbers	Unrestricted	3.80	0.36%	0.0800%	0.0600%	
2	Cleanliness			4.00	0.36%	0.0800%	0.0600%	
3	Way-finding			4.10	0.36%	0.0800%	0.0600%	
4	Flight information			4.30	0.36%	0.0800%	0.0600%	
5	Security			Publication only				
6	Wi-fi			Publication only				

Table 4b: Terminal 4 – security⁷⁷

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY
7a	Central search (interim)	Percentage of queue times measured once every 15 minutes that are less than 5 minutes	05:00 to 22:30	95.00%	1.00%	0.2222%	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%			
8a	Transfer search (interim)	Percentage of queue times measured once every 15 minutes that are less than 10 minutes	05:00 to 22:30	95.00%	0.50%	0.1111%	0.0833%
7	Central search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	1.00%	0.2222%	0.1667%
8	Transfer search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	0.50%	0.1111%	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%	0.0844%	0.0633%
10	Control posts	Percentage of vehicle queue times measured once every 15 minutes that are less than 15 minutes at each control post group		95.00%	0.38%	0.0844%	0.0633%

⁷⁷ In this table, the metrics for central search (interim) (Elements 7a and 7b) and transfer search (interim) (Element 8a) are adopted until the introduction of automatic queue measurements (see the section 'Central and transfer search – design of metrics' in Appendix J. The groups for the control posts (Element 10) are: CTA (CP5, CP8), Cargo (CP10, CP10a, CP25a), Eastside (CP14, CP16), Terminal 5 (CP18, CP19, CP20) and Southside (CP24).

Table 4c: Terminal 4 – passenger operational elements

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY
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%	0.0778%	0.0583%
12	PSE (priority)			99.00%	0.35%	0.0778%	0.0583%
13	Arrivals baggage carousels			99.00%	0.35%	0.0778%	0.0583%
14a	Track transit system	% one train serviceable and available for use, independent of any other element	Not applicable	Not applicable			
14b		% two trains serviceable and available for use, independent of any other element					

Table 4d: Terminal 4 – airline operational elements⁷⁸

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY
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%	0.0556%	0.0417%
16	Jetties			99.00%	0.25%	0.0556%	0.0417%
17	Fixed electrical ground power			99.00%	0.20%	0.0444%	0.0333%
18	Stand entry guidance			99.00%	0.25%	0.0556%	0.0417%
19	Pre-conditioned air		Not applicable	Not applicable			
20	Pier-served stand usage	Moving annual average of % passengers served (last 12 months)	Unrestricted	95.00%	0.30%	0.0667%	0.0500%

⁷⁸ In this table, the standard for pier-served stand usage (Element 20) is subject to exceptions to be agreed by the Licensee and the AOC.

Table 5a: Terminal 5 – passenger satisfaction elements

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY	
1	Departure lounge seating availability	Moving annual average QSM scores weighted by monthly passenger numbers	Unrestricted	3.80	0.36%	0.0800%	0.0600%	
2	Cleanliness			4.00	0.36%	0.0800%	0.0600%	
3	Way-finding			4.10	0.36%	0.0800%	0.0600%	
4	Flight information			4.30	0.36%	0.0800%	0.0600%	
5	Security			Publication only				
6	Wi-fi			Publication only				

Table 5b: Terminal 5 – security⁷⁹

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY
7a	Central search (interim)	Percentage of queue times measured once every 15 minutes that are less than 5 minutes	05:00 to 22:30	95.00%	1.00%	0.2222%	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%			
8a	Transfer search (interim)	Percentage of queue times measured once every 15 minutes that are less than 10 minutes	05:00 to 22:30	95.00%	0.50%	0.1111%	0.0833%
7	Central search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	1.00%	0.2222%	0.1667%
8	Transfer search	Percentage of passengers queuing less than 10 minutes	05:00 to 22:30	99.00%	0.50%	0.1111%	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%	0.0844%	0.0633%
10	Control posts	Percentage of vehicle queue times measured once every 15 minutes that are less than 15 minutes at each control post group		95.00%	0.38%	0.0844%	0.0633%

⁷⁹ In this table, the metrics for central search (interim) (Elements 7a and 7b) and transfer search (interim) (Element 8a) are adopted until the introduction of automatic queue measurements (see the section 'Central and transfer search – design of metrics' in Appendix J. The groups for the control posts (Element 10) are: CTA (CP5, CP8), Cargo (CP10, CP10a, CP25a), Eastside (CP14, CP16), Terminal 5 (CP18, CP19, CP20) and Southside (CP24).

Table 5c: Terminal 5 – passenger operational elements

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY
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%	0.0556%	0.0417%
12	PSE (priority)			99.00%			
13	Arrivals baggage carousels			99.00%			
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%	0.0667%	0.0500%
14b		% two trains serviceable and available for use, independent of any other element		97.00%			

Table 5d: Terminal 5 – airline operational elements⁸⁰

i	Element	Metric	Time of day over which performance counts for rebates	Standard _{i,j,a}	ANNMAX _i	R _{i,j} RP	R _{i,j} RY
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%	0.0556%	0.0417%
16	Jetties			99.00%	0.25%	0.0556%	0.0417%
17	Fixed electrical ground power			99.00%	0.20%	0.0444%	0.0333%
18	Stand entry guidance			99.00%	0.30%	0.0667%	0.0500%
19	Pre-conditioned air			98.00%	0.25%	0.0556%	0.0417%
20	Pier-served stand usage	Moving annual average of % passengers served (last 12 months)	Not applicable	Not applicable			

⁸⁰ In this table, the standard and rebates for pier-served stand usage (Element 20) are 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 (£'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	Maximum bonus MB_k	Lower performance limit LPL_k	Upper performance limit UPL_k
1	Departure lounge seating availability	Moving annual average QSM scores weighted by monthly passenger numbers in the relevant terminal	0.36%	4.10	4.50
2	Cleanliness		0.36%	4.20	4.50
3	Way-finding		0.36%	4.20	4.50
4	Flight information		0.36%	4.40	4.70

Table 8: Periods of bonuses earned to be taken into account when setting M_t as specified in Condition C1

To set the maximum revenue yield per passenger M_t	M_t representing the period	Take account bonuses earned in B_{t-2}	B_{t-2} representing the period
M_{2014}	April 2014 – December 2014	$B_{2012/13}$	April 2012 – March 2013
M_{2015}	January 2015 – December 2015	$B_{2013/14}$	April 2013 – March 2014
M_{2016}	January 2016 – December 2016	B_{2014}	April 2014 – December 2014
M_{2017}	January 2017 – December 2017	B_{2015}	January 2015 – December 2015
M_{2018}	January 2018 – December 2018	B_{2016}	January 2016 – December 2016

Note: For the purposes of calculating M_{2014} , $B_{2012/13}$ is set to zero; for the purposes of calculating M_{2015} , $B_{2013/14}$ is set to zero.

Table 9a: Publication – passenger satisfaction elements

Area	i	Element	Metric	Terminal (monthly)	Website (monthly and annual)	Regulatory accounts (annual)
All terminals	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				
	6	Wi-fi		Performance	Performance	Not applicable

Table 9b: Publication – security⁸¹

Area	i	Element	Metric	Terminal (monthly)	Website (monthly and annual)	Regulatory accounts (annual)
All terminals	7a	Central search (interim)	Percentage of queue times measured once every 15 minutes that are less than 5 minutes	Performance and standard	Performance, standard and estimated rebates	Audited rebates
	7b		Percentage of queue times measured once every 15 minutes that are less than 10 minutes			
	8a	Transfer search (interim)	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			
	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 vehicle queue times measured once every 15 minutes that are less than 15 minutes at each control post group			

⁸¹ In this table, the metrics for central search (interim) (Elements 7a and 7b) and transfer search (interim) (Element 8a) are adopted until the introduction of automatic queue measurements (see the section 'Central and transfer search – design of metrics' in Appendix J. The groups for the control posts (Element 10) are: CTA (CP5, CP8), Cargo (CP10, CP10a, CP25a), Eastside (CP14, CP16), Terminal 5 (CP18, CP19, CP20) and Southside (CP24).

Table 9c: Publication – passenger operational elements

Area	i	Element	Metric	Terminal (monthly)	Website (monthly and annual)	Regulatory accounts (annual)
All terminals	11	PSE (general)	% time serviceable and available for use, independent of any other element	Not applicable	Performance, standard and 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			

Table 9d: Publication – airline operational elements

Area	i	Element	Metric	Terminal (monthly)	Website (monthly and annual)	Regulatory accounts (annual)
All terminals	15	Stands	% time serviceable and available for use, independent of any other element	Not applicable	Performance, standard and estimated rebates	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)			

Table 9e: Publication – ACT

Area	i	Element	Metric	Terminal (monthly)	Website (monthly and annual)	Regulatory accounts (annual)
Airfield		Aerodrome congestion term	As specified in section 2(d) of Schedule 1	Not applicable	Performance, standard and estimated rebates	Audited rebates

APPENDIX A

Form of Regulation

- A1 This chapter contains the CAA's final view on the design of the price control that will apply to HAL during Q6. It sets out the statutory duties that the CAA must follow in formulating a price control and then discusses:
- the form of the control and whether to continue with a RAB approach; and
 - the duration of the Q6 control.
- A2 It then considers 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; and
 - treatment of over- or under-recoveries, or the K factor.
- A3 In addition, the condition which rolls forward the RAB is published as Appendix K.

CAA's duties

- A4 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.
- A5 Those of the CAA's statutory duties which are most relevant to setting the Q6 price controls are set out in figure A.1 below.

Figure A.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)	<p>In performing its duties under subsections (1) and (2) the CAA must have regard to:</p> <ul style="list-style-type: none"> (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

A6 In previous quinquennia, the CAA has set price controls for UK regulated airports using a RAB-based price cap.

CAA's final proposal

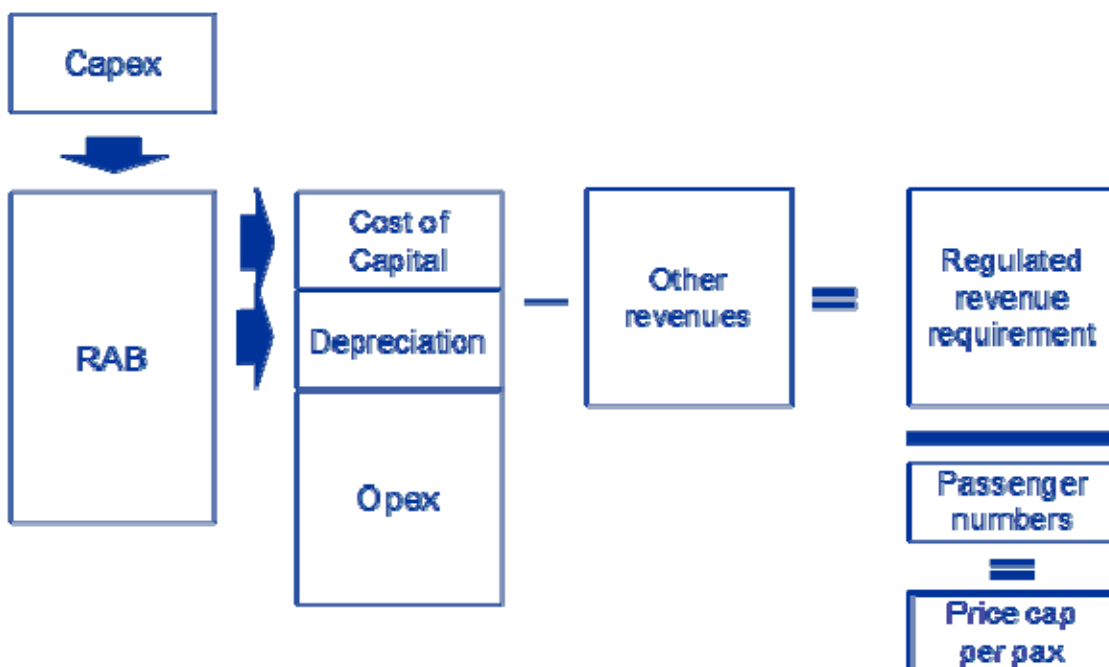
A7 The CAA's final proposal for the form of HAL's control was to set another RAB-based price cap, for several reasons:

- 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.

A8 Figure A.2 below illustrates a RAB-based control.

Figure A.2: Building blocks to calculate the HAL price cap



Source: CAA

Stakeholders' views

- A9 The CAA received one response which commented specifically on the form of the control. The Heathrow Airline Community welcomed the indication by the CAA that it intended to continue to use RAB-based regulation. The CAA should establish a regulatory settlement for HAL in Q6 which would be based on the costs of an efficient company rather than the current cost base of HAL.

CAA's final view

- A10 Given the high degree of stakeholder consensus on the issue, and the four reasons stated in the initial proposals, the CAA's final view is to continue to use RAB-based regulation.

Duration of the control

Issue

- A11 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.
- A12 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 final proposals

- A13 Following consideration of the responses, the CAA based its final proposals on a five year control. However, the CAA stated that it believed that a control coinciding with HAL's financial year could present benefits in transparency and in facilitating regulatory calculations. The CAA was 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 could be

implemented in time. If this proved impossible, it would implement these changes during the first year of Q6. However, such a change would be exceptional, and the CAA did not envisage changing the financial year again during Q6.

- A14 For the purposes of modelling the control, the CAA has converted its forecasts for the building blocks to take account of this decision. This has meant that the forecasts at the end of each chapter have been derived using appropriate conversion factors and are presented on a four years and nine months basis. For ease of comparison with the final proposals and the output of CE, the CAA has also included forecasts for each building block on a five year basis. It has not, however, otherwise made use of the five year forecasts in setting the control. In addition, the CAA has made a number of minor amendments to the price control licence condition and the RAB roll forward condition to take account of this change. The most important of these are highlighted in the relevant chapters and appendices of this document.

Stakeholders' views

- A15 The CAA received two responses commenting on the duration of the control,
- HAL recommended that the first year of Q6 should be shortened to nine months, ending on 31 December 2014 followed by four years that would run from January to December, with the 'quinquennium' ending on 31 December 2018. It identified a number of processes that would need to be managed for this change to take place. It considered that there was sufficient time to implement the necessary changes before April 2014.
 - The Heathrow Airline Community responded that it wanted to consider the implications of this proposal before taking a final view. It looked forward to discussing this issue with the CAA.

CAA's final view

- A16 Given the advantages outlined in the final proposals, the CAA has based its final view on a duration for Q6 of four years and nine months.

Issues

Single- and dual-till

Issue

A17 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.⁸²

CAA's final proposals

A18 The CAA's final proposals are set on the basis of a single-till.

Stakeholders' views

A19 The CAA received one response on the single-till issue. The airlines welcomed that the single till would be the basis of setting airport charges at Heathrow for Q6.

CAA's final view

A20 Given the advantages listed in the initial and final proposals, the CAA's final view is to set a single-till control for HAL during Q6.

Airport expansion cost recovery mechanism

Issue

A21 In 2003, the then government's White Paper into the future of air transport in the UK⁸³ 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 released its interim report on 17 December 2013, and will release its final report after the

⁸² 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.

⁸³ Available at:

<http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/about/strategy/whitepapers/air/>

2015 election. It is possible that planning for, and construction of, a major expansion of Heathrow could start during Q6.

- A22 Policy on airport expansion is a matter for the government. However, 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 final proposals

- A23 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.⁸⁴ 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.
- A24 The final proposals were based on HAL's two runway Masterplan, and did not include provision for a significant expansion of the airport. The CAA did not believe that an explicit mechanism in HAL's licence to incorporate expansion costs into HAL's allowed revenues was appropriate, because:
- it remained highly uncertain whether such costs would be incurred during Q6, if at all;
 - it was likely that, if any airport expansion costs are incurred within Q6, they would be relatively small. Significant expenditure on the construction phase of a new runway or new terminal seemed highly unlikely during Q6;

⁸⁴ Available at http://www.caa.co.uk/docs/5/ergdocs/heathrowgatwickdecision_mar08.pdf. In particular, see Annex E, paragraphs E44-E49.

- even if the government approved expansion at Heathrow, other parties, besides HAL, could be chosen to own or operate the new runway or terminals;
- it was theoretically possible that the CAA could consider that expansion approved by the government jeopardised its fulfilment of its statutory duties. Accordingly, including an automatic mechanism by which expenditure on expansion was included in the RAB without the CAA undertaking an assessment of that expenditure could be inappropriate;
- the CAA did 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 was best decided once their magnitude and timing were known.

A25 However, the CAA committed to considering further its treatment of the costs of significant capacity expansion and to consulting on a policy statement.

Stakeholders' views

A26 The CAA received two responses commenting on its approach to the recovery of airport expansion costs:

- HAL responded that this potential investment (and its associated costs) had been excluded by Heathrow from its business plans as there was little understanding of potential timescales. However, during Q6, there could be developments in government policy that could not be reasonably included as part of the regulatory settlement, but which may require material additional expenditure. A description of the likely areas and potential cost had been set out in HAL's response to the initial proposals. HAL's response also set out a proposed means of addressing the potential costs (Notified Items).
- The Heathrow Airline Community commented that the CAA had made the correct assessment regarding the need for an airport expansion cost recovery mechanism in the current circumstances and therefore it supported the reasons set out by the CAA for its decision.

CAA's final view

A27 The CAA notes HAL's point that there could be developments in government policy that could not be reasonably included as part of the regulatory settlement, but may require additional further expenditure. It does not agree, however, that it is appropriate to address the treatment of these costs in the price control settlement without considerable analysis and consultation. Accordingly, the CAA believes that its position in the final proposals remains appropriate. The CAA will consider the treatment of costs for any large expansion of Heathrow's capacity during Q6.

Safeguarded assets

Issue

A28 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.

A29 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 prospective⁸⁵ only.

⁸⁵ In this case, prospective could mean safeguarded assets created in Q6 or thereafter, or could

- A30 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 final proposals

- A31 The CAA accepted that, in principle, there was an argument for not including safeguarded assets in the RAB, or for allowing a lower cost of capital for those assets before they were used. This could ensure that users benefit from lower prices than would otherwise be the case, for assets which they did not yet use.
- A32 However, altering the approach to calculating the RAB, even if only prospective assets were affected, could lead to increased regulatory uncertainty, and hence an increase in the overall cost of capital. Since the value of the safeguarded assets was 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.
- A33 Accordingly, the CAA's final proposals were 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 could be appropriate to revisit this issue at that time.

Stakeholders' views

- A34 The CAA received two responses commenting on its approach to safeguarded assets.
- HAL agreed with the CAA's proposed treatment of safeguarded assets.
 - The Heathrow Airline Community expressed disappointment that the CAA had not sought to adjust the rate of return on safeguarded assets. They argued that this could be done without impacting the overall size of the RAB or the size of the RAB which is made up of safeguarded assets.

mean assets created as part of projects which commenced in Q6 or thereafter.

CAA's final view

- A35 The CAA's final view is that it should retain its current approach to safeguarded assets. While adjusting the rate of return on safeguarded assets would not require an adjustment to the overall size of the RAB, it remains an ex-post adjustment to the treatment of those assets, which could reduce regulatory certainty and increase HAL's cost of capital. Accordingly, it could result in an overall increase in prices.

Security cost passthrough (S factor)**Issue**

- A36 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.
- A37 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 final proposals

- A38 Given the unpredictability of Department for Transport (DfT) security requirements over the next quinquennium, the CAA considered it appropriate that a significant amount of unanticipated security costs above the deadband be passed directly through to users. However, the CAA considered that, though security requirements were mandatory, it was 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.
- A39 The CAA agreed with the Heathrow Airline Community 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 was for a symmetrical S factor with a deadband set at £20 million and a 90% sharing factor.

Stakeholders' views

- A40 The CAA received two responses commenting on its provisions for an S factor.
- HAL argued that it was not fair or appropriate for it to absorb significant costs of the implementation of security directives, which require mandatory and often immediate compliance with minimal discretion over the method to ensure that HAL meets its security obligations and can continue to operate. It proposed the introduction of a materiality threshold for individual items of £1 million which would then enable a claim for a full cost.
 - The Heathrow Airline Community supported retaining a dead band in the S factor arrangements before any extra costs can be passed on to users and uplifting the level of this dead band by inflation to the level of £20 million before, 90% of further costs can be passed on to users. It was consistent with best practice regulation for HAL to be incentivised to achieve any security requirements as efficiently as possible. The application of a dead band achieved this. The Heathrow Airline Community also supported making the S factor symmetrical so that cost savings due to reduced security requirements would be passed on to users.

CAA's final view

- A41 The CAA does not agree with HAL that it is unfair or inappropriate to require it to absorb a proportion of the significant costs of the implementation of security directives, as it is required to do with other legislative changes throughout the quinquennium. It considers that HAL's proposal of an individual claim for each item could be unnecessarily complicated. Accordingly, its final view is that it should maintain the approach set out in the final proposals, of a symmetrical S factor with a £20 million dead band and a 90% sharing factor.
- A42 The change in the duration of the control from five years to four years and nine months means that the £20 million deadband will be reduced to £19 million, to reflect the shorter duration over which the cumulative increase in costs will have to be incurred to exceed the envisaged amount.

Rates revaluation costs

Issue

- A43 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% increase⁸⁶). The CAA's consultants, Steer Davies Gleave (SDG), stated in its report that this was likely to be an overestimate.
- A44 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.

CAA's final proposals

- A45 The CAA included a variable, the BR term, to pass through rates revaluation costs. It considered, however, that HAL had the ability to have some influence on rates revaluation. Therefore it included a sharing factor of 80%. Under this provision, 80% of the unanticipated increase in costs would be included in airport charges, while HAL would absorb the remaining 20% until the CAA resets the allowance at the Q7 review.
- A46 The CAA expected the transfer of risk from HAL to the airlines to be reflected in a lower cost of finance for HAL. It took this into account in setting HAL's cost of capital allowance.

Stakeholders' views

- A47 The CAA received two responses commenting on the BR term.

⁸⁶ Steer Davies Gleave (2012) Review of Other Operating Expenditure at Heathrow Airport, page 12, available at www.caa.co.uk

- HAL supported the CAA's rates pass-through mechanism relating to impact of the revaluation. It noted a point of detail in the formula which the CAA has addressed. The airlines' proposal appeared to misunderstand the CAA's proposals and was inconsistent with the basic properties of the proposed "cost pass-through" mechanism.
- The Heathrow Airline Community welcomed the policy of the CAA to allow HAL to pass through only 80% of any unanticipated increase in the cost of business rates in Q6. They noted that any reduction in anticipated rates cost in the settlement should be shared in the same 80/20 split; and that there should be robust governance through the revaluation process.

CAA's final view

A48 The CAA's final view is that, for the reasons set out in the final proposals, a BR term should be included in HAL's Q6 price control. It will assess HAL's performance during the rates revaluation in the Q7 review, as it does with all other items of opex. The CAA agrees with the airlines that the BR term should be symmetrical, consistent with the S factor term, and has incorporated this feature in the proposed licence condition.

Noise costs

Issue

A49 HAL is required under statute to fund a significant level of costs 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 final proposals

A50 While noise costs are uncertain, the CAA believed that HAL has some control over how much it spends. In addition, at £5 million per year, noise costs were only around 0.5% of HAL's opex. The CAA had seen no evidence that noise costs were likely to increase significantly over Q6. Therefore, a pass-through mechanism did 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 have regard to the need to promote efficiency and economy. However, it would do relatively little to remove cost risk from HAL.

Accordingly, the CAA did not include a pass-through mechanism for noise costs in its final proposals.

Stakeholders' views

- A51 The CAA received two responses commenting on its approach to noise costs.
- HAL responded that the CAA's proposals appeared to discount HAL's proposals on the basis that noise costs were a small proportion of HAL's overall opex and were not expected (by the CAA) to significantly increase over Q6. The relative size of noise related costs was essentially irrelevant. To the extent that it was a reasonable and efficiently incurred cost, it must be recovered. It was questionable whether noise costs should be subject to the same regulatory principle as other opex costs. In addition, HAL questioned how this aligned with the CAA's environmental duty, which included promoting industry efforts to reduce the impacts of noise.
 - The Heathrow Airline Community welcomed the CAA's decision not to include a pass through mechanism for noise costs in its final proposals.

CAA's final view

- A52 As stated in the final proposals, the CAA does not believe that it is appropriate to include a passthrough mechanism for noise costs. It believes that to do so could jeopardise its fulfilment of its statutory duty to promote efficiency and economy.
- A53 The CAA does not accept HAL's points that the magnitude of projected noise costs is irrelevant, or that it is jeopardising its environmental obligations by rejecting a passthrough mechanism. It believes that such mechanisms are only justified for significant cost items. Including many such mechanisms for smaller individual items would materially complicate HAL's price control, reducing transparency and complicating its incentives. It also questions whether including a passthrough mechanism for noise costs would cause HAL to act differently, given that it already funds noise abatement schemes more generously than it could.

Rolling opex incentive mechanism

Issue

A54 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 final proposals

A55 The CAA did not include such a mechanism in its final proposals.

Stakeholders' views

A56 The CAA received one response commenting on the decision not to include a rolling opex incentive mechanism. The Heathrow Airline Community welcomed the CAA's decision on this issue.

CAA's final view

A57 The CAA has not included a rolling opex mechanism in the Q6 price control.

Traffic risk sharing mechanism

Issue

A58 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 traffic forecasts and the WACC.

CAA's final proposals

A59 Given that no stakeholders had advanced persuasive reasons for the inclusion of such a mechanism, the CAA's final proposals did not include it.

Stakeholders' views

- A60 The CAA received two responses commenting on a traffic risk sharing mechanism.
- HAL responded that it would continue to give further consideration to risk sharing mechanisms. In addition, it considered that in the event airlines' responses to the CAA's final proposals contained passenger forecasts in excess of the CAA's forecast, this could give rise to the need for more detailed consideration of, and dialogue on, risk sharing.
 - The Heathrow Airline Community welcomed the CAA's decision not to include a traffic risk sharing mechanism.

CAA's final view

- A61 For the reasons set out in the initial proposals, the CAA's final view is that HAL's Q6 price control should not include a traffic risk sharing mechanism.

K factor**Issue**

- A62 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 known precisely 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.
- A63 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 final proposals

A64 The CAA's final proposals contained a correction factor mechanism. The CAA would carry over under- or over-recovery from the end of Q5+1 to Q6.

Stakeholders' views

- A65 The CAA received two responses commenting on the K factor.
- HAL agreed that the Q5 correction mechanism should continue in Q6, which should include any adjustments for under/over recoveries from 2012/13 and 2013/14 rolling forward into years one and two of Q6.
 - The Heathrow Airline Community supported the CAA's decision for the K factor mechanism to continue in Q6 in the same way it had been applied in Q5.

CAA's final view

A66 The CAA's final view is that the K factor mechanism should continue in Q6 as during Q5.

CAA's final view

- A67 To summarise, the CAA's final view on the form of the price control is:
- Form of control: an RPI-X, RAB-based regulation.
 - Duration of the control: a control lasting four years and nine months.
 - Single- or dual-till: a single-till control.
 - Airport expansion cost recovery mechanism: none is allowed.
 - Safeguarded assets: to continue the present treatment of safeguarded assets.

- S factor: to continue the present S factor. The CAA has increased the deadband to £20 million in line with inflation during Q5. To reflect the reduction in the duration of the control to four years and nine months, the CAA has reduced this deadband to £19 million. 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 the £19 million deadband.
- BR factor: to contain provision for a BR factor.
- Noise costs: not to provide for a pass-through mechanism for noise costs.
- Opex rollover mechanism: not to provide for such a mechanism.
- Traffic risk sharing mechanism: not to provide for such a mechanism.
- K factor: to continue the present correction mechanism.

APPENDIX B

Traffic Forecasts

- B1 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.
- B2 This appendix describes the CAA's approach to forecasting passenger volumes at Heathrow. It sets out:
- the approach to forecasting used;
 - the forecasts submitted by HAL in November 2013;
 - issues of disagreement between HAL and the airlines; and
 - the forecasts on which the CAA's final view is based.

Approach to forecasting

- B3 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.⁸⁷

⁸⁷ Each input is considered as a range of possibilities and multiple forecasts are generated. Each

- B4 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.
- B5 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 November 2013 forecasts

- B6 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 RBP and the July 2013 ABP, HAL produced updated Q6 traffic forecasts, which were higher by 2.6 million passengers than those in the FBP. HAL gave five reasons for the change in traffic forecasts between the FBP and its response to the CAA's initial proposals:
- 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 Gross Domestic Product (GDP) growth forecasts;
 - increased taxes on departing passengers; and
 - an improved approach to the variance in GDP forecasts.
- B7 In November 2013, HAL submitted a new set of forecasts to the CAA. It gave the following reasons for the differences between those and the forecasts used in the ABP/RBP forecasts:
- an updated Olympics effect;
 - updated GDP forecasts from Consensus Economics (October 2013);

uses particular input values chosen from those ranges.

- an updated oil price using the EIA Annual Energy Outlook 2013 and non-fuel efficiency gains (DfT, Jan 2013); and
- revised base year traffic to account for business cycles.

B8 The forecasts are shown in figure B.1 below. For comparison, the figure also includes the forecasts in the ABP and those used by the CAA in its final proposals in October 2013.

Figure B.1: HAL Q6 traffic forecasts

Passengers (millions)	2014/15	2015/16	2016/17	2017/18	2018/19	Q6
HAL ABP/RBP	70.1	70.8	71.5	72.3	73.0	357.8
CAA's final proposals	70.8	71.0	71.7	72.5	73.2	359.2
HAL November 2013	70.4	71.2	71.9	72.7	73.5	359.6

Sources: HAL, CAA

B9 The revised forecasts based on HAL's econometric model include upward adjustments to the ABP/RBP forecasts by 1.8 million and 0.7 million respectively over the whole Q6. This is due to:

- updated information on the oil price and non-fuel efficiency gains;
- a more favourable GDP outlook; and
- downward revisions of 0.6 million due to baseline adjustment to account for business cycles and 0.1 million due to an updated Olympic impact.⁸⁸

Issues

B10 The CAA's final proposals listed four issues of contention between HAL and the airlines concerning the methodology for forecasting traffic:

- the inclusion of demand shocks;
- the size of demand shocks;

⁸⁸ HAL also provides a revised Q6 forecast of 361.5 million based on its capacity model which represents a 3.4 million uplift from HAL's previous capacity model forecast for the whole Q6 due to airline fleet upgrades and updated airline performance and a 0.1 million reduction due to the updated assessment of the impact of the Olympics.

- how to combine econometric and capacity forecasts; and
- truncated and non-symmetric input variables.

B11 In addition, respondents to the final proposals commented on the implications for the Q6 traffic forecasts of higher than expected traffic in the base year. This section considers each in turn.

Inclusion of demand shocks

Issue

B12 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. None of the parties seriously challenged the proposition 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 final proposals

B13 The CAA considered that the effects of demand shocks on traffic could 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.

B14 The allowances for demand shocks in the traffic forecasts and in the cost of capital were two different concepts. The CAA did not, therefore, consider that its proposals constituted double-counting. For example, the CAA could 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 would be borne by the company and its shareholders. The

CAA would therefore allow a higher rate of return for the company than would otherwise be the case to compensate for this risk.

Stakeholders' views

- B15 The CAA received two responses commenting on this issue.
- BA raised an issue of inconsistency in the way traffic shocks were accounted for across the regulated airports and NATS.
 - The Heathrow Airline Community and BA reiterated their objection to the inclusion of adverse demand shocks in the traffic forecast as this would double count traffic risks (unless there is an offsetting adjustment in the WACC).

CAA final view

- B16 It is the CAA's view that the two different forecasting methods as adopted by HAL and GAL are both valid approaches in incorporating demand shocks which are not in contradiction with each other. In particular, the CAA considers that the impact of demand shocks on traffic could be accounted for by either:
- first removing the impact of shocks in the historic data and then reintroduce their expected impact back into the forecast later as in the case of HAL; or
 - incorporating them in the regression model based on the historic data and therefore in the forecasting parameters as has been the case for GAL. As such, the average impact of shocks has already been taken into account in GAL's underlying demand forecast.
- B17 The CAA maintains its view that the allowances for demand shocks in the traffic forecasts and in the cost of capital were two different concepts as explained above and in the final proposals; thus there is no double counting of traffic risks as suggested by the airlines.

Size of demand shocks

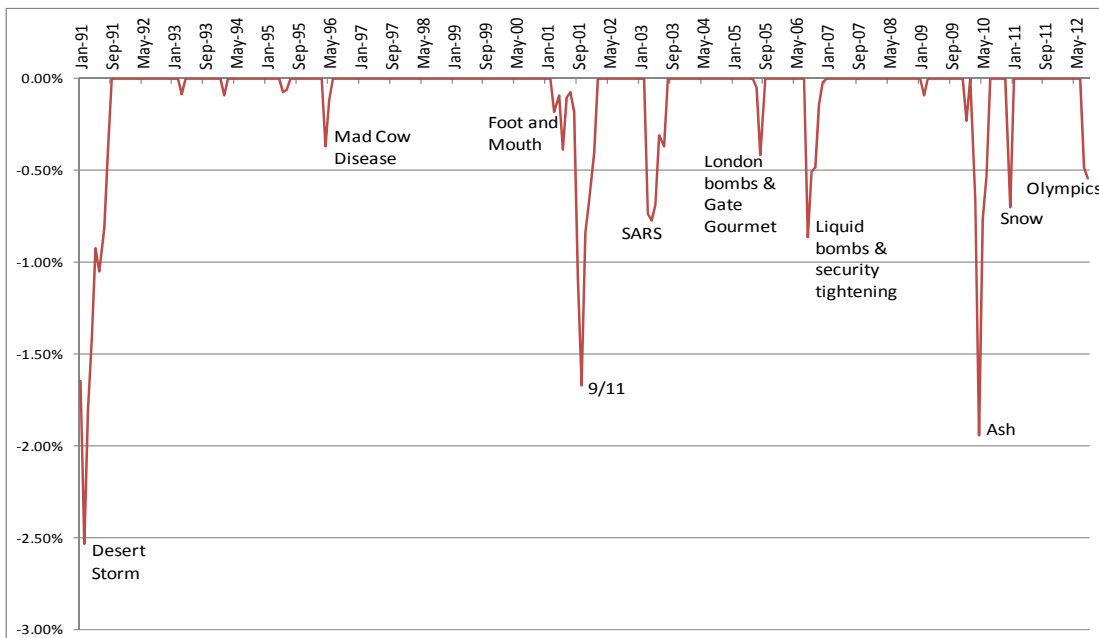
Issue

- B18 The main shocks experienced at Heathrow since the turn of the century 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 2010/11.

- B19 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.
- B20 The distribution of shocks used in HAL's model has been derived from the period January 2001 to August 2012. However, as figure B.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 B.2: Heathrow traffic shocks 1991–2012, effect on annual passengers



Source: HAL

CAA’s final proposals

B21 The CAA considered that:

- the selection of 1991, which was the date at which the data series in the CAA's possession started, as the start date was neither any more, nor any less, arbitrary than the selection of any other date;
- excluding Desert Storm from the analysis for no other reason than the magnitude of its effect would itself be arbitrary; and
- making judgements about the likelihood of overseas intervention in foreign conflicts during Q6, as one respondent suggested in its response to the initial proposals, would be beyond the expertise of an economic regulator.

B22 Accordingly, the CAA decided not to alter its approach and used post-1991 data in its calculation of the expected magnitude of shocks going forward.

Stakeholders' views

B23 The CAA received two responses on the size of demand shocks.

- BA commented that the CAA's choice of estimation period was arbitrary, and consequently, has made an arbitrary adjustment to the forecasts without any supporting evidence. Not all shocks were negative and the impact of some shocks such as snow could be exacerbated by the airport operator's suboptimal response. Some shocks could become neutral or even positive when viewed over a longer time horizon.
- HAL responded that the choice of the start date should be 2000 as event shocks were more likely to be stronger when the airport has effectively become capacity constrained subsequently. HAL's capacity constraint meant that demand shocks would be negative, in contrast to Gatwick or Stansted, which could recapture lost traffic. HAL also noted that the apparent decline in traffic in 2014 noted by BA was simply the shock adjustment of moving from 2013 (where there were no shocks) to a forecast year where HAL allowed for a possible shock.

CAA's final view

B24 The CAA considers that these comments have already been addressed (see above). Given that the respondents have presented no substantive new evidence or argumentation, the CAA has decided

to continue to use post-1991 data in its calculation of the expected magnitude of shocks going forward.

How to combine econometric and capacity forecasts

Issue

B25 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 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.

B26 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 final proposals

B27 In the initial proposals, the CAA proposed to use the capacity model for the first year of Q6, and the econometric model for subsequent years. Having considered the responses received, the CAA believed that the approach set out in the initial proposals remained robust. The use of the capacity model in the first year reflected the fact that airline plans are relatively fixed in the short term. The CAA used the econometric model for the following years, on the other hand, because airlines could adjust their plans in the light of changing demand, which was heavily influenced by economic growth. The CAA therefore based its traffic forecasts for the final proposals on the approach set out in the initial proposals.

Stakeholders' views

B28 The CAA received three responses commenting on this issue.

- BA responded that the CAA had not presented any evidence to justify the assumption that airlines' capacity plans were fixed one year out and heavily influenced by economic growth thereafter. BA considered that HAL's econometric model based on the assumption of constant relationship between traffic volumes and the demand drivers may not be valid given the fluid nature of the industry.⁸⁹ Consequently, the CAA should give primacy to the capacity model, or at least for it to be used for the first three years in order to be consistent with its treatment for Gatwick.
- HAL commented that in the short term airline capacity plans were not necessarily relatively fixed and this would affect the accuracy of the capacity model even in the short term. HAL cited the evidence that over the last 15 years at Heathrow, one year in three had experienced a negative traffic growth whilst capacity had declined on three occasions. HAL cautioned that there was a structurally optimistic bias in airline capacity plans driven by an incentive to acquire or retain grandfathering rights to certain slots (which are allocated based on the airline capacity plans) and that airlines had the flexibility to materially downgrade their capacity "in season" subject to the 80:20 slot rules.
- The Heathrow Airline Community responded that the forecasts for the first three years should be based on the capacity model.

CAA's final view

B29 The CAA considers that short term forecast based on airlines' capacity plans are more appropriate as they tend to reflect better both airlines' intention and the demand conditions that airlines face over the near term. The CAA applied the capacity forecast for the first two years (up to 2015/16) for Gatwick as opposed to one year (up to 2014/15) for Heathrow because the airlines and the airport operator at Gatwick agreed to use capacity model for short term forecast up to 2015/16 for the particular types of traffic and airlines at the airport.⁹⁰

⁸⁹ BA cited its acquisition of bmi and Virgin's tie-up with Delta as examples of change in supply that the econometric demand model is unable to capture.

⁹⁰ It is our understanding that both Heathrow and Gatwick airports received information from airlines about their short term capacity plans, and the capacity models would have made some allowance for structural bias towards optimism in the capacity plans for any given year.

- B30 However, the CAA considers that network carriers serving Heathrow would be likely to have more flexible capacity management plans than low cost carriers at Gatwick given their range of fleet mix and route networks, and the high proportion of business and transfer passengers at Heathrow. However, beyond the first year, the econometric model should give a more accurate forecast at Heathrow as, after the first year, airlines would adjust their fleet plans in the light of changing demand, which is heavily influenced by the outlook of underlying economic environment.⁹¹ Consequently, the CAA's forecast for Heathrow is based on the capacity model for 2014/15 and the econometric model for 2015/16 and subsequent years.

Truncated and non-symmetric input variables

Issue

- B31 Both the capacity and the econometric forecasting models use a Monte Carlo method, with the distribution of each input variable defined by a truncated normal distribution.⁹² 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.
- B32 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 B.3 shows selected outputs from this sensitivity analysis.

⁹¹ Low cost carriers such as easyJet actively apply yield management to achieve target seat load factor on individual flights given their capacity plan.

⁹² A distribution is truncated if its upper and lower ends are removed.

Figure B.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 final proposals

- B33** In its initial proposals, the CAA noted that, of itself, the effect highlighted in figure B.3 above may not need to be addressed. However, the CAA considered that, for two key input variables, shocks and total passenger air transport movements (ATMs), the bias introduced by the non-symmetric nature of the distributions was unwarranted.⁹³ The CAA therefore amended HAL's central forecast to remove the bias introduced by the non-symmetric nature of these two distributions.
- B34** In its final proposals, the CAA noted that the changes HAL has made to its forecasting methodology in its latest RBP and ABP traffic forecasts addressed the above issue. Having considered the responses received, the CAA remained of the view that the approach towards correcting for the effect of non-symmetric truncation on the central forecast outlined in the initial proposals was also appropriate for passenger ATMs. Accordingly, it adjusted HAL's ABP forecasts to remove the bias introduced by the non-symmetric nature of this distribution.

Stakeholders' views

- B35** The CAA received the following responses on this issue.

⁹³ 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.

- BA supported the CAA's decision to correct for the bias introduced by the non-symmetry in the distribution of the shocks and total passenger ATMs. However, BA continues to object to the use of asymmetric distributions of other variables such as GDP.
- HAL responded that the use of an asymmetric ATM distribution would better reflect the small potential for upside to the 480,000 ATM cap versus the large potential for downside.
- The Heathrow Airline Community opposed the use of asymmetric variables without appropriate correction.

CAA's final view

B36 Having considered all responses, 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 final proposals (paragraphs 3.29-3.33) was appropriate for passenger ATMs as well.⁹⁴

Adjustment for base year traffic growth

Issue

- B37 In HAL's RBP, the traffic forecast for 2013/14 based on its econometric model was 69.8 million. In the CAA's Final Proposals, 2013/14 traffic was estimated to be 70.2 million (shocked forecast) based on the capacity model. Since then, traffic at Heathrow has significantly outperformed the forecast with a rolling 12 month passenger volume of 72.2 million to November 2013.
- B38 Subject to no apparent demand shocks so far this year, traffic outturn in summer 2013 was 4.3% higher than summer 2012.⁹⁵ Assuming there will be no demand shocks for the rest of the financial year, Heathrow's outturn traffic for 2013/14 could reach 72.4 million or more. And traffic in 2013/14, even after adjusting for the average annual demand shock, could reach 71.5 million, 2.5% higher than HAL's RBP (shocked) forecast of 69.8 million for 2013/14.

⁹⁴ While the CAA does not object the use of non-symmetric truncation of the ATM distribution per se, however, the CAA considered that there is a need to correct for the bias introduced by the non-symmetry in the distribution.

⁹⁵ Summer 2013 growth rate was partly distorted by the impact of the Olympics in Summer 2012.

Stakeholders' views

- B39 The CAA received four responses commenting on the appropriate adjustment for the level of base year traffic.
- BA argued that the fact that current traffic levels are significantly higher than forecast by HAL's econometric model for the first three years of Q6 suggests that the model has poor predictive power and therefore cannot be relied upon to predict the traffic volumes in Q6.⁹⁶ Consequently, BA has prepared a new (unshocked) forecast based on a rebase of the base year traffic projection, its and other airlines' known capacity and fleet plans, projected load factors and aircraft size and arrived at a "conservative" estimate of 372.1 million for Q6.
 - HAL commented on these forecasts that it seemed inconsistent to argue that traffic forecasts should increase by around 10 million passengers while simultaneously arguing that RPI+0% will materially impact demand and put Heathrow airlines at a disadvantage. HAL considered that the new forecasts from the airlines were significant overestimates as they made no allowance for shocks and they were applied to the 2013 outturn without any consideration of whether this was appropriate. HAL argued that using a single base year, rather than a long term trend, as a basis for forecasts was inappropriate.
 - The Heathrow Airline Community presented a revised forecast based on the CAA's projected growth rates in the final proposals but with an upward adjustment of around 2.1 million in the base year and a similar magnitude each year thereafter. The Heathrow Airline Community pointed out that the base year traffic has a significant impact on the overall level of traffic over Q6. The CAA in its final decision should therefore reflect this most up-to-date information available to it and allow appropriate adjustment to its base year projection and beyond. In their view, the most recent figures for traffic at Heathrow were significantly in excess of the CAA's projections and that basing Q6 forecasts on incorrect figures would be a clear error of fact by the CAA in reaching its final decision. BA also made this point.

⁹⁶ HAL's RBP (shocked) forecast did not reach 72.3 million until 2017/18.

- Virgin also pointed out that the base year traffic has a significant impact on the overall level of traffic over Q6. The CAA in its final decision should therefore reflect this most up-to-date information available to it and allow appropriate adjustment to its base year projection and beyond. In its view, the most recent figures for traffic at Heathrow were significantly in excess of the CAA's projections and that basing Q6 forecasts on incorrect figures would be a clear error of fact by the CAA in reaching its final decision.

B40 Figure B.4 shows that the latest (unshocked) forecasts by BA are 3.6% or 12.9 million higher than the CAA's final proposals forecasts over Q6 and the airlines' forecasts are 2.9% or 10.5 million above the CAA's. These contrast with HAL's latest (shocked) econometric forecasts of 0.5 million or 0.1% above the CAA's.

Figure B.4: Forecast of Q6 passenger volumes for Heathrow

Passengers (m)	2014/15	2015/16	2016/17	2017/18	2018/19	Q6
BA (Oct-13)	72.9	74.5	74.9	75.0	74.8	372.1
Airlines (Oct-13)	73.0	73.2	73.8	74.6	75.2	369.7
CAA FP (Oct-13)	70.8	71.0	71.7	72.5	73.2	359.2
HAL (Nov-13)	70.4	71.2	71.9	72.7	73.5	359.6

Source: BA, airlines, HAL and CAA

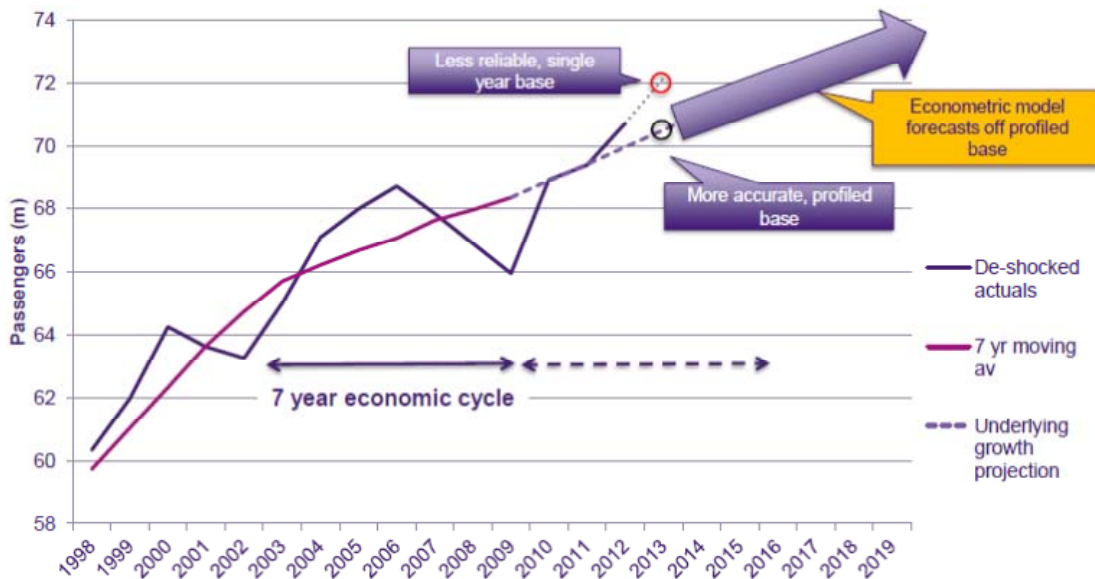
HAL's base year traffic adjustment

B41 HAL has argued that the higher than expected growth in 2013 has been driven by a combination of cyclical and 'one-off' factors:

- Cyclical factors - due to an increase in GDP through the recovery period of the current business cycle, and increased seat capacity as the industry transitions towards the peak of the aviation capacity cycle.
- 'One-off' factors - these include an Olympic driven short-term increase in tourism (up to 550,000 passengers), a reported increase in flight bookings due to the UK having the coldest and wettest winter on record, Lufthansa's disposal of bmi and carriers searching for volume over the transitional period (125,000 for domestics) and fewer lost passengers as a result of adverse weather or operating conditions.

B42 HAL considers that a forecast based on a single year's traffic carries risk for the accuracy of long-term forecasts, particularly if the peak or trough of a business/aviation cycle was used as the baseline. However, using a profiled base year input based on a 7 year moving average of a "typical" UK economic cycle that smoothes out the cyclical variation over time would give a more accurate indication of the underlying growth trend over the whole quinquennium period (figure B.5). According to HAL, 2013 could be the fourth consecutive year of a growth cycle and history suggests that about one in three years will experience a decline in traffic. HAL also noted that Heathrow has not experienced 5 years of continuous growth since the 1990s. Thus any forecast of Q6 based on the projected 2013 base year traffic which appears to be at or near the peak of the current cycle would likely result in an overestimation.

Figure B.5: Shocked Q6 forecast using a 7 year moving average projection from 2009



Source: HAL

HAL's test of the reliability of the Q6 passenger forecasts

B43 HAL has therefore applied a moving average approach to testing the reliability of the Q6 traffic forecasts. By smoothing the cycles and irregular variation, HAL illustrated that the 7 year moving average approach (the length of a "typical" cycle according to HAL) based on a profiled base year provided representative passenger volumes over

the past three quinquennia within +/- 1% of the de-shocked actual traffic as shown in figure B.6.

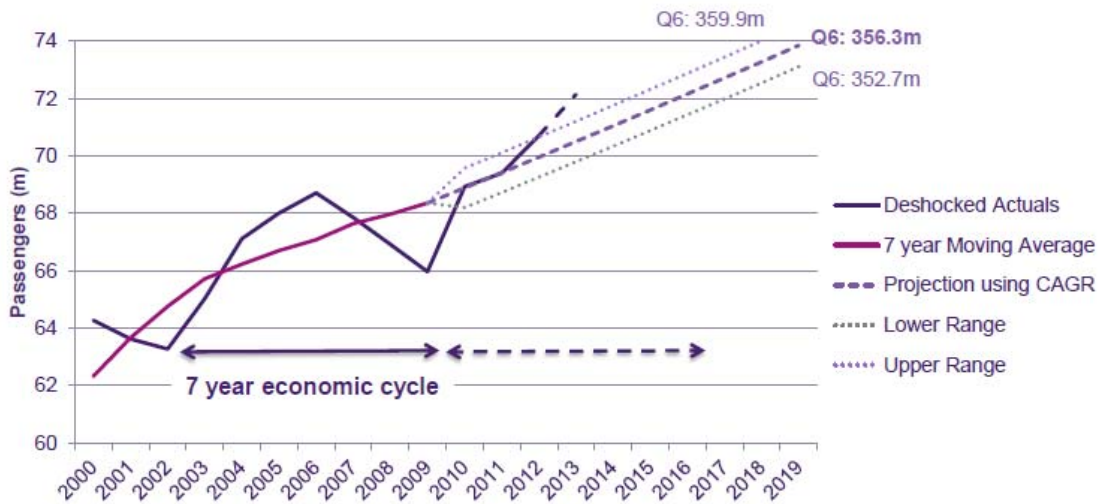
Figure B.6: Comparing the underlying growth projection for Q3, Q4 and Q5 traffic with de-shocked outturn traffic

	7 year m.a. projection (m)	De-shocked actuals (m)	% variance
Q3	312.8	314.5	-0.5%
Q4	333.9	337.1	-1.0%
Q5	345.1	342.8	0.7%

Source: HAL

B44 By using the smoothed compound annual growth rate (CAGR) of the most recent 7 year moving average and extrapolating it forward from 2009⁹⁷ to the end of Q6, figure B.7 shows that this would result in an indicative shocked Q6 traffic forecast of 356.3 million. HAL noted that since the CAA's final proposal forecast and both HAL's econometric and capacity forecasts of Q6 fall within the +/- 1% range of this forecast, this provides some further validation of them "being fit for purpose".

Figure B.7: Indicative shocked Q6 forecast based on projection from 2009



Source: HAL

⁹⁷ 2009 is the most recent year that it is possible for HAL to calculate the seven year moving average from 2006-2012.

B45 HAL did not present this moving averages approach to the Heathrow JST Working Group until very late in the Q6 process at a meeting on 29 November 2013. Thus the airline community has not had a chance to give a proper response to its merit or otherwise. HAL has asked Dr. Bates - the independent reviewer who provided a peer review of HAL's econometric model at an early stage of the CE process - to consider this particular issue of applying the base year data to the forecasting model on short notice. On the basis of the data supplied by HAL, Dr. Bates considered the approach of using moving averages as a useful enhancement to the process of deriving the quinquennial forecasts as it directs the emphasis to the whole Q6 period rather than an individual year and therefore should improve the reliability of the central estimate. Nevertheless, the reviewer also cautioned that although it is unusual in transport demand forecasting to pay particular attention to the choice of base year, in other areas of econometrics such as consideration of business cycles, this choice is likely to be more important, particularly in the case of shorter term forecasts. Thus, the reviewer suggested seeking wider corroboration of the general approach of using moving averages rather than specific years as this would enhance the credibility of this approach.

CAA's view on the base and following years' traffic adjustment

B46 The CAA agrees with the Heathrow Airline Community and BA that the stronger than expected growth of traffic so far this year should be reflected in the forecast passenger volume for the base and the following years, although the scale of the upward adjustment needs to be moderated to allow for the possibility of some 'one-off' factors (such as the summer Olympics and the severity of the winter) and the apparent absence of any significant shocks year to date.

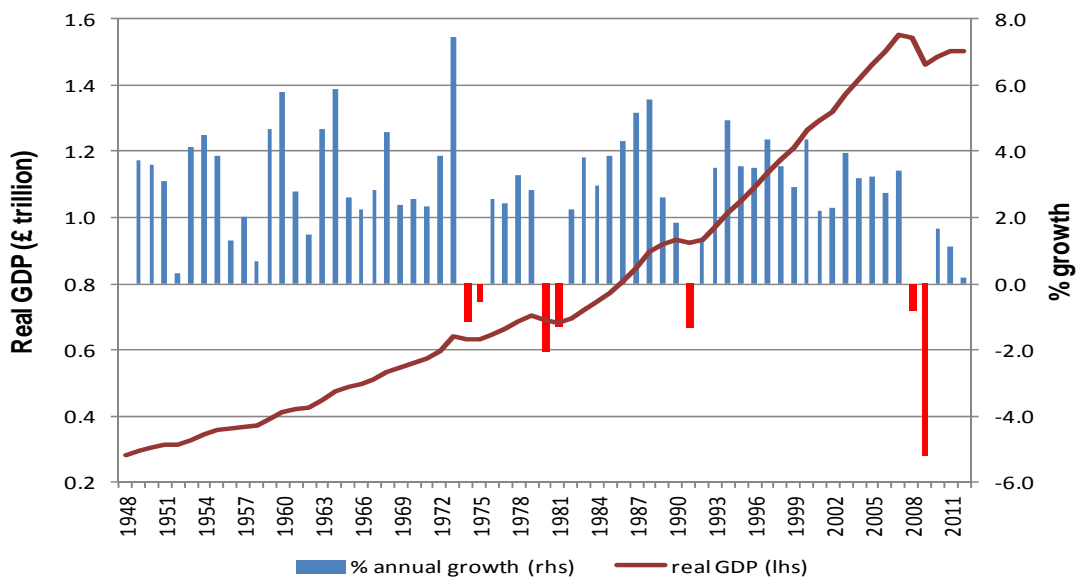
B47 Although the CAA accepts that some of these 'one-off' factors could have generated certain positive but transitory effects, however, the strength and duration of these effects are very difficult to quantify and predict. For example, the alleged improvement in Britain's global perception due to the Olympics could have a much shorter or longer lasting impact than HAL has assumed.

B48 More importantly, HAL suggested that there is a close link between the aviation and economic cycles as the cycles of airline market are considered to be a response to fluctuations in the GDP. In particular, HAL considered that the UK (and the world) business cycles appeared

to have an average length of seven or eight years, and this would suggest that 2014 is at or near the peak of the current cycle.

B49 Figure B.8 shows that, between 1948 and 1973, UK GDP increased consistently on an annual basis. Since 1973, there has been one instance of contracting annual output in every decade. These occurred in 1974/75, 1980/81, 1991 and 2008/09.

Figure B.8: UK real GDP (in £ trillion) and % annual growth, 1948-2012



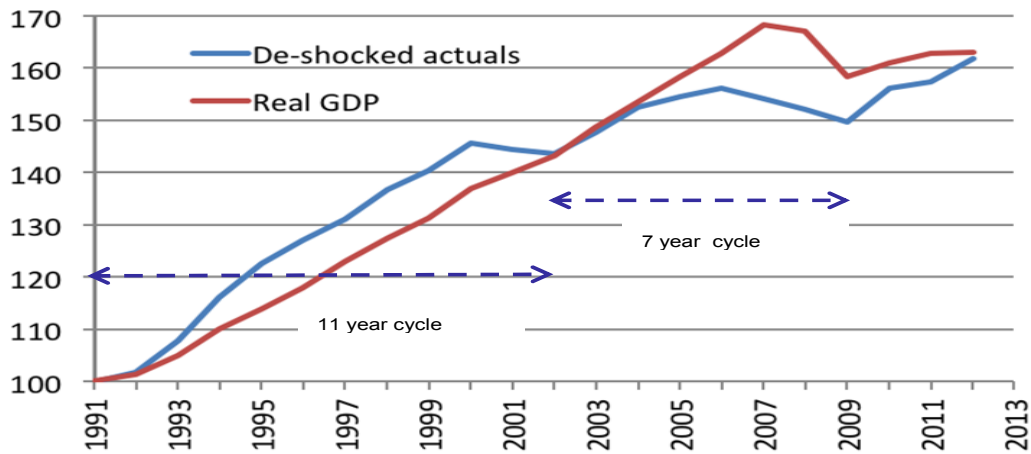
Source: ONS

B50 Measuring from peak to peak, the duration of these economic cycles varied substantially from six years (1973-79) to 11 years (1979-1990) to 17 years (1990-2007). While the expansion and contraction phases have varied substantially in magnitude and length, there is no evidence to support the claim that the current economic or aviation cycle would have a seven year duration peaking at or near 2014 as suggested by HAL.

B51 Furthermore, aviation cycles at Heathrow do not always follow economic cycles. Figure B.9 shows that, in contrast to the one long economic cycle of 17-18 years from 1991 to 2009, de-shocked passenger traffic at Heathrow measuring from trough to trough appeared to have experienced two cycles over the same period, lasting around 11 years (1991-2002) and 7 years (2002-2009) respectively. This clearly suggests that caution needs to be taken in

presuming a "typical" economic or aviation cycle lasting for around seven or eight years as suggested by HAL.⁹⁸

Figure B.9: Indexed de-shocked actual passenger traffic vs real GDP (1991=100)

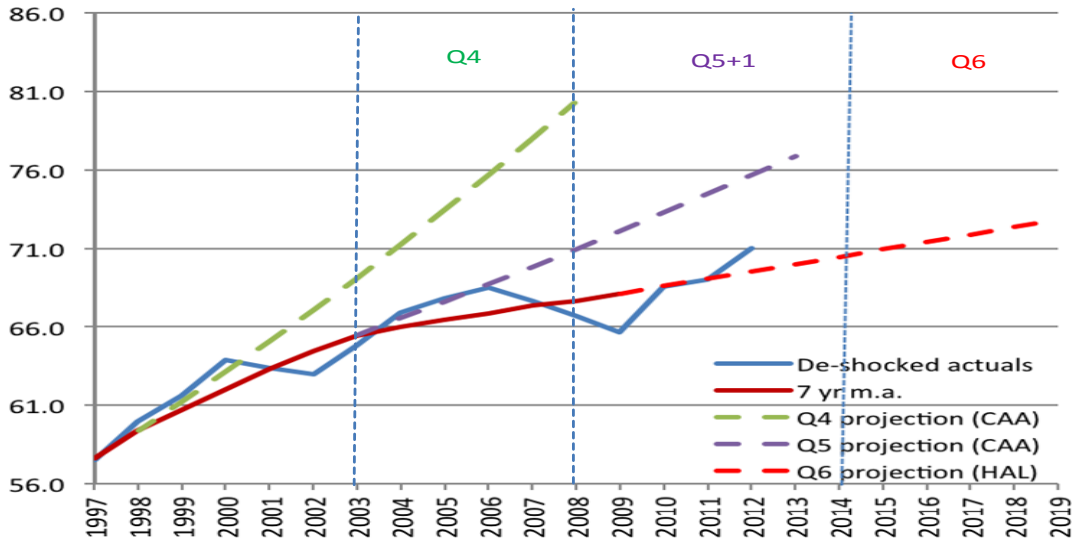


Source: ONS and HAL calculation

B52 HAL claimed that the CAGR calculated for the most recent 7 year cycle and used to extrapolate from 2009 (the most recent year for which it is possible to calculate the 7 year moving average) provided an indicative shocked traffic projection of 356.3 million for Q6. When account is taken of the +/-1% historical range around the CAGR, a Q6 range is calculated from this approach that encompasses the actual forecast using the econometric model. Figure B.10 shows the de-shocked actual passenger volumes from 1997 to 2012, the associated seven year moving average data and HAL's projection of the underlying trend growth in Q6. The CAA has applied the same seven year moving average methodology to project the trend growth rates for Q4 and Q5 in order to test the robustness of this approach as proposed by HAL.

⁹⁸ Dating business cycles can be technically challenging. The CAA took a simplistic approach here to illustrate that the cyclical patterns of the UK economy and the aviation market may vary substantially in magnitude and strength over time and from each other.

Figure B.10: Passenger forecast based on a seven year moving average underlying growth projection



Source: HAL and CAA calculations

B53 Moving averages could smooth the cyclical and reveal the underlying growth trend in the historic data. However, figure B.10 shows that the use of profiled base year approach based on mechanically applying a 7 year moving average of a "typical" cycle as suggested by HAL without incorporating input from any underlying demand drivers is unlikely to be a reliable methodology for projecting passenger volumes into the future or as a validating tool for the econometric and capacity models. Forecast of the Q4 and Q5 traffic volumes based on this approach would have significantly exceeded outturn passenger numbers as illustrated in figure B.10. This suggests that using moving averages to identify a "representative" profiled base year traffic and then using it to extrapolate forward may not be appropriate in the context of forecasting Q6 traffic volume.⁹⁹

B54 It is also the CAA's view that, to the extent that cyclical patterns are acknowledged to exist, it is more appropriate to model the economic/aviation cycles directly into the econometric and capacity forecasting approaches which HAL uses.

⁹⁹ It is also worth noting that this profiled base year approach by HAL led to a downward (rather than an upward) adjustment of 0.6m passengers over Q6.

CAA forecasts

- B55 Apart from the base year traffic adjustment, the CAA did not have agreement with the adjustments made by HAL to its RBP forecasts due to:
- updated oil price outlook and non-fuel efficiency gains;
 - updated GDP forecast using Consensus Economics (October 2013);
 - updated Olympic shock effect (720,000 passengers);
 - airlines' fleet upgrades and updated performance.
- B56 The CAA noted that, given that current traffic outturn has significantly outperformed the growth assumed (with a difference of 1.7 million between the latest projection of around 72.4 million for 2013/14 versus HAL's de-shocked forecast of 70.7 million) which could have a substantive impact on the overall Q6 traffic volume, there is no disagreement by all parties that it is important to take proper account of the impact of higher base year traffic on Q6 passenger volume.
- B57 The Heathrow Airline Community and BA have respectively suggested an average uplift of around 2.1 million and 2.6 million passengers per annum to the CAA's final proposals' forecasts to reflect, amongst other factors, the higher base year outturn and updated airlines capacity plans. HAL, based on a moving average profiled base year approach and in contrast to the airlines, suggested a 0.6 million downward adjustment over the Q6 period. The CAA considered that the extent of the proposed uplift by the airline community is unwarranted as this would have ignored the fact that there could be some 'one-off' temporary factors that have contributed to the higher than expected outturn and that traffic is subject to fluctuation from year to year due to economic uncertainty and modelled and non-modelled shocks.
- B58 However, in light of the discussions above regarding the unreliability of using a 'typical' seven year moving average calculation to derive a profiled base year traffic and use it to rebase the traffic and extrapolate it forward for the Q6 forecast, the CAA considered that there is a need to uplift the HAL econometric forecasts by an average of 0.8 million per year to reflect the higher base year traffic. This upward adjustment has taken into account the possibility that

unexpected strong growth in 2013/14 could be partially driven by some 'one-off' factors such as an Olympic driven short term increase in tourism, the coldest and wettest winter on record¹⁰⁰, BA's purchase of bmi and other factors. The CAA's average uplift of around 0.8 million per year also reflects the uncertainty around the position of 2013/14 traffic on the current business/aviation cycle (whose shape and duration is still largely unknown). It also makes allowance for some randomness from the Monte Carlo input/output modelling such that the CAA's revised (shocked) forecast of 71.3 million for 2014/15 based on HAL's econometric model now lies within the 75% confidence intervals of HAL's revised econometric forecasts.¹⁰¹

B59 Figure B.11 shows the derivation of the CAA's proposed Q6 traffic forecasts from HAL's November 2013 Q6 traffic forecasts. The CAA's proposed (shocked) forecasts are based on HAL's capacity model for the first year of Q6 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.

¹⁰⁰ HAL has pointed out the highest level of average rainfall from June to Dec 2012 since 1852 and that March 2013 was the coldest since 1883 with temperatures on average ~20% lower than the average for the last 100 years.

¹⁰¹ A full upward adjustment of 1.8m (see paragraph B57) instead of 0.8m for the impact of a higher base year traffic outturn would have moved the forecast for 2014/15 close to the edge of the forecast ranges, at 90-95% confidence intervals.

Figure B.11: CAA's proposed Q6 passenger forecasts for Heathrow

Passengers (millions)	2014/15	2015/16	2016/17	2017/18	2018/19	Total
Econometric model						
HAL forecast (Nov-13)	70.4	71.2	71.9	72.7	73.5	359.7
Shocks from 1990	0.2	0.2	0.2	0.2	0.2	0.8
CAA base year adjustment	0.8	0.8	0.8	0.8	0.7	3.8
CAA forecast	71.3	72.1	72.8	73.6	74.3	364.3
Capacity model						
HAL forecast (Nov-13)	71.3	71.7	72.3	73.2	73.0	361.5
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	71.9	72.3	73.0	73.8	73.6	364.6
Combined forecast						
CAA forecast	71.9	72.1	72.8	73.6	74.3	364.9

Source: CAA

B60 In summary, the CAA proposes to use the traffic forecasts in figure B.12 for HAL's Q6 price control. The forecast figures indicate a total of 364.9 million passengers over Q6, compared to 359.2 million in the final proposals, an increase of 1.6%. HAL's estimate of 359.7 million, submitted to the CAA in December 2013, is 1.4% lower than the CAA's final forecast¹⁰².

Figure B.12: CAA proposed Q6 passenger forecasts for Heathrow - 5 year duration

Millions	2014/15	2015/16	2016/17	2017/18	2018/19	Q6 Total
Passengers	71.9	72.1	72.8	73.6	74.3	364.9

Source: CAA

B61 Adjusting this forecast to reflect the revised duration of the control gives the traffic forecasts set out in Figure B.13 below.

¹⁰² In their 19th December 2013 Investor Report, HAL forecast 72.8m passengers for the calendar year 2014. According to HAL, this did not include any allowance for potential disruptions or shocks. The inclusion of such allowance would have brought the forecast down to around 71.9m according to the CAA.

Figure B.13: CAA proposed Q6 passenger forecasts for Heathrow - 4 years and 9 months duration

Millions	9 mo. 2014	2015	2016	2017	2018	Q6 Total
Passengers	55.4	72.0	72.7	73.4	74.2	347.7

Source: CAA

APPENDIX C

Capital Expenditure

- C1 This chapter considers the appropriate level of capex for the Q6 price control calculation. It consists of the following sections:
- capex process to date: this sets out the process which led to the CAA's final view, including the CAA's initial proposals, the July 2013 updates to HAL's FBP, the CAA's final proposals and HAL's subsequent updates to its July 2013 updates;
 - 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; and
 - the CAA's final view: this sets out the CAA's projections for HAL's efficient capex over Q6.
- C2 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

- C3 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 Heathrow Airline Community each produced a prioritised list of projects.

- C4 Although it appeared to the CAA that there was considerable common understanding between HAL and the airlines on most of the capex programme, HAL's 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 capex of £3 billion over Q6, which it considered sufficient to address future demands whilst continuing to enhance the passenger experience and ensure an overall competitive package.
- C5 The airline community provided its own prioritised plan¹⁰³ 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 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

- C6 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.

¹⁰³ This includes components for each terminal reflecting the priorities of the airline occupants of those terminals.

- C7 The airlines have not taken an explicit view on the appropriate level of capex at Heathrow. Instead, the airlines have 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.
- C8 Figure D.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. The CAA's final proposals used HAL's ABP as a baseline, and made four adjustments:
- reducing HAL's Crossrail contribution from £137 million to £70 million;
 - allowing £29 million for fuel storage works;
 - eliminating £20 million of projected expenditure on PRT works at Heathrow; and
 - reducing the allowance for COPI from RPI+1 to RPI+0.
- C9 These adjustments reduced HAL's projected capex over Q6 from £3,013 million in the ABP to £2,885 million.

Figure C.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
CAA FPs	578	697	622	499	488	2,885

Source: HAL and CAA

- C10 Following the publication of the CAA's final proposals, HAL produced an update to its RBP and ABP. The changes made to the ABP were:
- reduction of the Crossrail contribution to £70 million, in line with the CAA's final proposals;

- removal of the asset replacement scope with respect to the Terminal 5 PRT system, in line with the CAA's final proposals;
- addition of enabling works on aviation fuel infrastructure, in line with the CAA's final proposals;
- alignment of the plan to reflect the removal of an allowance for construction price inflation in the CAA's final proposals;
- addition of a baggage resilience project to provide additional facilities to improve resilience of the baggage transfer operation in Terminal 1/Terminal 2;
- reflecting the maturing of project capital forecasts (scope, solution, estimate etc.) as projects have been progressed;
- a number of allowances have been replaced with firmer proposals, an example is the Surface Access Development Fund is now more focused on HS2 and Western Rail;
- the initial allocation of business cases to the revised Strategic Programmes.

C11 The building blocks in the CAA final proposals contained £2,885.2 million of capex at 2011/12 prices. HAL applied an inflation factor of 3.09% (the average RPI increase from 2011/12 to 2012/13), which gave an overall portfolio value of £2,974.4 million in 2012/13 prices. The revised Heathrow portfolio described in HAL's revised plans totalled £2,972.4 million.

Approach to determining a capex allowance for HAL during Q6

C12 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 appendix.

C13 In practice, it is unlikely that either the CAA would use either the first, or the second, approach in isolation to project HAL's capex over Q6. 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 have a bearing on the fulfilment of its statutory duties.

C14 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 programme of investment of approximately £3 billion 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 Gateway 3 by July 2013;
- the size and diversity of the Q6 programme, which included over 60 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 Appendix D;
- 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 Appendix D) 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.

C15 However, the CAA has commented on some individual projects where these are of particular relevance to its fulfilment of its statutory duties. 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 by July 2013) had 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

C16 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 1. 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 final proposals

- C17 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.
- C18 Following the publication of the initial proposals, the CAA saw 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 believed that such a level of expenditure would, if managed efficiently, lead to improved standards of service and a better passenger experience.
- C19 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 very limited expenditure on Automation of the Passenger Journey, Aircraft De-Icing or Enabling the New Generation of Wide Body Aircraft under the £2 billion programme. 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 based its final proposals on the level of expenditure contained in HAL's ABP, which anticipated expenditure of £3,013.5 million over Q6. The CAA

considered that this best met its statutory duties, in particular the primary duty to further the interests of users of air transport services.

Stakeholders' views

- C20 The CAA received four responses commenting on its approach to determining the overall level of capex during Q6.
- BA responded that it was disappointed that the CAA had chosen to base its final proposals on the investment programme in HAL's ABP, as it was not the product of CE. The CAA should instead use the Airline Community Plan. It listed a number of capex projects which it regarded as a high priority for it to be included in any Q6 capex programme.
 - HAL noted that the CAA's view was that "£3 billion of capex is both affordable and desirable". It agreed that this figure was desirable and that was the conclusion of all interested stakeholders. However, it noted that affordability depends on willingness to invest. It considered that the rate of return currently envisaged by the CAA gave rise to a significant risk that investors (considering the opportunities and risks in all other sectors) would not be willing to invest. Following the CAA's final proposals, HAL would move each project in the ABP forward to Gateway 3, where they would be reviewed.
 - The Heathrow Airline Community responded that a £2,885 million plan was appropriate only if it excluded Terminal 3 integrated baggage (T3IB) additional carry over cost and any contribution to Crossrail. The Q6 capex programme must start with a clear expectation that around £3 billion as set out in the airlines' prioritised plan is necessary to enhance resilience and the passenger experience in Europe's most capacity constrained airport. If, however, the CAA were to insist on further T3IB carry over costs and a contribution to Crossrail, the airlines would not consider that a £2,885 million investment programme would be sufficient as this would require that other projects in the passengers' interests would not be undertaken. In these circumstances, a £2,990 million capital programme would be essential.

- Star Alliance responded that a £3 billion investment programme was an essential part of the Q6 settlement. It stressed the need for punctual completion of Terminal 2 and for the introduction of appropriate automation.
- Virgin supported the airline community's position that up to £3 billion of capital could be invested in Q6, subject to a robust and transparent business case based Gateway review process. This process was essential in order to enable airlines and the IFS function to effectively scrutinise investment proposals, before committing to a project transferring from "Development" to "Core", where the bulk of the capital spend is incurred.

CAA's final view

- C21 The CAA notes the general consensus that an investment programme of approximately £3 billion over Q6 is appropriate. Given the arguments put forward in the final proposals, and summarised above, the CAA remains of the view that this is the appropriate level.
- C22 The CAA does not accept BA's view that it should base its proposals on the Airline Community Plan rather than HAL's ABP. The Airline Community Plan is a detailed, useful and constructive contribution to the debate which the airlines will have with HAL over the scale and scope of the capex programme at Heathrow for Q6. However, the CAA believes that it is more appropriate to base the final view on the ABP capex programme, for three reasons.
- The ABP has been produced by the airport operator, which will have responsibility for delivering it, and which has experience in running an airport.
 - While the ABP has not been agreed through CE, as BA argued, neither has the Airline Community Plan.
 - The purpose of the CAA's determination at the current review is not to decide on the merits of individual projects, but rather to form a view on an overall level of capex over Q6. Therefore which plan the CAA based its determination on is therefore less significant than it might appear, since all projects will in any case be discussed and agreed through the capex governance process at the airport.
- C23 Since the publication of the final proposals, HAL has sent the CAA updated traffic forecasts (see Appendix B). While there could in

principle be an argument for updating the capital expenditure forecasts to allow for the increase in traffic, the CAA does not believe that this is appropriate, because:

- it is more difficult to form a robust estimate of the impact of the increase in costs on capex than on opex or commercial revenues;
- HAL's Q6 capex programme is at a relatively early stage of development. Forming a robust view on how individual projects might change as traffic changes is therefore more difficult than would otherwise be the case; and
- the impact of changes in capex on the price control is much smaller than the impact of changes in opex of a similar magnitude.

C24 Accordingly, the CAA has not updated its capex projections to allow for the recent increase in HAL's traffic forecasts.

Issues

C25 In the final proposals, the CAA stated that it believed that it was appropriate for HAL and the airlines to continue to develop individual capex programmes within the context of the £3 billion budget discussed above. However, it was also appropriate for it to take a view on seven issues for which the new framework for capex planning is insufficient. These were:

- Crossrail contribution. This is governed by a 2008 agreement between BAA and the DfT, and hence was not covered by the proposed capex development framework.
- Western Rail access. This referred to a rail project which was not currently included in the Q6 capex programme.
- Fuel storage. This was an issue where HAL and the airlines appeared to have diametrically opposed views as to whether expenditure was necessary or desirable. It was also a resilience issue, which the CAA believed 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 COPI.
- The appropriate level of on-costs.

C26 In addition to the above issues, the CAA discusses in this chapter whether it is appropriate for it to allow the additional expenditure on the T3IB project into the RAB as incurred.

Crossrail contribution

Issue

C27 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 final proposals

C28 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 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).

C29 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.

- C30 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.
- C31 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.¹⁰⁴ This was provided to the CAA as part of HAL's submission to the CAA.
- C32 The DfT's counterproposal made the following core proposals.
- An airport contribution to the project of £137 million based on analysis by OXERA and DfT officials.¹⁰⁵
 - Flexibility as to the timing of the payment to link payments better with the delivery of Crossrail's benefits.
 - All payments to be made in the Q6 period 2014 – 2019.

¹⁰⁴ 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

¹⁰⁵ 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 C.2: 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

C33 The CAA considered that it should apply two tests when considering whether the Crossrail contribution should be added to the RAB:

- whether it would be in the interests of passengers and cargo owners; and
- whether it would be undertaken by an airport owner operating in a competitive market. In other words, whether the investment would 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.

C34 The first test was 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, had 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 were as follows.

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

C35 The third of these three differences was by far the most significant. This did, however, present issues in terms of both principle and quantification. After considering stakeholders' arguments, the CAA proposed a contribution of £70 million. The CAA did not consider that this decision constituted 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 were likely to be highly idiosyncratic, and the 2008 Agreement was unlikely to be replicated exactly in future cases.

Stakeholders' views

- C36 The CAA received four responses commenting on its approach to determining the level of the Crossrail contribution during Q6.
- BA regarded the level of the Crossrail contribution assumed by the CAA as arbitrary at best, given that the Crossrail business case was negative and not in passengers' interests. The DfT was using the model for purposes for which it was not designed and the analysis of WtP was flawed. In addition, the CAA provided no evidence or argumentation to justify the existence of the "option value" for Crossrail given that a third runway could be built.

- HAL acknowledged the CAA's decision to reduce the Crossrail contribution by £67 million resulting in the inclusion of a £70 million Crossrail contribution in HAL's RAB. It supported the CAA decision that the contribution was not subject to the governance processes for information exchange and consultation outlined in HAL's draft licence. HAL also noted and supported the CAA's decision that this should not set a regulatory precedent.
- The Heathrow Airline Community strongly objected to the inclusion of the £70 million Crossrail contribution. They argued that the proposed contribution would not be in passengers' interests. The CAA had not reflected the evidence placed before it and that therefore the CAA's judgement was not sound in this instance. Key stakeholders had rejected a contribution. The Heathrow Airline Community made various analytical points. The DfT's model was not designed for the purpose for which it was being used and was not applicable. The CAA's proposed contribution seemed entirely arbitrary. The Heathrow Airline Community therefore believed that the CAA had made an error in the exercise of its discretion and requested that the CAA correct this by amending its decision and not allowing a Crossrail contribution.
- Virgin objected to the CAA's position supporting £70 million of Crossrail investment in Q6, did not believe that such a contribution would be in its passengers' interests, and maintained that a robust and positive business case for such a contribution had yet to be produced. The CAA had a duty to analyse robustly the case for the inclusion of any project into the capital plan. Virgin did not believe that the CAA had reflected the evidence placed before it and therefore its judgement was open to challenge in this instance.

CAA's final view

C37 Having considered all the responses, the CAA remains of the view that a further contribution from Heathrow's passengers, in addition to the business rates levy charged to all London businesses, is appropriate. While it agrees with the Heathrow Airline Community that determining the size of that contribution requires judgement, it does not agree that it has made an error in the exercise of its discretion in allowing a contribution of £70 million. Accordingly, the CAA's view is that there should be a contribution of £70 million.

- C38 However, the CAA believes that it is appropriate to amend the timing of the contribution. HAL's ABP and the CAA's final proposals assumed that half the contribution would be paid in the first year of Q6, with half in the final year. Paying the entire contribution in the final year of Q6 instead will have three advantages:
- the timing of the contribution will align more precisely with the benefits to passengers from the service provided. Crossrail service to Heathrow is currently scheduled to start in 2018, though the "exact opening strategy" for Crossrail has not been finalised¹⁰⁶;
 - postponing the contribution to 2018 will enable the CAA and HAL to delay the contribution should the opening of Crossrail be delayed; and
 - it will reduce significantly the impact on prices over Q6. Users of the airport will pay a rate of return on the Crossrail contribution only in the final year of Q6, rather than for each of the five years of the quinquennium.
- C39 Accordingly, the CAA has adjusted the timing of the contribution from the assumptions in HAL's ABP so that it is paid in 2018.

Western rail access

Issue

- C40 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 CTA. This is known as Western rail access. Some enabling work has been included in HAL's business plan, though the infrastructure work specific to the project has not yet included in any of HAL's business cases as it is an early stage proposal by other parties.

CAA's final proposals

- C41 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

¹⁰⁶ See Transport for London's 12 March 2013 press release:
<http://www.tfl.gov.uk/corporate/media/newscentre/archive/27439.aspx>

RAB. It will consider any business case which HAL submits in the light of its published criteria and its statutory duties.

Stakeholders' views

- C42 The CAA received three responses commenting on its approach to Western rail access.
- BA supported the CAA's decision not to include Western rail access in the Q6 control in the absence of a business case.
 - HAL noted that it had provided the CAA with a business case which included some capitalised costs to support the integration of the Western rail project into Heathrow's infrastructure, though it did not include an allowance for specific infrastructure works.
 - The Heathrow Airline Community welcomed the CAA's decision not to include Western rail access in the Q6 capital plan, given the absence of a business case with a positive return.

CAA's final view

- C43 The CAA notes HAL's point that it had provided the CAA with a business case which included some of the business costs to support the integration of Western rail access into Heathrow's infrastructure. However, HAL has not provided a business case setting out the remainder of the project, and there is currently no generally accepted timetable for the construction or operation of Western rail access. Therefore, the CAA's final view is that it will maintain the decision given in its final proposals. Any further expenditure will be developed through the usual capex governance process.

Fuel storage

Issue

- C44 HAL's FBP provided for £29 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.
- C45 At Heathrow, infrastructure for the storage of fuel contains 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, Heathrow Airline Community and third parties, in particular HAFCO, a joint venture company owned by BP, Esso, Shell, TotalElfina, 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.

C46 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. The CAA's initial proposals included capex forecasts based on the £3 billion capex programme in the FBP, and hence implicitly supported the £29 million plan for developing fuel infrastructure at Heathrow.

CAA's final proposals

C47 The CAA sought detailed evidence from HAL and the Heathrow Airline Community 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.

C48 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,¹⁰⁷ the airlines felt that an increase was called for, and cited instances in December 2012 where Heathrow's fuel resilience had been inadequate.

- C49 The CAA's capex consultants, Alan Stratford Associates (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."
- C50 The CAA considered that a robust fuel infrastructure at Heathrow was crucial for operational resilience. The current level of resilience seemed to be unacceptably low to Heathrow's customers and also to be considerably lower than international norms. Moreover, airlines appeared to put sufficient value on more resilience that they were prepared to pay for the capital costs, if necessary through airport charges. Accordingly, the CAA strongly encouraged 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.
- C51 There was no agreed way forward for developing fuel infrastructure at Heathrow. This made setting a capex allowance for this project problematic. After careful consideration, the CAA included a £29 million allowance for the enabling works to deliver more robust fuel infrastructure at Heathrow.

Stakeholders' views

- C52 The CAA received three responses commenting on its approach to fuel storage investment at Heathrow during Q6.

¹⁰⁷ 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.

- BA responded that delivering improved resilience for the airport was crucial to the airlines. It supported the inclusion of fuel storage investment at Heathrow in the RAB. It noted that the Airline Community Plan included a further £102 million of investment to enable the entire programme to be completed.
- HAL supported the airline and fuel company activities to address fuel storage issues. While it had removed expenditure on fuel storage from the ABP HAL had included, in line with the CAA's FPs, a project in the ABP to deliver basic site clearance and enabling works, including the connection of services. In the event the project did not proceed, in accordance with the Capital Efficiency Handbook and the CAA's final proposals, HAL would expect to remit the allowance, or reallocate the allowance to other projects through the governance process. Finally, HAL stated that it was not responsible for fuel supply and did not operate in the fuel market. Therefore it was inappropriate to introduce a service quality standard on an element in which it has limited control.
- The Heathrow Airline Community welcomed the CAA's recognition of the strategic importance of the fuel resilience project and the CAA's insistence that all of the parties should meet and agree a mutually acceptable way forward. The Heathrow Airline Community agreed with the CAA concerning the appropriate allowance at this stage. In the constructive meetings that must take place, the airlines would continue to put forward the case for the £130 million RAB-based proposal. The Heathrow Airline Community requested that the CAA make provision in the final settlement in January 2014 that, if this approach were agreed by all parties to be the best way forward, the capital programme would be increased by £102 million to £2,987 million. Finally, the Heathrow Airline Community proposed to impose a service standard for HAL to maintain a minimum of 3.5 days of fuel supply at Heathrow.

CAA's final view

C53 The CAA notes the Heathrow Airline Community's view that it should make extra provision for an increase in the fuel storage programme of £102 million in the event that the airlines and HAL agree that the assumption of the cost of the works previously allotted to the fuel companies was appropriate. The CAA does not believe that it should allow a failure by the parties to agree terms to jeopardise the

development of infrastructure would improve operational resilience at Heathrow significantly. While there are other factors, most notably the allocation of liability for disasters, preventing agreement between HAL and HAFCO, the CAA does not believe that the allocation of funding between HAL and HAFCO should be such a difficulty. Therefore, the CAA has included the additional allowance of £102 million proposed by the airlines in its forecast for HAL's capex over Q6.¹⁰⁸ If HAL and HAFCO can in fact agree terms, the CAA expects that the £102 million would not be spent, but would either be reallocated to other investment projects or returned to users as appropriate.

- C54 However, the CAA also notes that the provision of extra infrastructure will not in itself deliver additional resilience. Fuel companies must fill the additional infrastructure with fuel. The CAA therefore expects that HAL's resilience planning will cover this issue. For example, parties should consider agreeing purchasing behaviour that ensures that sufficient fuel is on-site.
- C55 The CAA does not believe that a service standard for fuel resilience is appropriate at this stage, when the infrastructure to build them is not yet in place, or even under construction. Service standards are designed to encourage the efficient operation of existing infrastructure, rather than the provision of significant new infrastructure. In addition, HAL shares responsibility with fuel companies for the provision of fuel to the airlines. This could complicate the incentive effects of any service standard in this area significantly. Accordingly, the CAA has not included a service standard for fuel resilience in the Q6 service quality proposals.

PRT system

Issue

- C56 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

¹⁰⁸ There is no generally agreed profile for this expenditure, therefore the CAA has allocated it to individual price control years in the same proportion as the original £29 million of fuel storage works.

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 CTA (Terminals 1, 2 and 3), to establish competitive equivalence between Terminal 5 and the other three terminals there.

CAA's final proposals

C57 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 delivered efficiently. It was clear from the responses to the CAA's initial proposals that user support had not been forthcoming. The business case was 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.

C58 These reductions are shown in figure C.3 below. As the PRT was removed from the price control, HAL was allowed to charge users for its use. The CAA had not yet seen a business case for the CTA PRT, nor had the project been subjected to airline scrutiny, as it was at a very early stage of development. Accordingly, the CAA did not make a determination on whether the CTA PRT will be included in the RAB during this review.

Figure C.3: 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

Stakeholders' views

C59 The CAA received three responses commenting on its approach to the continuing exclusion of the PRT expenditure from the Q6 opening RAB.

- BA supported the CAA's decision to exclude the T5 PRT from the Q6 RAB. It noted that it would be likely to oppose including the CTA PRT in the RAB since it did not believe that PRTs were suitable mass transit vehicles for airport customers.
- HAL responded that the CAA had erred in concluding that the PRT did not have value to passengers that it should take into account. Information provided to the CAA on several occasions evidenced that passengers value the PRT highly and score it highly in the QSM survey. HAL claimed that the CAA appeared to be suggesting that airlines represent passengers' views on PRT despite the evidence received directly from passengers and the CAA's own acknowledgement in other contexts that airlines did not represent passengers' interests. The CTA PRT had not been included in the RBP or ABP.
- The Heathrow Airline Community welcomed the CAA's decision to disallow the investment made on the T5 PRT from the RAB. It also believed that no further investment should be made in either that system or its extension into the CTA.

CAA's final view

C60 The CAA does not believe that HAL's argument that passengers score the T5 PRT highly on its QSM measure is a sufficient reason for it to be included in HAL's regulated airport charges. One of the reasons for excluding the PRT from the RAB is not that it is unpopular with passengers, but that other solutions, such as bussing passengers, could have represented better value for money. Given the CAA's statutory duty to promote efficiency and economy and passengers' interests in the cost and quality of services, this must be an important consideration. HAL may levy charges for the use of the PRT outside its regulated charges, and if the service is popular with passengers, it should be able to recoup some or all of its investment in this way. Accordingly, the CAA's final view is that the T5 PRT should not be included in the Q6 RAB.

Terminal 1 baggage system

Issue

- C61 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 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.
- C62 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.

CAA's final proposals

- C63 The CAA noted 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 encouraged 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 understood that the consultancy study had identified the transfer baggage sorter as a particular concern. The CAA therefore believed that any robust mitigation plan must address this issue.
- C64 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."

Stakeholders' views

- C65 The CAA received three responses commenting on its approach to determining the appropriate level of capex to be spent on the Terminal 1 baggage system during Q6.
- BA supported an additional £11 million of investment in the Terminal 1 baggage system to provide improved resilience.

- HAL responded that it had clearly evidenced that the Terminal 1 baggage system could provide a robust service pending investment in an independent system for Terminal 2. It noted that the ABP did not include any specific capital expenditure relating to contingency arrangements on the Terminal 1 baggage system.
- The Heathrow Airline Community welcomed the CAA's understanding of the criticality of the Terminal 1 baggage system to the effective running of the new Terminal 2. It had recently been agreed with HAL that a reduction can be made to the capital allocated to Terminal 2 in the Airline Community Capital Plan from £500 million to £231 million. It had been agreed with HAL that HAL's provision for this work (£220 million) was appropriate so long as the airlines jointly added an additional £11 million to improve the risk mitigation planning on the existing Terminal 1 baggage system. This has allowed the Heathrow Airline Community to create a single Airline Community Capital Plan. The Heathrow Airline Community commented that the CAA should, in its final settlement document in January 2014, formally recognise the necessity for development of a new Terminal 2 baggage system to proceed quickly in Q7.

CAA's final view

- C66 The CAA believes that it is important that robust risk mitigation planning is in place for the baggage system, including transfer baggage. A failure in this system can jeopardise the operations of the entire airport. The CAA has noted the extra £11 million in expenditure on the Terminal 1 baggage system forecast by HAL and agreed by the airlines. The CAA notes that stakeholders have worked together to produce this solution, and expects that this cooperation will continue during Q6 to the benefit of all parties.
- C67 The CAA recognises the Heathrow Airline Community' wishes that the CAA's final view should endorse the development of a new Terminal 2 baggage system during Q7. The CAA believes that the development of any project necessary to the efficient and economical function of the airport in passengers' interests should proceed as expeditiously as possible. However, the CAA does not believe that a specific endorsement of this project is necessary or appropriate at this stage, before HAL has provided a robust business case, developed in conjunction with the airlines through the capex governance process.

Construction price inflation

Issue

C68 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 final proposals

C69 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, have made detailed forecasts for COPI over Q6. Their projections, and the Office of Budget Responsibility (OBR) projections for RPI, are reproduced in figure C.4 below.

Figure C.4: COPI and RPI forecasts for Q6

Year	COPI	RPI – CAA
2014/15	1.20%	3.10%
2015/16	1.40%	2.90%
2016/17	2.60%	3.00%
2017/18	3.30%	3.70%
2018/19	3.70%	3.60%

Source: Davis Langdon, CAA analysis

C70 Thus, over the five year Q6, construction prices, which will increase by 12.8%, were forecast to increase slower than retail prices, which will increase by 17.4%. After considering the available evidence, the CAA believed that, on balance, setting an allowance for COPI in excess of RPI could enable HAL significantly to over-recover. The CAA did not, therefore, include an allowance for COPI in excess of RPI in its final proposals.

Stakeholders' views

C71 The CAA received three responses commenting on its approach to forecasting the level of COPI during Q6:

- BA endorsed the Heathrow Airline Community' response.

- HAL responded that the CAA's view on COPI was illogical and inconsistent. COPI was not the only measure of construction price inflation. The CAA's own consultants, ASA and Davis Langdon, had both supported an allowance of RPI+1%. It was difficult to understand how the CAA had arrived at the conclusion that COPI was the most appropriate measure for construction inflation as Davis Langdon did not recommend it. It had expressed its own preference for the tender index which was in line with HAL's and ASA's draft recommendation of RPI+1. The RBP and ABP allowance for inflation had been set at RPI. Recently published indices from BCIS, and HAL's own analysis indicated a sharp jump in exposure to construction inflation in the final two years of Q6.
- The Heathrow Airline Community welcomed the CAA's decision to remove the additional 1% inflation allowance above RPI. It commented that the CAA should consider setting inflation at RPI-1% for the first three years of the quinquennium and RPI without any adjustment for the remaining two years.
- Virgin responded that the CAA should set a target of a nominal terms price freeze, as the airline community had achieved with its cost base.

CAA's final view

- C72 The CAA has reviewed the evidence provided by its consultants on COPI. It notes HAL's opposition to the reduction in the level of increase forecast between the initial and the final proposals. However, it does not agree with HAL's reasons.
- The CAA used COPI at the Q5 review to forecast construction price inflation. The level of the CAA's forecast at that review was significantly in excess of the outturn. Using the same index in this review will promote regulatory consistency and reduce risk.
 - The CAA does not agree necessarily that the construction market will demand a higher price than the underlying cost of plant, labour and materials, which HAL forecasts will increase by around RPI. In a competitive market, efficient procurement by HAL should limit cost increases to the rate of increases of underlying materials.
- C73 The CAA does not accept HAL's point that it should use tender price indices (TPIs) as well as COPI.

- In the CAA's view, TPIs (such as the BCIS index referenced by HAL) are not "equally important" as other indices such as COPI, as they are simply a measure of the prices construction firms bid, rather than the price paid by the clients (in this case HAL). This is consistent with the view adopted during the Q5 reviews by both the CAA and the CC.
- During the Q5 reviews, the CC's final report also noted that both firms and DBERR (now BIS) had told it (the CC) that TPIs did not capture adequately prices paid in the context of framework agreements.¹⁰⁹
- The CC also noted an academic study produced by "Glasgow Caledonian University on the accuracy of TPI forecasts which concluded that: 'the TPI forecast produced by the BCIS is generally overoptimistic [i.e. an overestimation of inflationary trends], leading to systematic forecast error. A naïve model, in which the value of the TPI in a quarter before the current one is assumed to be the forecasts for the current period and over "the next eight quarters, has better prediction accuracy...". The researchers noted that organisations in the industry responsible for construction price level forecasts depended mainly on judgement and professional experience and that quantity surveyors, the industry's custodians of construction price information lacked forecasting tools. Based on the conversation we had with ECH and DL, we have no reason to believe that the approach taken to TPI forecasting has changed since this study was carried out".
- The CC also noted that "historically TPIs have been on average 1.5 percentage points higher than DBERR's general COPI. TPI forecasts could therefore be expected to be 1.5 percentage points above COPI forecasts".

C74 The Heathrow Airline Community criticised the CAA for not incorporating the negative real COPI in its capex forecast. The CAA notes, however, that real COPI was only negative in the first few years of Q6 and forecast to return above inflation in the second half of the Q6 period. In November 2013 the CAA reviewed more up to date

¹⁰⁹ HAL and GAL price control review, CC, September 2007, available at http://www.competition-commission.org.uk/assets/competitioncommission/docs/pdf/noninquiry/rep_pub/reports/2007/fulltext/532ad.pdf

forecasts available based on the COPI in the second quarter of 2013 which pointed towards expected increases in COPI. These are presented in figure C.5 below.

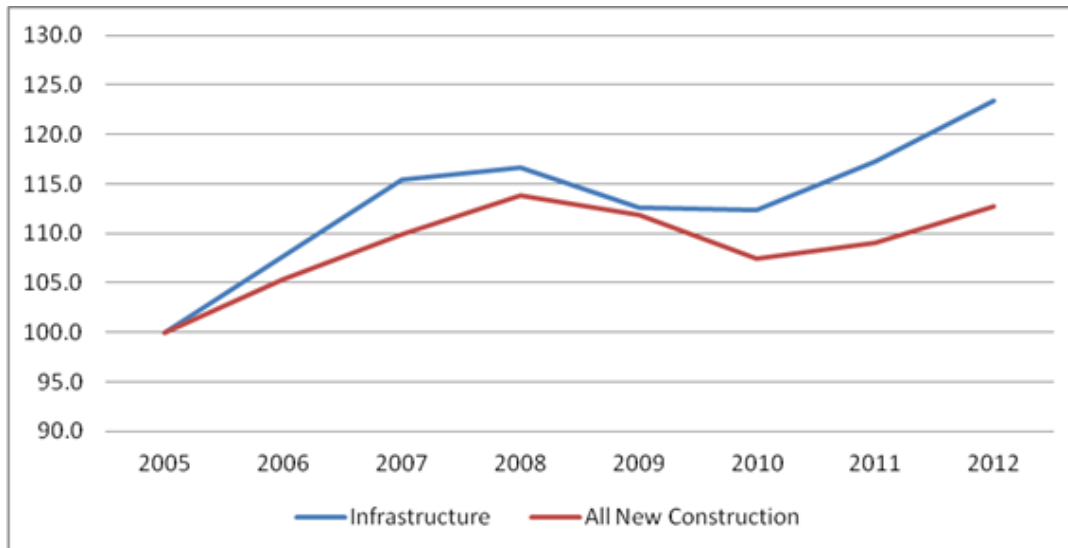
Figure C.5: Forecast for real COPI

Year	COPI*	RPI**	Real COPI
2014/15	1.20%	3.10%	-1.90%
2015/16	1.40%	2.90%	-1.50%
2016/17	2.60%	3.00%	-0.40%
2017/18	3.30%	3.70%	-0.40%
2018/19	3.70%	3.60%	0.10%

Source: *Davis Langdon, **CAA

- C75 The CAA notes that the forecast COPI will still fall below inflation in the first few years of Q6 but the difference would be more marginal than at the time of final proposals.
- C76 The CAA notes that the forecast COPI is based on BCIS ALLCON Construction TPI for All New Construction. The CAA notes that All New Construction includes the following categories: Public Housing, Private Housing, Public Non-Housing, Private Industrial, Private Commercial and Infrastructure. Out of these, the CAA considers Infrastructure the most relevant for HAL. The CAA notes that the Infrastructure component has been increasing at a higher rate than the overall All New Construction index in the past few years (see Figure C.6) and expects this trend to continue into Q6.

Figure C.6: Comparison of Infrastructure and All New Construction output price indices (2005 = 100)



Source: BIS^[1] and CAA analysis

- C77 In its Q5 price control review for Gatwick and Heathrow^[2] the CC also noted that the COPI has been more pronounced for housing projects than infrastructure projects and therefore considered that inflationary pressures would be more appropriately measured by analysing trends in the infrastructure COPI and the commercial building COPI.
- C78 Given the above and the uncertainty involved in the COPI and its volatile nature, noted also by the CC in its Q5 revision, the CAA continues to consider it inappropriate to make a separate allowance for real COPI.

On-costs

Issue

- C79 HAL defines on-costs as: “the development, design or project management cost which is expended by BAA in the delivery of a

¹ BIS quarterly construction price and cost indices: quarter 2 2013, output price indices, available from: <https://www.gov.uk/government/publications/bis-quarterly-construction-price-and-cost-indices-quarter-2-2013>

² CC, Heathrow Airport Ltd and Gatwick Airport Ltd Q5 price control review, 2007, Appendix D: Capital investment and construction inflation, available from: <http://www.competition-commission.org.uk/our-work/directory-of-all-inquiries/heathrow-and-gatwick-quinquennial-review/final-report-and-appendices-glossary>

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

- C80 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 final proposals

- C81 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.

- C82 Given these findings, the CAA did not incorporate any further reductions in HAL's capex into its projections for its final proposals.

Stakeholders' views

- C83 The CAA received two responses commenting on its approach to determining the appropriate level of on-costs for HAL in Q6.
- HAL welcomed the findings of the CAA's consultants, ASA, that HAL's level of on-costs was comparable with those in other regulated industries and considerably lower than in some. HAL noted the CAA's acceptance of HAL's targeted on-costs.

- The Heathrow Airline Community were disappointed that the CAA had disregarded the evidence of the Faithful and Gould study.¹¹⁰ However, in the absence of new evidence, it reluctantly accepted the CAA's decision.

CAA's final view

C84 Based on the ASA study and responses received, the CAA's final view is that the level of on-costs incurred and projected by HAL is consistent with industry benchmarks and therefore no change to the forecasts in the ABP is appropriate.

Terminal 3 Integrated Baggage budget increase

C85 T3IB is a three storey baggage facility adjacent to Terminal 3, incorporating the Terminal 3 departure baggage system, an early bag store and Hold Baggage Storage, with interfaces for transfer bags through the Terminal 3-Terminal 5 baggage tunnel and the eastern campus via the Western Interface Building. It was initially estimated to cost £257 million in outturn prices but it has experienced a number of cost increases and project delays. As part of the Q5 capex review undertaken by ASA for the CAA, ASA conducted an extensive investigation and £30 million of inefficiencies was identified (see Appendix H of this document for more information). The issue for the CAA at the Q6 review is whether to allow any of the most recent budget increase, of £75 million, into HAL's projected and actual expenditure over Q5+1 and Q6, and if so, how much. This latest increase was after the finalisation of the ASA Q5 study. ASA commented on it in its Q6 study, though noting that further work would be useful to come to a robust view.

CAA's final proposals

C86 The CAA's final proposals allowed the increase into HAL's Q5 RAB and Q6 expenditure in its entirety.

Stakeholders' views

C87 The CAA received three responses concerning T3IB.

¹¹⁰ This study was commissioned by BA and is summarised in the CAA's final proposals.

- BA responded that it had continually focused on T3IB during Q6 discussions. BA was therefore extremely concerned that the CAA had failed to consider the facts provided by its independent consultants and had not made further deductions from the RAB. BA endorsed the Heathrow Airline Community' position on this project.
- HAL commented that by the end of Q5 the forecast expenditure on T3IB will be approximately £350 million. Of that £350 million the CAA had proposed to write down the RAB by £30 million. In addition HAL would pay over £28 million in trigger rebates. HAL had therefore been significantly impacted through adjustments to expenditure that amounts to almost 18% of Q5 expenditure on the project. Furthermore, in Q6 the forecast spend rolling over was approximately £82 million. The actual expenditure on the project will not be known until the project is completed yet the airlines are suggesting that this money also be written down (ex-ante) in contradiction to the regulatory model.
- The Heathrow Airline Community noted "with incredulity" that the CAA's final proposals did not support any additional deductions to T3IB costs for Q6 in the final proposals. It justified at length its position that the expenditure had been inefficiently incurred and that the Heathrow Airline Community had provided evidence to the CAA that the airlines had not been consulted on HAL's additional expenditure. It believed that for T3IB, the CAA was ignoring its duty to ensure that capital was spent efficiently and only after consultation. It called on the CAA to arrange a detailed study into the latest £75 million on-costs. If they were proved to be unsubstantiated or to have been incurred inefficiently or without consultation, the CAA should disallow them from the RAB. In these circumstances the CAA's offer to keep future expenditure increases on this project under review, was insufficient.

CAA's final view

C88 The CAA does not accept the Heathrow Airline Community' view that it ignored the views of its consultants in formulating its final proposals in this area. It did not believe that there was sufficient evidence to disallow expenditure permanently from the RAB. The CC's opinion in its final report on the Phoenix Natural Gas price control review in 2012 was that such adjustments should take place in exceptional

circumstances only. The CAA's view was that such circumstances had not been demonstrated by the ASA study. The consultants themselves noted that "further more detailed analysis would be required to come to a more properly costed disallowable sum".

- C89 However, noting the Heathrow Airline Community' concern, the CAA has decided to undertake a full review of the latest overspend on T3IB, to determine how much should be allowed into the RAB. Pending the conclusion of that study, but without prejudice to its conclusions, it will remove the £35 million identified in the ASA study from Q6 capex. However, it will make no further reduction in the Q6 opening RAB. The CAA aims to conclude this study once T3IB is complete. Should the CAA find that the inclusion of any or all of the T3IB expenditure is justified in relation to its statutory duties, it will adjust HAL's price control accordingly.

Final view

- C90 The CAA has adjusted HAL's ABP capex projections based on its decisions above. The adjustments made are shown in figure C.7 below. The changes from the capex projections in the CAA's final proposals are:
- the adjustment to reflect the change in the timing of the Crossrail contribution;
 - the increase in the allowance for fuel storage works from £29 million to £131 million; and
 - the removal of £35 million from the Q6 T3IB budget, pending the CAA's investigation into the additional expenditure.

Figure C.7: 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	(67.2)	–	–	–	3.6	(63.2)
Fuel storage	67.8	54.2	9.0	–	–	131.0
PRT	–	–	–	(2.3)	(6.3)	(8.6)
COPI	5.5	14.5	18.6	19.7	26.0	84.3
T3IB	(35.0)	–	–	–	–	(35.0)

Source: HAL, CAA

C91 Based on the CAA's decisions above, its projections for HAL's efficient capex over Q6 are set out in figure C.8 below.

Figure C.8: CAA's final view for capex – 5 year duration

£ million	2014/15	2015/16	2016/17	2017/18	2018/19	Total
Capex	562.4	738.7	629.0	499.3	523.5	2,953.0

Source: CAA

C92 Adjusting these numbers to reflect the reduction in the duration of the control to four years and nine months yields the capex in figure C.9 below.

Figure C.9: CAA's final view for capex – 4 years 9 months duration

£ million	9 mo. 2014	2015	2016	2017	2018	Total
Capex	439.1	669.0	645.6	528.8	533.9	2,816.4

Source: CAA

APPENDIX D

Capital Efficiency

- D1 This chapter consists of the following sections:
- capital efficiency in HAL's price control;
 - issues concerning capital efficiency; and
 - the CAA's final view on a new regulatory framework for promoting capital efficiency.

Capital efficiency in HAL's price control

- D2 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.
- D3 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

- D4 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 IFS.

Proposed split between core and development capex

Issue

- D5 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.¹¹¹ 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.

¹¹¹ 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.¹¹²

CAA's final proposals

D6 Given the widespread support for the approach developed by HAL and the airlines and proposed by the CAA in its initial proposals, the CAA included provisions in the price control which implemented the split between core and development capex. The CAA believed 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 included these provisions in its final proposals.

Stakeholders' views

D7 The CAA received three responses commenting on the proposed split between core and development capex.

- BA welcomed the proposed split between core and development capex. It also welcomed the CAA's proposal to adopt the P80 allowance for development capex and the P50 allowance for core capex, and the proposed reallocation of unspent development capex allowances. It repeated its view that the CAA should adopt a three-pot classification of capex overspends, as Ofgem had.
- HAL noted that the CAA had agreed that development capex allowance should be set at the P80 level. As projects transitioned from development to core status, unused development capex would be returned to the portfolio. Alternatively, the development capex remuneration mechanism would ensure that HAL would only earn a return on development capex that was taken forward.
- The Heathrow Airline Community strongly endorsed the CAA's proposals on core and development capex. It also endorsed the three-pot classification of capex overspends.

CAA's final view

D8 For the reasons set out in the final proposals, the CAA's final view is to adopt the split between core and development capex proposed by HAL and agreed by the Heathrow Airline Community during CE. Its

¹¹² 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.

view on BA's three-pot solution remains that set out in the final proposals.

Right of appeal in capex governance

Issue

D9 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 final proposals

D10 The CAA believed that the second option, requiring HAL to attempt to obtain airline sign-off, was more appropriate. The CAA expected HAL and the airlines to negotiate in good faith, as they did during the CE process, and anticipated that most investment projects would be agreed in this way. However, the CAA identified two instances in which the CAA, as an arbiter, would have to 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.

D11 The CAA noted that the detailed structure and responsibilities of the governance mechanisms were still under development. The CAA did not believe that it was necessary to include detailed provisions for governance arrangements in HAL's licence. Doing so would have meant that even relatively minor changes to those arrangements would take months and require public consultations. Accordingly, the CAA included a provision in HAL's draft licence that required HAL to develop a governance protocol. That protocol would be agreed between HAL, the airlines and the CAA before the start of Q6.

Stakeholders' views

D12 The CAA received four responses commenting on the right of appeal in capex governance during Q6.

- BA supported the CAA's proposals on the right of appeal and obtaining airline sign-off for individual projects.
- HAL did not support the CAA's proposals for intervention where "agreement" could not be reached between HAL and the airline community on individual projects within the capex programme. On the one hand, the CAA indicated that these were matters for HAL to consider and on the other, that it was minded to assume a role in determining precisely which projects proceed and when. While it always aimed to reach agreement on investment projects with the airline community, if this proved impossible, HAL would continue to make the final decision on investment in the interests of passengers. HAL argued that a right of appeal would encourage more parties to bring capex disputes to the CAA, which would increase the workload of the CAA and delay the actual deployment of capex. In addition, a right of appeal would create regulatory uncertainty in relation to capex and, thereby, undermine HAL's ability to plan and manage its portfolio.
- The Heathrow Airline Community strongly endorsed the CAA's decision on the right to appeal the sign-off of capital projects. It included a considerable amount of detail relating to Q6 governance and the three key building blocks which the CAA and HAL should consider in the light of experience gained during Q5 and the need to focus on the passenger experience.
- Virgin did not comment directly on the right of appeal, but encouraged the CAA to support an efficient, streamlined structure of meetings to the greatest extent possible to effectively govern the Q6 settlement, recognising the limited resources airlines will have relative to HAL.

CAA's final view

D13 The CAA notes HAL's points that an appeals mechanism could increase the CAA's workload and delay capex. The CAA considers that:

- there is already a significant degree of agreement between HAL and the airlines on the appropriate capex programme for Q6, so any increase in workload for the CAA is likely to be limited;

- the CAA undertakes a review of HAL's investment during the quinquennial review. Rather than increasing the overall workload, therefore, the appeals mechanism could simply reschedule it;
- the envisaged split between core and development capex has advantages. However, it may reduce the incentives on HAL to deliver capital programmes efficiently. For this reason, greater regulatory oversight of the projects which comprise HAL's capex programme is appropriate.
- while this will increase the CAA's workload, it considers that this is worthwhile to avoid difficulties that might otherwise arise in assessing whether projects are consistent with its statutory duties after the event at a subsequent price review; and
- delays to capex can be minimised by designing a proportionate appeals mechanism.

D14 The CAA does not accept HAL's point that such a mechanism would increase regulatory uncertainty. In practice, it is likely that, if the CAA hears an appeal on a project during the quinquennium, when the project is at an early stage, HAL will be aware whether or not the project will be allowed into the RAB at the next review. This should increase, rather than reduce, regulatory certainty. Overall, therefore, the CAA considers that HAL's concerns are more than outweighed by the protection of users of the airport from HAL's monopoly power which an appeals mechanism should offer.

D15 The CAA's final view is therefore that HAL and the airlines should make good faith attempts to reach agreement on items in the capex programme. However, if the parties cannot reach agreement, either side may appeal to the CAA, subject to conditions set out in the governance protocol which HAL is developing with the airlines. The CAA will then judge the appeal according to its statutory duties, in particular its duties to represent the interests of passengers, and to promote HAL's efficiency and economy.

D16 HAL is required by the draft licence to develop a capex programme governance protocol. Since the publication of the final proposals, the CAA has written to HAL concerning the governance of its Q6 capex programme. This letter included the decision on the appeal

mechanism set out in this section, and other, more detailed points on capex governance.

Q5 triggers

Issue

D17 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 the first year of Q6;
- 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 final proposals

D18 The CAA considered that it was appropriate to attach triggers to projects triggered in Q5 which were not complete by 1 April 2014, but which were still part of the Q6 plan. The arguments which obtained in applying triggers to those projects in Q5 would remain valid at the start of Q6. Accordingly, the CAA proposed 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 would be worked out between the final proposals and the implementation of the Q6 price control on 1 April 2014.

D19 HAL and the airlines raised minor issues with the CAA for determination on the Eastern Maintenance Bay Redevelopment and Midfield Pier Centre projects. The CAA committed to determining these issues before the start of Q6.

Stakeholders' views

- D20 The CAA received three responses commenting on attaching triggers to Q5 legacy projects during Q6.
- BA supported the CAA's decision to attach triggers to Q5 legacy projects during Q6. It also called on the CAA to incentivise HAL to deliver the T3IB project quickly and efficiently.
 - HAL noted the CAA's proposal for attaching triggers to projects triggered in Q5 which were not complete by 1 April 2014. HAL stated that the new triggers should only be applied to Q6 spend with a trigger date consistent with any proposed Q6 capital plan.
 - The Heathrow Airline Community responded that a trigger on the Eastern Maintenance Base project was inappropriate at this stage and, if and when T2C proceeds, a Trigger should be developed in the normal way through the Gateway process.

CAA's final view

- D21 The CAA's final view is that triggers should be attached to those projects specified in the final proposals, with the exception of the Eastern Maintenance Base project. As the Heathrow Airline Community states, this should be triggered through HAL's Gateway process once T2C proceeds.

Q6 triggers

Issue

- D22 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.
- D23 The CAA set out its criteria for determining whether to set triggers on individual projects in its Q5 decision.¹¹³
- Triggers should be based on the performance of events with demonstrable benefit to users.

¹¹³ CAA, *Economic Regulation of Heathrow and Gatwick Airports 2008-2013 – CAA decision*, available at www.caa.co.uk

- 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.

D24 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 final proposals

D25 Given the widespread support for triggers, the CAA proposed to include them in HAL's price control for Q6 capex projects that met its criteria. However, the CAA proposed a more flexible approach to capital investment over Q6. Therefore, it was not appropriate for the CAA to commit to developing triggers for each project before the start of the quinquennium. This was 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 meant that the CAA could not calculate the proportion of capex which triggers will cover.

D26 HAL and the airlines would develop triggers for individual projects during Gateways 1 and 2. The triggers would be attached formally to the projects once they reach Gateway 3. The triggers would 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 considered that these conditions continued to be appropriate for Q6.

- D27 Attaching triggers to small 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 was different, the CAA considered that triggers were 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.
- D28 Based on its published criteria, the CAA considered that triggers should be set for three Q6 projects when those projects reached Gateway 3:
- Enhanced terminal facilities for passengers;
 - Engineering Asset Replacement (Wave 1)¹¹⁴; and
 - Enabling Wide Body Growth.

Stakeholders' views

- D29 The CAA received three responses commenting on its approach to setting Q6 capex triggers.
- BA supported the CAA's decision on Q6 trigger projects. However, it stated that the CAA's view that smaller projects should not generally be triggered could give HAL an incentive to break larger projects down into a number of smaller projects. It considered that, if there were evidence of this occurring, triggers should be applied to a group of projects collectively.

¹¹⁴ 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.

- HAL responded that a trigger should not be applied where it is already incentivised to deliver the project e.g. increased commercial revenue, reduced opex or compliance with legislation. HAL agreed with the CAA that triggers are unlikely to be appropriate for projects below a certain level of expenditure. In accordance with the capital efficiency handbook, HAL considered that an appropriate level is greater than £20 million, rather than the £15 million proposed by the CAA. HAL stated that "Enhanced terminal facilities for passengers" did not meet the criteria for a trigger.
- The Heathrow Airline Community agreed with HAL that a £20 million threshold was appropriate as a guideline. However, triggers should also be set for projects that were of strategic importance or can have a significant impact on the passenger, irrespective of any threshold. It submitted a revised list of Q6 projects that would reach Gateway 3 by April 2014.

CAA's final view

- D30 Given the advantages of triggers in ensuring that HAL delivers projects which benefit stakeholders in a timely manner, and the widespread support from stakeholders, the CAA has included provision for triggers in HAL's Q6 price control. Though the CAA notes HAL's view that triggers are not appropriate where HAL is otherwise incentivised to deliver the project punctually, the CAA believes that this is not necessarily the case, as such incentives may be insufficient or incomplete. Therefore, the presence of such incentives should not, of itself, negate the means for a trigger.
- D31 While the level of a materiality threshold is a matter for judgement, the CAA agrees with stakeholders that a £20 million level for triggers during Q6 is more appropriate than a lower level. The CAA notes BA's concern that HAL could break down large projects to avoid this threshold. It will investigate documented complaints from parties if they consider that HAL is behaving in this way.
- D32 The CAA expects that HAL and the airlines will agree triggers for projects that meet the criteria set out in the final proposals by the time the projects are at Gateway 3. It will determine any cases where the parties are unable to reach agreement.

Intertemporal indifference

Issue

D33 The Heathrow Airline Community noted that, where capex is not subject to triggers, HAL can make additional profit by delaying actual capex beyond the timescales that the CAA assumes when setting capex allowances. To address this, the Heathrow Airline Community 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 final proposals

D34 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 underspending over five years comes off the RAB at the start of Q7, the CAA would effectively eliminate the financial benefit of delay.

D35 In its final proposals, the CAA stated that, because HAL recovered forecast, rather than actual depreciation in its price control, intertemporal indifference remained an issue. HAL could still make a cash flow gain by delaying or cancelling projects for which expenditure had been 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 was £54 million.

D36 The CAA identified two options for addressing this issue:

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

D37 The CAA considered that the first option was likely to involve the adoption of a complex mechanism which could have unintended

effects. In addition, if the cash flow gain was relatively small over Q6, it could be disproportionate to the magnitude of the problem. Accordingly, for its final proposals the CAA favoured a commitment to assessing the level of over-recovery of depreciation at the Q7 review. If this were to be significant, the CAA would reduce HAL's revenues during Q7 to bring forward the unwinding of any early depreciation.

Stakeholders' views

- D38 The CAA received three responses commenting on intertemporal indifference in HAL's price control.
- BA supported the CAA's proposals on intertemporal indifference.
 - HAL disagreed with the CAA's proposal to reduce HAL's revenues in Q7 should there be an over-recovery of depreciation during Q6. It claimed that this proposal was inconsistent with existing CAA policy and did not appear logical. As the impact of any variance between actual and forecast depreciation was a matter of timing only, the CAA's proposal for a further adjustment in the event that there was an over-recovery of depreciation appeared to lack economic rationale. If the CAA implemented this proposal, to maintain "intertemporal indifference", the impact of the overstated depreciation in the closing RAB needed to be unwound at the same time. The establishment of an IFS eliminated the need for a mid-term review as suggested by the airlines.
 - The Heathrow Airline Community accepted the CAA's proposal to review the extent of over-recovery of depreciation at the Q7 review provided the position was monitored and formally reviewed at the Q6 mid-term review (which they assumed would occur in Q6 as in previous control periods).

CAA's final view

- D39 The CAA does not accept HAL's statement that the recovery of depreciation is a matter of timing only. While this may be true for the airport operator, it is not true for individual passengers or airlines, who often have shorter time horizons than the airport operator. Intertemporal indifference will encourage timely capex without delays, which promotes efficiency and is in the interests of all passengers. Accordingly, the CAA believes that intertemporal indifference in depreciation remains an issue. The CAA's final view is therefore that

it should review depreciation at the next review, to ensure that HAL has not over-recovered significantly.

- D40 The question of the appointment of an IFS is discussed in the next section of this chapter.

Independent Fund Surveyor

Issue

- D41 HAL and the Heathrow Airline Community 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 final proposals

- D42 Given widespread support for the establishment of an IFS, the CAA included provision for such an arrangement in its final proposals for HAL's price control. It proposed to include an allowance of up to 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 would be appointed jointly by HAL and the AOC (or other representative body as appropriate). The IFS would have a duty of care towards HAL, the airlines and the CAA.

Stakeholders' views

- D43 The CAA received three responses commenting on the establishment of an IFS to advise on HAL's capex programme.
- BA supported the appointment of an IFS. It did not agree that the IFS should be appointed jointly between HAL and the airlines. However, it preferred a jointly-appointed IFS to the absence of an IFS.

- HAL noted the CAA's inclusion for the provision of the IFS within HAL's price control. The allowance for the IFS, however would be significantly less than 0.5% of the capex programme, with an allowance of £9.5 million included in HAL's ABP. BA's opposition to joint appointment of the IFS was inconsistent with agreement to that principle between HAL and the airline community. HAL expressed concerns about accepting a price control if the effect were that the IFS and the CAA conducted a review of HAL's capital plans during the regulatory period. This would simply waste time and cost, and be disproportionate. HAL requested the CAA's reassurance that, consistent with previous discussions on this topic, the governance would avoid any such effect.
- The Heathrow Airline Community strongly endorsed the creation of the IFS role. The IFS would be used to provide independent project monitoring and reporting.

CAA's final view

- D44 The CAA notes the support of key stakeholders for the establishment of an IFS. It believes that the IFS should make a significant contribution to the efficient delivery of HAL's investment programme. Accordingly, its final view is that the IFS should be established as proposed in the final proposals.
- D45 The CAA also notes HAL's concern that the CAA and the IFS should not review HAL's capital plans during the quinquennium. The CAA confirms that it does not envisage undertaking a global review of the capital plans during the quinquennium, as opposed to a study of individual projects as this becomes necessary.

Final view

- D46 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 view is 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 by the start of Q6. 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.

APPENDIX E

Operating Expenditure

- E1 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 summary of the main issues of disagreement between HAL and the airlines, and the CAA's final view; and
 - a summary of the CAA's final view of the Q6 opex allowance for HAL.

Opex process to date

- E2 To date, the Q6 opex process has consisted of the following stages.
- HAL published its IBP in 2012 providing its initial opex forecast 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 opex forecast in its June 2013 RBP and 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 CAA commissioned updates to the consultancy work to respond to stakeholder evidence and update the opex forecasts in its final proposals. The final proposals contained a reduced opex allowance of £4,944 million.
- Stakeholders provided responses to the CAA's final proposals in November 2013.

HAL's business plans

- E3 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.
- E4 The RBP reduced forecast opex by £112 million over Q6 relative to the FBP. The main changes were:
- £90 million reduction in facilities management opex, based on retendering the outsourced terminal baggage operations and maintenance contract;
 - £16 million reduction in other costs, including ground transportation and Passengers with Reduced Mobility (PRM) costs;
 - £9 million reduction in rent and rates costs based on the vacation of Heathrow Point West;
 - £3 million reduction in utility costs; and
 - £6 million increase in opex related to commercial operations.
- E5 In July 2013, HAL published its ABP, an addendum to its RBP which set out an alternative opex forecast for Q6 based on a £3 billion investment programme. The only change in the opex projection was a £2.7 million reduction in facilities costs reflecting an increase in asset replacement capex from £575 million to £600 million.
- E6 Figure E.1 below shows the differences between the total opex forecasts for Q6 contained in the IBP, FBP, RBP and the ABP. It also

shows the opex allowance in the CAA's initial and final proposals for comparison.

Figure E.1: HAL and CAA projections for operating expenditure over Q6

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
IBP	1,103	1,099	1,040	1,036	1,026	5,304
FBP	1,082	1,050	1,034	1,030	1,038	5,234
CAA - IPs	1,066	1,030	994	970	957	5,017
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 - FPs	1,057	1,006	980	953	947	4,944

Sources: HAL and CAA

Issues

E7 HAL and the airlines do not agree on the appropriate opex allowance for Q6. There is strong disagreement over the scope for operational efficiencies. The main areas of contention between HAL and the airlines have been:

- the analysis and conclusions of the top-down benchmarking;
- the scope for further efficiency in employee pay and pensions;
- the scope for further efficiency in 'other' opex, maintenance and central support costs;
- the scope for further security process efficiency, including flow rates, roster efficiency and the potential for outsourcing;
- the scope for greater on-going efficiency savings or frontier shift; and
- the overall opex allowance over Q6.

Top-down benchmarking

Issue

- E8 The CAA is keen to understand how it should use external comparators to inform its judgement about the appropriate level of ambition to apply to HAL's business plan.

CAA's final proposals

- E9 The CAA stated that no benchmarking sample could be considered perfectly comparable with Heathrow and that there were 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 was helpful to assess the overall level of operating costs at an airport relative to its peers and can provide an indication of relative efficiency.
- E10 The CAA updated its benchmarking analysis in the final proposals to take account of stakeholders' comments and the latest available research and data including reviewing new benchmarking reports by Leigh Fisher and the Air Transport Research Society (ATRS).
- E11 This showed that between 2011/12 and 2012/13, adjusted opex per passenger at Heathrow had risen by 1% from £11.96 to £12.13, primarily caused by an 11% increase in staff costs and costs associated with the Olympic Games.¹¹⁵ This compares with a reduction of 0.1% in the benchmark sample. HAL's adjusted opex per passenger was above the average of the sample (£8.14) and also above comparators such as Amsterdam Schiphol (£11.43).
- E12 The ATRS report showed that Heathrow is ranked 25th of 26 European airports in terms of 'residual' productivity taking account of differing inputs and outputs. The study estimated an efficiency gap of around 60% for Heathrow relative to the frontier, this compared to a gap of 55% for Gatwick.
- E13 The Leigh Fisher report showed that between 2009/10 and 2010/11 adjusted opex per passenger at Heathrow fell by around 18%, compared to an average increase of 3%. Adjusted opex per

¹¹⁵ HAL estimates that the Olympics increased opex by around £25 million in 2012. This is attributed to the costs of the temporary Olympic terminal and associated costs for baggage handling, uniforms, staff bonuses and overtime.

passenger remained higher than comparators such as Amsterdam Schiphol.

E14 The CAA accepted that in the initial proposals it had incorrectly interpreted the Booz & Co benchmarking evidence commissioned by HAL, which showed that GAL was more efficient than HAL taking account of passenger complexity. However, the CAA stated that bottom up evidence of staff costs, pensions, rostering efficiency, and security flow rates all indicate that GAL is more efficient than HAL. This and the independent benchmarking evidence from ATRS and Leigh Fisher described above all indicate that GAL is more efficient than HAL and do not support the Booz & Co analysis.

E15 In summary, the CAA considered 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.

Stakeholders' views

E16 The CAA received three responses commenting on this issue:

- BA and the Heathrow Airline Community agreed that the CAA's benchmarking evidence indicated that HAL had significant scope for efficiency and noted that there was a body of evidence demonstrating inefficiency at Heathrow.
- HAL stated that top-down benchmarking evidence lacked context and could only be relied upon if the input data is wholly consistent and comparable. HAL stated that it had the strongest commercial portfolio in the world and improving levels of service quality. HAL stated that it was not clear to what extent the CAA's benchmarking analysis had any immediate relevance to the overall analysis of opex efficiency. HAL noted that the CAA stated that opex per passenger had fallen by 7% from 2008, which contradicted the view that HAL has exceeded its Q5 opex allowance. It stated that absent a detailed consideration of all relevant factors, the CAA could not rely on the benchmarking analysis presented in the final proposals.

CAA's final view

- E17 The CAA notes HAL's comments about the comparability of the benchmarking evidence and Heathrow's above average service quality in terms of airport service quality (ASQ) scores, passenger profile and high levels of commercial revenue per passenger. The CAA has sought to account for these issues by adjusting the benchmarking data to account for retail costs and by incorporating a range of airports with comparable levels of service quality and airline and passenger types.
- E18 The CAA has compared Heathrow to airports including Amsterdam, Gatwick, Hong Kong, and Munich. The CAA considers that these airports are appropriate comparators. Amsterdam in particular is similar in terms of its business model, overall size, number of passengers and ATMs. It scores highly on measures of service quality, has high commercial revenues and also has six runways compared to two at Heathrow, although it only operates a single terminal compared with four at Heathrow. Amsterdam was also used in HAL's own benchmarking study as a comparator.
- E19 The CAA considers that it has drawn reasonable conclusions from the benchmarking analysis, consistent with the wider benchmarking evidence and taking account of the risks and uncertainties associated with such evidence. This includes examining a variety of benchmarking evidence which tend to support the CAA's conclusions. In summary, the CAA considers that:
- opex per passenger at Heathrow is higher than some comparable airports;
 - over Q5, opex per passenger at Heathrow has fallen at a slower rate than across a sample of comparable airports; and
 - these factors, comparisons with similar airports and the wider benchmarking evidence tend to suggest that HAL is likely to have scope for catch-up efficiency over Q6.

Employee pay**Issue**

- E20 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. The IDS Thomson Reuters (IDS) employee reward benchmarking study identified that:

- HAL's total staff reward¹¹⁶ was between 10% and 21% higher than benchmarks based on comparisons with general market and aviation industry benchmarks;
- rates of wage growth have been higher than the economy wide average in every year between 2005 and 2012 (excluding a pay freeze in 2009 and 2010 when the increase was the same);
- there was evidence of grade drift in security and fire service functions with the 'virtual depopulation of the lower grades';
- there could be potential for improvements to rostering efficiency based on the implementation of a more flexible roster system; and
- there was evidence of high reliance on staff working overtime with 93% of staff below senior management level regularly working 5.8 hours of overtime per week.

E21 The CAA stated that, based on data published in HAL's regulatory accounts in 2011/12, staff costs were £270 million.¹¹⁷ Based on the mid-point of the benchmark analysis, the CAA estimated that HAL could reduce costs by 15.5%, equivalent to £144 million over Q6 taking account of proposed reductions in staff headcount and accounting for the 33% wage efficiency included in the ABP. The CAA applied a glide path to this saving, reducing the net efficiency to £84 million over Q6.

CAA's final proposals

E22 The CAA considered the achievability of the proposed reduction in staff costs and noted that there are a number of ways that HAL could attempt to reduce its wage costs. The CAA noted that wage restraint has been applied throughout the public sector, parts of which have experienced a two year nominal wage freeze from 2010 followed by 1% nominal average pay growth from 2013.

¹¹⁶ Total reward includes basic salary, bonus and shift payments, holidays (based on basic salary) and employer pension contributions.

¹¹⁷ In the initial proposal the CAA mistakenly referred to HAL's £262 million staff cost regulatory allowance.

- E23 Assuming average RPI inflation of 3.5% per year over Q6, the CAA estimated that staff costs could be reduced by around 21% in real terms by the end of Q6 by applying a nominal wage freeze. This was greater than the 15.5% reduction included in the CAA's initial proposals and indicates that the proposal could be achieved with below inflation pay rises over Q6.
- E24 HAL could also seek to cut costs by reducing levels of overtime increasing the proportion of staff on new lower rates of pay and seeking to reduce and reverse the grade drift identified in the IDS study. Current rates of staff turnover at Heathrow are around 5%, significantly lower than the benchmark of 13% in the wider economy. This may suggest that employee rewards are significantly better than alternatives.
- E25 The CAA noted that there had been an improvement in the economic outlook since the initial proposals, which was likely to mean that wage growth could begin to increase more rapidly than assumed in the March OBR forecasts. To account for this, the CAA reduced the wage efficiency from 15.5% to 14.5%, resulting in a total saving of £78 million over Q6 relative to HAL's ABP.
- E26 The CAA considered the risk of double-counting staff efficiency savings in central support and maintenance costs. Reductions in wage costs will cut across several areas of HAL's business plan including security, maintenance and central support, which each contain staff costs. This has implications for the efficiencies proposed in these areas and was discussed in the appropriate sections of the final proposals.

Stakeholders' views

- E27 The CAA received five responses commenting on this issue.

- BA generally agreed with the CAA's assessment of HAL's employee pay. It also agreed that the findings of the IDS study were robust. It did not agree with the CAA's approach to avoid double-counting staff cost savings or the decision to reduce the efficiency target from 16% to 15%. BA stated that the recent performance of the UK labour market meant that wage growth was likely to be subdued. BA urged the CAA to return HAL's wage costs to rates in line with wider market rates before permitting any further increases. BA stated that it had not had access to HAL's workforce strategy and so could not comment on the reasonableness of the measures and cost estimates included. BA stated that the CAA should not rely on this evidence.
- HAL stated that it had taken steps to reduce staff costs over Q5 whilst ensuring it met all safety and regulatory objectives. These measures included a pay freeze, reducing layers within the organisation and reducing rates of absenteeism. HAL stated that further savings would be achieved over Q6 through the 'workforce initiative' included in the business plan. HAL criticised the IDS benchmarking analysis on the basis that it did not provide appropriate comparators; employed a narrow sample range of 18 security guards, used average rather than median salaries, and adopted an overly simplistic approach to the analysis of pre and post 97 contracts. HAL also highlighted its own benchmarking evidence based on EEF and Towers Watson databases which showed that ~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX~~ appear to compare well with benchmarks. HAL stated that the wage efficiency projections imply a combination of measures including a near nominal wage freeze, reductions in staff numbers and reductions of overtime, but did not consider the speed at which the benchmark target could be achieved. HAL also highlighted the potential for industrial action and passenger and airline disruption.
- The Heathrow Airline Community generally agreed with the CAA's assessment of HAL's staff pay. It also agreed with the CAA that the findings of the IDS study were robust. However, it did not agree with the CAA's assessment to reduce the proposed efficiency from £80 million to £78 million. It stated that any costs over and above a reasonable benchmark should be borne by HAL and not passed onto the airline community.

- Unite, PCS and Prospect (the Unions) made a joint response highlighting Heathrow's high rates of capacity utilisation and strategic economic importance as a major employer and hub airport. The Unions did not accept the staff cost benchmarking analysis referred to in the final proposals. The Unions also stated that unfair comparisons had been made for example the comparison of fire officer grades, which does not take into account the Fire Service Review agreements which replaced overtime payments with an uplifted basic salary as part of a move to annualised working hours. The Unions highlighted that the final proposals could negatively impact on employee relations if it is regarded as unfairly balanced. This could result in a move towards industrial action, which would cost the airlines more than they are attempting to save as well as negatively impacting passenger experience.
- Virgin noted that HAL paid substantially above average wages organisation wide. Staff costs per passenger had increased 123% over Q5 and therefore the CAA should re-examine its decision not to close the gap further. In relation to the CAA's reduction in the proposed wage cost efficiency, Virgin stated that whilst economic growth has increased, there is no evidence to suggest wage growth will have kept pace and some forecasts show a reduction since April. Virgin stated that if the CAA believes that wage growth has increased, this assumption should also be applied to the commercial revenue forecast.

CAA's final view

- E28 The CAA has considered HAL's criticisms of the IDS report but considers that the analysis contained in that report is robust. Comparisons between HAL's mean average salaries and the market benchmark median average are appropriate. This is because market benchmark data is drawn from a variety of sources and the median average is less sensitive to outliers. The mean average is a more appropriate measure for HAL as it better represents average rates of pay within the company, and there is less need to account for outliers within HAL's staff cost data.
- E29 The IDS study has applied a process of evaluating jobs into appropriate HAY point ranges, which enable comparisons between

against benchmarks. In addition, the IDS report shows that HAL's total reward for fire-fighters is similar to benchmarks.

- E35 In the final proposals, the CAA stated that the recent improvement in the economic outlook could mean that wages in the general economy could rise faster than inflation, reducing the scope for efficiency savings. On this basis the CAA reduced the proposed efficiency from 15.5% to 14.5% of staff costs.
- E36 OBR forecasts published in December 2013 indicate that average earnings growth will actually remain below inflation over Q6 on a cumulative basis. This is based on lower outturn wage growth and low productivity growth.¹¹⁸ Figure E.2 shows that on a cumulative basis average earnings are expected to be around 2% lower in real terms by the end of Q6 compared with a 2012 base.

Figure E.2 OBR real average earnings growth assumptions

Year	March forecast		December forecast	
	Average Earnings	2012=100	Average Earnings	2012=100
2012	-1.1%	100	-1.2%	100
2013	-1.8%	98.2	-1.6%	98.4
2014	-0.1%	98.1	-0.3%	98.1
2015	0.4%	98.5	0.0%	98.1
2016	0.4%	98.9	-0.1%	98.0
2017	0.1%	99.0	0.0%	98.0
2018	0.1	99.1	-0.2%	97.8

Source: OBR March and December 2013 Economic Forecasts

Real average earnings calculated by subtracting RPI from nominal average earnings

- E37 This suggests that HAL is likely to have greater scope for reducing staff costs than assumed in the initial and final proposals. Based on the forecasts the CAA has increased the wage cost reduction from 15.5% to 17.5%. This increases the potential staff cost efficiency to £97.1 million over Q6.
- E38 The CAA considers that its proposed staff wage cost efficiency for HAL could be exceeded through a nominal wage freeze over Q6 and notes that similar measures are being implemented throughout the

¹¹⁸ OBR, Economic Outlook, December 2013.

public sector and in other sectors of the economy. The CAA has not assumed that other measures such as reducing overtime, absenteeism or restructuring are required to achieve the proposed efficiency, but notes that these options could provide an alternative method to achieve the proposed savings.

- E39 The CAA notes the statements regarding the potential for industrial action as a result of the proposed reductions in staff costs and the negative impact that this could have on airport operations. However, the CAA cannot ignore the evidence of high staff costs at HAL. Furthermore the CAA does not consider that moderate real terms reductions in staff costs, following generous increases over Q5, will inevitably lead to industrial action. Average earnings are forecast to decline over Q6. HAL should not be insulated from this trend at the expense of passengers.
- E40 The CAA considers that its proposals could be achieved through moderate wage restraint. The CAA has applied a glide path to the proposed staff cost efficiency to give HAL time to implement changes efficiently. The proposed efficiency will bring HAL's staff costs into line with benchmarks by the end of Q6. The CAA notes that HAL has several options for reducing staff costs including reducing levels of overtime increasing the proportion of staff on new lower rates of pay and seeking to reduce and reverse the grade drift identified in the IDS study.

Pensions – future costs

Issue

- E41 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" and 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.
- E42 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 defined benefit (DB) and 10% for the defined contribution (DC) scheme). This is significantly higher than the 25% cap and comparative benchmarks of 20% and 7%.

CAA's final proposals

- E43 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, recent changes to market conditions and returns on pension assets.
- E44 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 1/54ths to 1/60ths. These changes were based on analysis of typical scheme benefits and were the same as those considered by the CC in the Q5 review.
- E45 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 which assumes a contribution rate of 24%. GAD considered that there could be scope for further stretch savings based on further efficiencies being made in other schemes.
- E46 Based on the responses to the CAA's initial proposals, HAL's ABP update and further work conducted since April, the CAA concluded that the previous benchmarking analysis may have overestimated the potential for efficiency in HAL's pension costs. The CAA accepted GAD's conclusion that HAL's ABP contribution rates will be comparable to benchmarks by the end of Q6.
- E47 However, HAL's RBP assumes that contribution rates would remain at 24% in the first year of Q6. Given the clear expectation that pension costs should have been reduced in Q5, the CAA considered that this allowance should be reduced to 23% to 24% of pay from the start of Q6. This resulted in an efficiency of £3.0 million relative to HAL's ABP.
- E48 HAL assumed DC contribution rates of 9%, compared to benchmarks of around 7%. The CAA considered that DC contribution rates were not sufficiently out of line with comparative benchmarks to require further efficiencies.
- E49 Regarding the cost saving options proposed by the airlines including the introduction of a salary sacrifice scheme (also referred to as

SMART pensions), the CAA concluded that such options are likely to be required to achieve the planned pension efficiency savings and should not be considered as an additional saving.

- E50 The CAA stated that 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 national insurance contributions by around 25% per year. This would require employees to 'sacrifice' at least 25% of their wages, which is unlikely to be achievable.
- E51 The CAA agreed with HAL that there was an interaction between wages, pensions and social security costs and that separate wage and pension efficiency proposals could double-count the potential saving. However, pension costs are directly proportional to wages, and a reduction in wages will therefore lead to a proportional reduction in pension costs. The projected pension efficiency saving has been reduced from £10 million to £3 million and the CAA considered that the impact of any interaction between the wage and pension cost efficiency was unlikely to be significant.

Stakeholders' views

- E52 The CAA received three responses commenting on this issue.
- HAL made no comments in direct response to the CAA's treatment of future pension service costs.
 - The Heathrow Airline Community accepted that GAD's calculations were accurate but disagreed with the level of change suggested by the CAA, supporting instead a minimum change to a 1/70th accrual rate. The Heathrow Airline Community was disappointed that the CAA did not include the savings associated with moving to a salary sacrifice scheme despite benefitting the company, its staff and its stakeholders.
 - Virgin argued that there was scope for further efficiencies to HAL's pension costs.

CAA's final view

- E53 The CAA has based its pension cost allowance on GAD's conclusion that HAL's pension cost assumptions represent a reasonable level of cost by the end of Q6 based on comparisons of the benefits provided

by typical DB pension schemes. The CAA noted that the GAD study did indicate that there could be scope for further efficiency based on further reforms being implemented by other schemes. Such scenarios were examined as part of the IDS study, which indicated that a combination of measures could reduce DB pension costs from 40% to 15% of pay.¹¹⁹

- E54 GAD also stated that it is difficult to find robust benchmarks of the most recent changes to typical schemes (and how widespread or typical such changes are). The CAA does not consider that it has sufficient evidence to support further efficiencies to DB pension costs. The CAA considers that the introduction of a salary sacrifice scheme is one method through which HAL could achieve the proposed efficiency savings and should not be considered as an additional saving.

Pensions – deficit contribution

Issue

- E55 In 2010, HAL's actuaries estimated that the BAA pension scheme was in deficit by £378 million. HAL's 'regulatory fraction' of this deficit is estimated to be £275 million. It has since made annual contributions of £24 million to reduce this deficit. HAL's ABP includes pension deficit costs of £129 million over Q6 based on a 10-year recovery plan beginning in 2013.

CAA's final proposals

- E56 The CAA commissioned GAD to provide advice on the treatment of the pension deficit. GAD considered that the economic regulation of pensions 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).

¹¹⁹ These scenarios included increasing the normal retirement age to 65, linking payments to career average salary, changing accrual rates from 54th to 80ths and the combination of all three measures.

- E57 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' (to recover a large surplus in the fund), and the absence of any signal of a change in policy by the CAA, 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. Based on a high level review, GAD stated that it had no significant concerns with the estimation of the pension deficit.
- E58 HAL's pension contributions were higher than the 25% limit set in Q5, though the impact of this on the scheme deficit is likely to be small. The deficit is caused by a shortfall on assets accrued over many years. It is very difficult to attribute a portion of the deficit to liabilities incurred in specific years above a given threshold.
- E59 GAD raised the issue of the commutation payments associated with the sale of Edinburgh and Stansted airports. Each of these airports are expected to make a payment to the BAA pension scheme to absolve liabilities associated with former employees (deferred and pensioner members). In total the commutation payments are expected to equal £48.3 million. GAD estimated that the payments would exceed the deficit attributable to Stansted and Edinburgh and effectively reduce HAL's deficit. GAD concluded that HAL's deficit costs should be adjusted to account for these payments.
- E60 Based on approximate calculations GAD 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 HAL's deficit contributions should be reduced by £6.4 million over Q6 relative to HAL's ABP.

Stakeholders' views

- E61 The CAA received one response commenting on this issue. HAL welcomed the CAA's decision to adopt GAD's recommendations that deficit recovery costs should be included in the opex allowance, but disagreed with the treatment of the commutation payments associated with Edinburgh and Stansted. HAL stated that these payments would effectively eliminate any deficit attributable to Stansted and Edinburgh within the BAA pension scheme, but would not have an effect on HAL's deficit because the regulatory fraction attributable to Heathrow

would increase to offset any lowering of the total deficit. HAL provided a letter from KPMG (in its role as pension advisor) supporting this interpretation. HAL stated that it expected its pension deficit to rise in future and highlighted GAD's recommendation that the CAA should set out a pension policy for the future treatment of deficit costs. HAL stated that it would support a symmetric adjustment mechanism to account for differences between the price control allowances and additional reasonably incurred costs. HAL proposed two alternative mechanisms; an ongoing price factor adjustment or an end of period RAB adjustment. HAL stated that the inclusion of GAL's commutation payment within its RAB had implications for HAL. HAL stated that this implied that cash payments made in excess of future service costs under past and current agreements with its Pension Trustees should be recognised in Heathrow's opening RAB.

CAA's final view

- E62 The CAA accepted GAD's conclusion that, based on the historic treatment of HAL's pension surplus and lack of a signal of policy change, customers should pay for (and benefit from) pension deficits (or surpluses). GAD also recommended adjusting the deficit cost allowance to account for the commutation payments associated with Edinburgh and Stansted. In estimating the effect of the commutation payments on HAL's deficit GAD took account of KPMG's point that HAL's regulatory fraction would increase.
- E63 Whilst HAL's regulatory fraction will increase, GAD estimated that the commutation payments would be greater than the deficit attributable to Edinburgh and Stansted, and would therefore reduce the residual scheme deficit attributable to HAL. GAD also noted that active members at Stansted and Edinburgh have the option to transfer their pension rights from the BAA scheme to their new pension scheme. The assets transferred from the BAA scheme to the new schemes are expected to be less than the value of the equivalent liabilities using the BAA scheme funding basis. This could further reduce the BAA scheme deficit.

Future Pension Policy

- E64 GAD stated that the CAA should consider setting out its policy for the future treatment of pension costs at the next price control highlighting

two issues; potential changes in the estimate of the scheme deficit during Q6 and the future treatment of deficit costs.

- E65 Scheme funding valuations fluctuate over time due to changes in market conditions and other factors. The BAA scheme funding position might change significantly during the Q6 period and it would be a reasonable aim for the CAA to ensure that the choice of baseline valuation date does not affect the balance of pension costs met by shareholders and airport users in the long term. GAD suggested that this could be achieved by adjusting for any differences between reasonably incurred pension contributions and the price control allowances at future price controls (through a 'true up' mechanism for example). GAD stated that there are advantages in using the latest full actuarial valuation for this purpose, as it is consistent with the actual setting of future contribution rates and represents a more robust assessment of the scheme following a process set out in legislation.
- E66 GAD also suggested that the CAA could consider options to strengthen HAL's incentives to manage its pension costs such as only taking into account a certain percentage of the pension scheme deficit at future price control reviews, or signalling that the funding risk in respect of benefit accruals after a certain cut off date is entirely a matter for the company and its shareholders.
- E67 The CAA considers that there is merit in signalling the possibility of change to the future treatment of pension costs, including the introduction of a 'true up' mechanism to account for changes in the scheme valuation and changes to the treatment of future deficits.
- E68 With regard to the treatment of any deficit recovery costs at the next price control, the CAA considers that there are three main policy options:
- a continuation of the current policy, whereby passengers pay for deficits, and benefit from surpluses;
 - a policy whereby shareholders pay for deficits, and benefit from surpluses; or
 - a hybrid approach whereby deficit and surplus payments are shared between passengers and shareholders.

- E69 An example of the latter approach is the 'incremental deficit' method developed by Ofgem whereby the pension liabilities are split between those accrued before and after a cut off point. Any scheme deficit is then split between these portions with customers paying for the former, and the company for the latter.¹²⁰
- E70 The CAA intends to consult stakeholders on potential changes to the treatment of HAL's deficit at the next price control review based on the issues described above. Stakeholders should not assume that this will result in any changes to the CAA's existing policy.

Other opex

Issues

- E71 The CAA commissioned SDG to examine other opex at Heathrow. This included costs relating to rent and rates, utilities, police, cleaning, Air Navigation Service (ANS), PRM charges and other items. The study identified the potential for efficiency of between £87 million and £97 million over Q6 relative to the FBP.

CAA's final proposals

- E72 The CAA commissioned SDG to update its study. SDG reviewed stakeholders' responses to the initial proposals and altered its efficiency proposals in several ways.
- Acknowledging the efficiency proposals related to ground transport, PRM, utilities and rents, had been included in HAL's updated 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 reduced the core and stretch efficiency range associated with cleaning costs from £13.6-£17.5 million, to £7.5-£8.6 million over Q6.

¹²⁰ Ofgem, 2013, Energy Network Operators' Price Control Pension Costs - Regulatory Instructions and Guidance: Triennial Pension Reporting Pack supplement including pension deficit allocation methodology.

- 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 in combination. SDG considered that the level of Heathrow Express staff was high and could be reduced by between 40 and 72 full time equivalents 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.

E73 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. The CAA considered SDG's efficiency proposals on a case by case basis, taking account of responses from stakeholders. The CAA considered that HAL might have scope to reduce the level of Heathrow Express staff. However, this could reduce ticket revenues the quality of the rail service. This saving was not included in the final proposals.

E74 SDG's ANS stretch efficiency proposal is based on benchmarking analysis which shows that HAL's ANS costs are higher than benchmarks. This might be explained by the much greater complexity of air traffic operations at Heathrow relative to other airports and so there is a high degree of uncertainty associated with this proposal. The CAA did not include this efficiency in the opex allowance.

E75 The CAA adopted SDG's remaining core opex efficiency proposals relating to cleaning and rates costs. Overall these two proposals result in total savings of £38.7 million over Q6 relative to the ABP. The CAA considered that neither efficiency proposal requires a glide path as the savings are based on a reduction in cost forecasts or maintaining current performance. The CAA also proposed a pass through mechanism to account for the uncertainty associated with the rates revaluation.

Stakeholders' views

- E76 The CAA received three responses commenting on this issue.
- BA agreed with the CAA's proposals not to introduce a glide path for efficiency savings in this area. However, the efficiency targets set by the CAA were too low and the CAA should include a stretch target for ANS. The CAA had not investigated why HAL's ANS targets were above benchmark levels. BA was also concerned that SDG had been commissioned to undertake further work after the initial proposals, but that the airlines had not been consulted as part of this work. BA considered that this put the airline community at a disadvantage. Virgin made a similar point seeking clarification on process from the CAA.
 - HAL stated that the proposed reductions in cleaning costs would lead to a reduction in cleaning staff rotas, which would impact on the cleanliness of facilities and negatively impact on passenger experience. HAL stated that it had exceeded Gatwick and Stansted on SQR cleaning performance, and that its costs were forecast to reduce. HAL stated that SDG's benchmarking did not take account of the costs associated with specific terminal designs.
 - The Heathrow Airline Community agreed with the CAA's proposals not to forecast a glide path for the efficiency savings suggested for this area as there was no basis for any delay in implementing the savings identified by SDG.

CAA's final view

- E77 Both HAL and the airlines have provided comments on earlier versions of the report, and in response to the initial proposals. The CAA commissioned SDG to update its projections to take account of new information and stakeholders' responses to the initial proposals.
- E78 The report provides a summary of airline and airport operator comments on each efficiency proposal and the airlines responses are generally supportive of the SDG analysis and proposals. HAL's comments were more critical and in this context, the priority for this stage of the study was to respond to HAL's evidence and the consultants have therefore focussed on engagement with HAL.
- E79 In most areas SDG has re-iterated its original conclusions. The CAA has taken account of airlines' submissions and evidence through their

responses to the initial and final proposals. SDG took account of HAL's response by updating its benchmarking analysis based on HAL's data and acknowledged that total cleaning costs per square metre (total terminal area) will decline at a rate of 0.5% over Q6. SDG also stated that cleaning costs are primarily driven by 'front of house' passenger areas, which require more frequent cleaning. On this basis, SDG found that HAL's cleaning costs were forecast to rise by 1.6% per annum and proposed that HAL should aim to maintain costs constant resulting in an efficiency of £7.5 million over Q6. SDG also proposed a stretch efficiency of £8.6 million based on bringing costs down to the average benchmark.

- E80 The CAA considers it is reasonable for HAL to maintain cleaning costs per square metre constant in real terms, based on its passenger terminal areas and has adopted SDG's core efficiency proposal. This should be achievable without any deterioration in service quality. Accordingly, for its final view, the CAA has retained the level of efficiency in its final proposals in this area.
- E81 The CAA has reconsidered SDG's proposal to reduce ticket sales staff on the HEX service. There could be a case for removing ticket sale staff and replacing them with automated ticket barriers for example. This measure is used at most rail stations and could provide benefits by preventing ticket evasion, whilst reducing staff costs.
- E82 However this proposal could have a number of service quality impacts:
- passengers on the HEX service are likely to be very sensitive to time and uncertainty whilst travelling to or from a flight. The presence of staff on the train or at the station is part of the service offer and may encourage more passengers to use the service.
 - removing staff may to reduce the quality of the service and could have adverse effects on commercial revenue by reducing ticket sales.
 - removal of staff would require the installation of ticket barriers, which would make movement through the station more difficult for passengers with large bags.
- E83 Accordingly, the CAA has not applied the projected efficiencies in this area.

- E84 The CAA adopted SDG's core opex efficiency proposals relating to cleaning and rates costs. Overall these two proposals result in total savings of £38.7 million over Q6 relative to the ABP. The CAA considered that neither efficiency proposal requires a glide path as the savings are based on a reduction in cost forecasts or maintaining current performance.

Maintenance costs

Issue

- E85 The CAA commissioned SDG to assess HAL's Q6 maintenance cost forecasts. SDG examined the maintenance costs in the FBP, including benchmarking costs against seven other airports and examining HAL's procurement strategy. The study found that maintenance costs were 64% higher than benchmarks in terms of costs per square metre.
- E86 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 efficiency including undertaking more outsourcing of mid-tier complexity and reactive maintenance activities. SDG noted HAL had been able to achieve a saving of 16% through new outsourced contracts.
- E87 SDG concluded that some efficiency gains were likely to be possible through improvements to HAL's 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 maintenance cost per terminal area (reducing the gap to 50% of the average of the benchmarks).
- E88 The study also included an alternative core efficiency target of £51.3 million. This was based on a 10% reduction in third party engineering costs, which could be achieved through improvements to HAL's procurement strategy.

CAA's final proposals

- E89 The CAA commissioned SDG to update its study to account for new information and stakeholders' responses to the initial proposals. SDG

examined new data on terminal areas provided by HAL and found that HAL's costs per square metre were stable over Q6 and comparable to benchmarks. This removed the rationale for two of its original efficiency proposals.

- E90 However, SDG noted that the reduction in maintenance costs between the FBP and ABP more than exceeded the original stretch efficiency target. HAL had achieved this through retendering the contract for passenger baggage operations and maintenance achieving a 25% reduction in cost by consolidating the contract from two suppliers to one.
- E91 SDG considered 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 in other areas through similar changes. On this basis, SDG estimated that HAL could achieve a total efficiency saving of £33.6 million over Q6. This was based on achieving a 12.5% saving in non-baggage outsourced maintenance costs. SDG did not consider that it would be appropriate to adopt the airlines' proposal that HAL could achieve the average benchmark cost per metre square due to the more complex nature of HAL's maintenance activities - across a large airport with multiple terminals.
- E92 Maintenance staff costs account for 10% of total staff costs. The CAA considered the effect of the wage cost efficiency on HAL's maintenance costs and the risk of double counting wage and maintenance efficiencies. Accounting for the impact of the wage cost efficiency proposal on maintenance costs reduced the proposed efficiency to £20.0 million over Q6.
- E93 The CAA considered 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 multiple outsourced contracts let out in work packages to a framework of companies. HAL planned to move to a new framework arrangement from March 2014, which will provide an opportunity to reduce costs from the first year of Q6. HAL is therefore likely to have scope to reduce costs on an ongoing basis.
- E94 In summary, the CAA adopted SDG's updated core efficiency proposal, accounting for the impact of staff cost efficiencies without

applying a glidepath. This resulted in an overall efficiency of £20.0 million over Q6 relative to HAL's RBP.

Stakeholders' views

- E95 The CAA received four responses commenting on this issue.
- BA agreed with the CAA's proposals not to apply a glide path to maintenance efficiency savings. However, it did not agree with the efficiency savings suggested by the CAA which it argued were far too small. The efficiency target in this area should be £100 million. BA claimed that the CAA had not provided analysis of what proportion of the gap to benchmarks could be closed.
 - HAL stated that the maintenance efficiency proposal would lead to the failure of critical passenger and airline assets during peak times, which would impact on passenger experience. It was irrational to assume that savings achieved on the baggage maintenance contract renewal could be achieved across the entire spectrum of maintenance costs. The CAA's proposal was not supported by any evidence. HAL also disagreed with the CAA's decision to remove the maintenance efficiency savings from the glide path stating that such savings would have significant barriers to implementation, including constraints posed by contractual dates of third party contracts.
 - The Heathrow Airline Community agreed with the CAA's proposals not to apply a glide path to maintenance efficiency savings. However, it did not agree with the efficiency savings suggested by the CAA which were far too small. There was no reason why the gap between HAL's level of maintenance efficiency and the benchmarks cannot be closed fully, rather than the 50% proposed by SDG. The CAA had made no comment and provided no analysis of what percentage of the gap could be reasonably closed. The Heathrow Airline Community saw no reason why the CAA should not apply a 16% to 40% efficiency savings range to the remainder of the maintenance budget based on HAL achieving similar savings from retendering its baggage maintenance contract. The Heathrow Airline Community estimated that opex could be reduced by a further £100 million.

- Virgin could not understand the CAA's decision to reduce the maintenance cost efficiency target from £28 million to £20 million over Q6 given HAL's costs were found to be 64% higher than benchmarks in SDG's study. The savings achieved on the East Campus baggage maintenance tender provided evidence of HAL's non-commercial mind set and approach when managing its cost base.

CAA's final view

- E96 SDG's updated efficiency proposal was not based on benchmarking evidence. The benchmarking evidence described in SDG's original report was updated in the stage three report to account for new data provided by HAL. This indicated that costs per square metre were not expected to rise over Q6. This in combination with the lower maintenance cost projections in the ABP led SDG to the conclusion that the efficiency proposal based on benchmarking evidence was no longer appropriate.
- E97 SDG's updated efficiency proposal is based on HAL achieving a 12.5% reduction in its non-baggage outsource maintenance costs. SDG observed a number of areas where HAL could improve its maintenance efficiency, including through its approach to outsourcing and tendering. SDG noted that HAL had achieved a 25% reduction in outsourced baggage maintenance costs through changes to its procurement process and argued that this provided strong evidence that HAL was likely to be able to achieve savings in other areas. SDG proposed savings of £33.6 million over Q6.
- E98 The CAA considers that HAL has been able to reduce its costs significantly through changes to its procurement strategy. HAL will introduce a new procurement framework from the start of Q6 and this is likely to provide an opportunity to review and improve the efficiency of existing contracts. The CAA has adopted SDG's efficiency proposal.
- E99 HAL's maintenance costs forecasts include around £186 million of staff costs. The CAA's wage cost proposal will reduce maintenance costs by around £17.2 million (accounting for the increase to the wage efficiency described above). The CAA considers that it is appropriate to take account of this interaction by netting this efficiency off the SDG

maintenance efficiency proposal. This reduces the efficiency from £33.6 million to £16.4 million.

Central support costs

Issue

- E100 The CAA commissioned Helios to examine HAL's central support costs. The Helios study examined HAL's historic and forecast central support costs and collected a range of benchmark data based on airports, airlines and bespoke Hackett and Gartner data 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.
- E101 Based on comparisons with benchmarks, the study concluded that HAL could reduce central support 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 at the performance frontier.

CAA's final proposals

- E102 In considering how to interpret this evidence, the CAA 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 costs provided by the report and specific proposals for the achievement of cost efficiency;
 - the impact of proposed staff cost efficiency on central support costs and the potential for double-counting staff wage efficiencies based on the IDS evidence;
 - the efficiency savings included in the ABP, which included a 7% reduction in central support headcount; and

- further responses from the airlines and airport operators since the publication of the final report.
- E103 On balance, the CAA considered that it would be appropriate to incorporate the 'core' efficiency proposals into the range of efficiency savings for HAL after subtracting the reduction in 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.
- E104 The total wage efficiency included in the CAA's final proposals was £78 million, and central support staff account for around 20% of total staff costs. This implied that the wage cost efficiency would reduce central support costs by around £15.3 million over Q6. As this was more than the total core efficiency proposed by Helios, the CAA did not propose further efficiencies in this area.

Stakeholders' views

- E105 The CAA received three responses commenting on this issue:
- BA responded that the CAA had misunderstood its position. In summary, the CAA had confused savings that came from reducing wages with those that came from changing the employment structure and other areas. The CAA was wrong to assume that incorporating both these elements of savings amounted to double-counting.
 - HAL supported the CAA's interpretation of the Helios study and agreed that the proposed wage efficiency effectively includes the core savings proposals made in the Helios study.
 - The Heathrow Airline Community did not support the CAA's decision not to include an efficiency target for central support costs. The CAA had not fully understood the costs and drivers within central support costs and therefore failed to fully assess the level of savings that should be achieved. The CAA had confused savings that come from a wage strategy with savings that accrued from changing the employment structure. The Heathrow Airline Community was also disappointed that the CAA had chosen to ignore savings that could be made from other measures, such as a reduction in HAL's consultancy budget and lower insurance costs due to the reduced capex spending.

CAA's final view

- E106 The CAA notes the airlines' concerns about the interpretation of the proposals for greater efficiency in central support costs. The Helios study found that central support staff costs were generally higher than benchmarks, and did provide some evidence that central support functions had high levels of senior staff. These findings formed the basis of some of the efficiency proposals made in the study.
- E107 However the total cost benchmarking indicated that HAL's overall central support costs were comparable to peer group benchmarks in most areas. This suggests that overall central support costs could already be efficient. The benchmarking also indicates that there is a wide range of efficient spending on central support activities and it is difficult to assess costs based only on comparative benchmarks without supporting evidence and explanation for how the proposed savings could be achieved.
- E108 Over Q6, HAL's business plan includes a 30% reduction in total central support headcount, which is likely to address the balance between junior and senior staff. In addition, the CAA's wage cost efficiency will reduce costs by a further £19.1 million over Q6 (accounting for the changes described above). Taking account of this, HAL's central support costs will fall by 25% by the end of Q6. Given the finding that HAL's central support costs are already in line with average benchmarks in most functions, this suggests that the scope for additional process efficiencies may be limited. The CAA therefore believes that the level of efficiency assumed in its final proposals remains appropriate.

Efficiency frontier**Issue**

- E109 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 hypothetically efficient operator might incur) might move over time. The CAA commissioned independent consultants Cambridge Economic Policy Associates (CEPA) to examine this question.
- E110 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% per year.

CAA's final proposals

- E111 The CAA commissioned CEPA to update its work in response to stakeholders' comments on the initial proposals. CEPA confirmed that a frontier shift target of between 0.9% and 1% was an appropriate target for HAL.
- E112 The CAA considered that stretch savings are possible in relation to unidentified efficiencies. This was clear from the inclusion of such a target in HAL's business plan. It was true that such efficiencies must eventually be identified, planned and developed by a business. However, it was likely that, over the course of Q6, opportunities for cost savings would arise that were not anticipated in the ABP, for example as a result of new technology. The CEPA evidence suggested that such savings were likely to be around 1% per year on average, which was higher than the target implied by the savings in the ABP (which are equivalent to 0.87% per year).
- E113 The CAA adopted the 1% per year frontier shift saving estimated by CEPA. After taking account of HAL's stretch efficiencies, this resulted in a further efficiency relative to HAL's ABP of £20.4 million over Q6.

Stakeholders' views

- E114 The CAA received four responses commenting on this issue.
- BA and the Heathrow Airline Community agreed with the CAA that a 1% efficiency frontier target is appropriate and that it was possible to achieve it through unidentified savings. However, the CAA should not confuse the savings that it tasks HAL with to become efficient, with those that it should face when it is efficient. Consequently, the efficiency frontier savings should be applied in full and in addition to all other savings.
 - HAL stated that any assessment of the scope for frontier shift must account for all planned efficiencies regardless of how those efficiencies have been described. The CAA's isolation of certain efficiencies is not an accurate representation of the efficiencies set out by HAL.

- Virgin commented that the CAA was incorrect to reduce the frontier shift target by the volume of identified savings. Frontier shift should be applied incrementally to identified savings.

CAA's final view

- E115 The CAA agrees with Virgin that frontier shift efficiency should be applied in addition to all catch-up efficiency savings. This requires the CAA to make a judgement over the scope for catch-up efficiency at HAL, applying frontier shift in addition to those savings. The CAA considers that most of its efficiency proposals are based on catch-up efficiency (in staff costs, pensions, and maintenance) and more conservative forecasts (cleaning and rates costs). These savings will bring HAL into line with comparative benchmarks and correct for overly pessimistic assumptions about future costs.
- E116 HAL's business plan also includes efficiency relating to security processes, reductions in headcount and a workforce strategy which will address issues including absenteeism, overtime payments and roster efficiency. The CAA has assessed each of these areas and considers that, in combination; the efficiency savings will largely address existing inefficiencies at HAL bringing it to the cost frontier.
- E117 In addition to these savings, HAL has included a stretch target of £138.6 million over Q6 (equivalent to 0.87% per year) in its RBP. The CAA does not consider that HAL has well defined plans for achieving these efficiency savings. The CAA considers this efficiency proposal as 'frontier shift' and that the saving should be increased to reflect a net target of 1%. The CAA has therefore applied a further £20.4 million efficiency based on the 1% target.

Security – flow rates

Issue

- E118 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 250.¹²¹ HAL has stated that the differences between flow rates at Heathrow and other airports is explained by several factors including:

¹²¹ Figures are based on confidential benchmarking evidence from Copenhagen Airport.

- Heathrow's largest airline, BA, has a more generous hand baggage allowance than other airlines such as easyJet and Ryanair (which account for the majority of flights from Gatwick and Stansted). This increases the number of bags per passenger taken through security relative to other airports;
- Heathrow has a high proportion of long haul and premium passengers who are likely to carry more electronic 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.

E119 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 flow rate analysis evidence from HAL which tends to suggest that this is an important explanatory factor. However, the CAA understands that other airports such as Gatwick have been able to maintain higher flow rates despite the same changes in passenger behaviour. This suggests that other airports have been able to manage the impact of this factor more effectively than HAL.

CAA's final proposals

E120 The CAA considered the responses to the initial proposals. Based on the evidence and opinions presented, the CAA concluded that HAL's current flow rates are relatively low in comparison with other airports, but this was likely to be partially caused by uncontrollable factors.

E121 The CAA evaluated the points raised by airlines regarding the nature of passengers at Heathrow and Gatwick. Various factors were likely to affect flow rates including passenger types, baggage allowances, and the prevailing weather which tends to affect the amount 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 considered 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 was typically higher at Heathrow than other airports, which would tend to reduce flow rates.

E122 The ABP includes significant reductions in security costs. This is based on a 33% improvement on current flow rates (depending on the terminal) and 3% 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 a 23% reduction in security costs per passenger (from £1.93 in 2012/13 to £1.48 based on HAL's passenger forecasts). In addition to this, the CAA's proposed wage efficiency will reduce security staff costs by 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. In combination these measures will reduce total security costs by around 22% and security costs per passenger by 27% by 2018/19.

E123 On balance, taking account of the efficiencies included in HAL's ABP and the CAA's wage efficiency proposals, the CAA considered that further security efficiencies based on security flow rates could be difficult to achieve and could jeopardise service quality. The CAA did not propose further efficiencies related to flow rates.

Stakeholders' views

E124 The CAA received four responses commenting on this issue.

- BA was disappointed that the CAA appeared to believe that the low flow rates at Heathrow were justified. The CAA had failed to recognise the scale of benefits achievable in HAL's security function, despite recognising that performance was worse than in other airports, staff are overpaid and roster efficiency is sub-optimal. BA stated that HAL had two new terminal facilities and that it should be expected to achieve higher levels of process efficiency.

- HAL stated that it broadly agreed with the CAA's proposals regarding security processing efficiency and that it had already provided efficiencies in its business plan related to rostering, reductions in absenteeism, paid breaks and other areas of staff organisation. HAL stated that further reductions to the number of security officers and/or lanes could lead to longer queue time; reduce flow rates and commercial revenues.
- The Heathrow Airline Community was disappointed that the CAA appeared to believe that the low flow rates at Heathrow were justified. HAL's latest flow rate performance had dropped to 110 for planning purposes. It was not in the passengers' interests to conclude with this being acceptable. The Heathrow Airline Community stated that HAL's flow rates are around 50% lower than benchmarks against other airports despite newer terminal facilities. The Heathrow Airline Community stated that the £51 million efficiency savings included in HAL's business plan can be more than accounted for by the closure of Terminal 1 and the benefits of moving carriers into newer facilities.
- Virgin did not agree with the CAA's analysis of security process efficiency and stated that significant efficiencies were possible. Virgin stated that HAL's rationale for dismissing an efficiency target was neither comprehensive nor robust. BA's extra baggage allowance was a "red herring" and the impact of passenger mix was ambiguous. Virgin stated that the airlines have provided detailed analysis showing how the wage structure should be reorganised to reduce costs by 27% over Q6.

CAA's final view

E125 The CAA notes the airlines' comments that HAL should be able to achieve higher rates of security process efficiency due to its new terminal facilities. HAL is forecasting security flow rates of 140-160 passengers per hour per lane across its terminals against a current performance of around 125. Current flow rates may be lower than benchmarks. However, as with other forms of benchmarking, comparisons need to consider wider factors and the inherent uncertainties associated with the evidence. The benchmarking evidence available to the CAA uses self-reported flow rates which may be based on different definitions and do not fully take account of different security arrangements, lane layouts and staff manning. The

CAA considers that flow rates are also affected by factors including amounts of baggage and types of passenger and that these factors will tend to reduce flow rates at Heathrow relative to other airports.

E126 Flow rates vary by up to 20 passengers per hour between summer and winter months. This indicates that passenger baggage and general behaviour is an important driver of flow rates. US guidance on airport terminal design indicates that flow rates are affected by various factors and that typical airport flow rates are between 100 and 200 passengers per hour per lane.¹²² The benchmark sample data indicates that the average flow rate is around 190 passengers per hour per lane. However, the most suitable comparator in the sample, Amsterdam Schiphol, has a flow rate of 190 passengers per hour, which is close to Heathrow's forecast for Q6.

E127 An alternative comparison of security efficiency can be made using the number of passengers per security FTE per year. On this basis HAL is currently less efficient than comparators such as GAL. Heathrow has 190 passengers per security FTE compared with 200 at Gatwick and 200 at Stansted. By the end of Q6 Heathrow will have improved its performance to 200 passengers per FTE, exceeding GAL's current performance and matching Stansted Airport Limited's (STAL's). On this basis, the CAA does not propose further efficiency savings related to flow rates.

Security – rostering

Issue

E128 The IDS study 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 system which limits the ability of HAL to change staff supply in response to changes in demand leading to higher overtime payments.

¹²² ACRP Report 25, Airport Passenger Terminal Planning and Design, pg203-205.

- E129 The study concluded that there may be scope for 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 final proposals

- E130 The CAA noted that 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. The airlines made similar proposals, but with higher estimates of the potential efficiency. Overall, the CAA considered that the savings included in HAL's ABP workforce strategy provided 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 described above, the CAA did not propose further efficiencies in this area.

Stakeholders' views

- E131 The CAA received four responses commenting on this issue:
- BA and the Heathrow Airline Community accepted that there would be differences in estimations of savings but, the £51 million suggested by the CAA for the Q6 period could be more than accounted for by the closure of Terminal 1 and the benefits derived from moving carriers into newer facilities rather than implementing the initiatives suggested by the airlines and agreed by the CAA. Therefore, the proposal did not address areas that the CAA and HAL both agree should be tackled, such as roster efficiency, pay rates and so on. BA stated that it had not had sight of HAL's workforce strategy and could not comment on its accuracy, but the CAA should not rely on this as evidence.
 - HAL stated that it broadly agreed with the CAA's proposals regarding security processing efficiency and that it had already provided efficiencies in its business plan related to rostering.

- The Heathrow Airline Community commented that looking at the items associated with security savings over Q6, from improving facilities, closing obsolete terminals, nominal wage freezes, new starter contracts, improving flow rates, improvements in roster efficiency and removing overly generous contract provisions such as 70 minute paid breaks, should yield more than £80 million savings over Q6.
- Virgin commented that the CAA's final proposals did not address any of the £102.5 million savings over Q6 that Virgin had already identified.

CAA's final view

- E132 HAL's ABP forecast that total security staff costs in Q6 will be £683 million. The CAA's wage efficiency proposals will reduce this cost by around £38 million to £645 million. Only around 30% of this cost is sensitive to passenger demand. The remainder is largely fixed, based on fixed security posts, and airside and landside security patrols. This suggests that rostering and overtime efficiencies are only applicable to around £193 million of HAL's security costs.
- E133 Improving roster efficiency by 10% could reduce costs by around £20 million and reductions in absenteeism could reduce costs by around £4 million. IDS estimated that the average overtime figures for security staff is between 7% and 9%. Assuming that this could be reduced to around 4%, based on HAL's security cost forecast the CAA estimates that HAL could reduce costs by around £25 million over Q6.
- E134 Overall, the CAA estimates that these three measures could reduce costs by around £49 million over Q6, assuming that changes were achieved in full from the first year. On this basis, the savings in HAL's workforce strategy appear to be a reasonable estimate of the scope for further workforce efficiency over Q6.

Impact of 2017 rates revaluation

Issue

- E135 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).¹²³ 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 relative to HAL's FBP.

CAA's final proposals

- E136 For its final proposals, the CAA adopted HAL's suggestion of a pass through term for the variance of the impact of the 2017 rates revaluation on its costs from the forecast impact, recognising that the effect of the revaluation on rates costs is largely uncontrollable. The impact of the rates revaluation depends upon the relative changes to gross national rateable value between 2008 and 2015¹²⁴ and the specific 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. However HAL's forecast of the impact of the revaluation was significantly higher than that forecast by other airport operators, and was also much higher than the relative effect of the previous 2010 revaluation.
- E137 For the purposes of setting the Q6 price control the CAA has to set a forecast level of costs. HAL's forecast was based on an assumption that construction costs would increase by 30% between 2008 and 2015. SDG found that construction costs have only increased by 4.6% between 2008 Q1 and 2013 Q3, meaning that a 30% increase by 2015 is very unlikely. SDG estimated that the impact is more likely to be around 14% based on the historic relationship between construction prices and GDP growth.
- E138 SDG considered the impact of the rates revaluation on HAL's forecast costs in the light of HAL's comments on the initial proposals. Its revised opinion was that the rates revaluation would result in a 9% increase in rates costs compared to HAL's assumption of 26%. This resulted in an efficiency of £31.2 million over the course of Q6

¹²³ SDG, Review of other operating expenditure at Heathrow Airport, page 12, 2012, available at www.caa.co.uk

¹²⁴ 2008 and 2015 are the valuation dates used for the rate revaluations occurring in 2010 and 2017.

compared to HAL's ABP. If this assumption turns out to be too high or too low, 80% of the difference will be passed through to users through the pass through mechanism. The CAA decided to adopt SDG's cost forecast in its final proposals. BA's proposal that there could be savings from the delay to the rates revaluation has been included in HAL's business plan.

Stakeholders' views

E139 The CAA received three responses commenting on this issue.

- BA objected to the CAA's provision for a rates revaluation mechanism, arguing that HAL was best placed to bear the risk of rates costs. BA also argued that the rates mechanism should be symmetrical.
- HAL supported the introduction of a rates revaluation pass through mechanism into the price control formulae. HAL made several points about the design of the formulae to ensure that it would achieve the intended results.
- The Heathrow Airline Community stated that it could not comment on the evidence provided by Gerald Eve regarding HAL's rate cost forecast. The Heathrow Airline Community was pleased that the rates pass through mechanism included a risk sharing mechanism for HAL and noted that any reduction in anticipated rates cost in the settlement should also be shared with the airlines and that there should be robust governance through the revaluation process to update and share with the airline community the impact and challenge process that HAL had undertaken to minimise cost increases.

CAA's final view

E140 The CAA has accepted some of HAL's amendments to the rates cost mechanism and confirms that the intended purpose of the mechanism is to pass through both higher or lower rates cost to passengers following the rates cost revaluation in 2017. For clarity, the mechanism is not intended to pass through any changes to HAL's overall rates cost associated with changes to terminal space or other factors. The intention is to pass through changes in rates costs associated only with the relative impact of the revaluation in 2017 on

HAL's pre-existing rateable assets above or below a 9% increase. This is reflected in the new wording of the price control condition.

Other Issues

E141 Several other issues were raised in stakeholders' responses. The CAA's final proposals for these issues and its final view are summarised below.

GAL's pension commutation payments

E142 Responses to the CAA's initial proposals for Gatwick 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 its RAB as it had reduced its exposure to pension deficit costs in the BAA scheme. Similar payments are expected to be made in relation to the sale of Edinburgh and Stansted airports.

E143 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 taken into account in the regulatory settlement for GAL. This conclusion had 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 on HAL's deficit costs. This issue was discussed above in the pension deficit section.

Closure of Terminal 1/opening of Terminal 2

E144 The Heathrow Airline Community's response to the final proposals stated that early closure of Terminal 1 in June 2015 could save £50 million. It was disappointed that the CAA's final proposals had not recognised this saving. BA endorsed the Heathrow Airline Community's position. It expected that the timescales for closure could be significantly accelerated by HAL.

E145 In its final proposals, the CAA considered that there was 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.

- E146 The terminal closure is a complex process which requires the movement of several airlines from Terminal 1 into Terminal 2 and other terminals. The last airline moves from Terminal 1 are planned to occur in March 2016. This is subject to ongoing negotiation with several airlines. Airline moves are in turn dependent upon the completion of supporting work such as the T3IB project and 'cut in work'. This work is expected to be completed in December 2015. This means that HAL has assumed that Terminal 1 will be open for around nine months following the completion of airlines moves, before the terminal is fully closed.
- E147 Assuming an earlier date without evidence, would place risks on HAL and could have operational impacts on the relocation of airlines. HAL has also considered and consulted on alternative options for terminal closure, including achieving an earlier closure date. HAL has made a decision to seek to minimise the operational impacts of the terminal closure, this requires a longer time frame for airline moves. The CAA has no evidence to support the assumption of an earlier closure date.

Terminal 2 Operational Readiness

- E148 The airlines stated that HAL was given an £10 million allowance for Terminal 2 Operational Readiness costs in Q5. Because Terminal 2 will not open until Q6, the airlines considered that additional operational readiness costs should not be included in Q6. The CAA has investigated in some detail whether allowing an operational readiness budget of £10 million does involve double-counting. After careful consideration, the CAA has come to the conclusion that it does, and has reduced HAL's opex forecast accordingly.
- E149 HAL has made the following points to the CAA.
- At this late stage in the process, HAL was surprised that the CAA was considering adopting a fundamentally different approach to assessing unforeseen events in Q5.
 - If the CAA was minded to change its position, it should also consider all the unforeseen costs that HAL had incurred that were not part of the Q5 operating cost allowance, including the materially lower passenger numbers.
 - Furthermore, HAL had made considerable trigger payments to airlines for Terminal 2.

- E150 The CAA cannot accept any of these points. It does not consider that it is adopting a fundamentally different approach to assessing unforeseen events in Q5. It has always wished to avoid making allowances for the same cost item in two consecutive price control periods. It does not consider, therefore, that HAL's second point, that other cost items should be reconsidered, is correct. No parties have argued that such items as the lower passenger forecast have been allowed twice in consecutive price control periods. Finally, HAL may have made considerable trigger payments to the airlines for the delay in the opening of Terminal 2. However, these relate to capex, while the operational readiness costs are opex.
- E151 Accordingly, the CAA has reduced HAL's opex allowance by £10 million in the first year of Q6.

Passenger Rapid Transit

- E152 The CAA has excluded the PRT (CTA and Terminal 5) from the RAB 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 £10.3 million over Q6.¹²⁵ The CAA has removed this amount from the opex allowance. In response to the final proposals, BA and the Heathrow Airline Community agreed with the CAA's decision to remove the PRT from the RAB.

Passenger Forecasts

- E153 The CAA has assumed higher passenger numbers than forecast in HAL's ABP. This is based on several factors including improving economic forecasts and higher outturn passenger numbers in the base year. These factors are described in more detail in Appendix B. Overall the CAA has assumed that passenger numbers will be 347.7 million over the four years and nine months of Q6, 2.0% higher than assumed in HAL's ABP. This will have an impact on HAL's opex in some areas including increasing the need for security staff, utility costs and commercial services for example.

¹²⁵ The figure of £9.6 million is net of the estimated costs of a bus 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.

E154 The CAA has estimated that the elasticity between opex and passenger numbers is between 0.3 and 0.5.¹²⁶ For consistency with previous regulatory decisions, including the final proposals for GAL, the CAA has increased the opex allowance based on an elasticity of 0.3. This increases the opex allowance by £31.1 million over Q6.

CAA Security Charge

E155 In its response to the final proposals, HAL raised the issue of the CAA's charges for aviation security. The CAA consulted on its proposed mechanisms for recovering the costs of discharging its new Aviation Security function from April 2014. The CAA published a consultation document stating that the security charge would be around 4.9 pence per departing passenger, levied on airports with over 100,000 passengers.¹²⁷ Based on the CAA's passenger forecast, this means that HAL is likely to incur charges of around £8.9 million over Q6. This has been included in the opex allowance.

Changes to Security SQR Standards

E156 The CAA is proposing changes to the measurement of the SQR across fixed control posts. This involves assessing performance across separate groups of control posts, rather than as a group average. This will increase the probability of failure and penalty costs. HAL has estimated that it would require an additional 40 security officers at four control posts to implement the new standards. HAL estimates that this would increase opex costs by £8 million over Q6.

E157 The CAA has analysed the effect of the change in policy based on HAL's historic performance over 2013/14. This shows that HAL would have regularly failed the standard in three of its five control post areas, (including the Southside) and suggests that HAL will require some additional resources to avoid penalties.

E158 However, based on this analysis the CTA control posts passed the standard in every month of 2013 but one (being marginally only below in October) and are unlikely to require significant additional staff. This suggests that HAL may have overestimated its need for additional staff.

¹²⁶ Steer Davies Gleave, 2012, Review of operating expenditure and investment consultation (Annex D), Stansted Mid Term Q5 Final Report.

¹²⁷ Available at www.caa.co.uk

- E159 HAL has also assumed that each security officer will cost around £40,000 per year. Based on the findings in the IDS study described above, the CAA considers that this cost should be reduced by 17% to around £33,000 to account for HAL's high staff costs. Overall the CAA has increased the opex allowance by £5 million over Q6 to account for the change in HAL's SQR standard.

Macroeconomic Factors

- E160 The airlines stated that they were concerned that macroeconomic factors have not been consistently applied in the proposals highlighting the reduction in the proposed wage cost efficiency. The airlines stated that if the CAA considered the macroeconomic conditions had changed, this should be reflected in higher commercial revenue forecast. This issue has been discussed in the wage cost efficiency section and further in the commercial revenue section in Appendix F.

Overall level of opex over Q6

Issue

- E161 The CAA's statutory duties require it to further users' 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 over Q6.

CAA's final proposals

- E162 Given its statutory duties, the CAA based its final proposals on its consultants' evidence and efficiency proposals. This resulted in a £176 million reduction in opex over Q6 relative to HAL's ABP. Should the 2017 rates revaluation conclude as per HAL's expectation, the reduction would decline to £151 million.

Stakeholders' views

- E163 The CAA received four responses commenting on this issue.

- BA stated that, given the CAA's duty to have regard to the need to promote efficiency and economy, it should forecast HAL's opex on a bottom-up basis. HAL was inefficient, over-rewarded and making record profits. Allowing HAL to set a budget and then assessing efficiency savings would build inefficiency into the settlement. BA also objected to the CAA's characterisation of its forecasts as HAL's "efficient" level of opex. In addition, BA made some process points concerning its access to HAL's workforce strategy and SDG's updated studies.
- HAL stated that the CAA had adopted a very prescriptive approach in some areas of its analysis, and had made arbitrary assumptions for example in maintenance and cleaning costs where it had simply accepted SDG's proposals. HAL stated that it had experienced significant shocks in Q5 including additional security obligations worth around £18 million, relocating all company resources to the Compass Centre and restructuring in response to forced divestments whilst simultaneously improving the passenger experience. HAL stated that the CAA's final proposals suggest an additional cost saving of £176 million over Q6, which implied a total saving of £603 million combined with HAL's own cost savings. HAL stated that this translated to a cost saving of 3.6% per year, which it considered would be difficult to achieve without service quality impacts.
- The Heathrow Airline Community stated that, given the CAA's duty to have regard to the need to promote efficiency and economy, it should forecast HAL's opex on a "bottom-up" basis. HAL was inefficient, over-rewarded and making record profits. Allowing HAL to set a budget and then assessing efficiency savings would build inefficiency into the settlement. It also objected to the CAA's characterisation of its forecasts as HAL's "efficient" level of opex. In addition, the Heathrow Airline Community made some process points concerning its access to HAL's workforce strategy and SDG's updated study. The Heathrow Airline Community stated that the CAA had a duty to passengers to insist that the airport was run as efficiently as possible. HAL's status as a regulated monopolist should not preclude it from being run just as efficiently as a competitive business.

- Virgin was extremely disappointed with the lack of progress on opex savings. The CAA should forecast HAL's opex on a "bottom-up" basis. It was unclear why the growth in the economy meant that it would be more difficult for HAL to deliver wage savings. Virgin did not accept that it had double-counted efficiency savings. In addition, Virgin made process points concerning its access to HAL's workforce strategy and SDG's updated study.

CAA's final view

- E164 The CAA has addressed many of these points in the preceding sections. The CAA has analysed HAL's opex using both top-down benchmarking, and bottom-up studies across different areas of HAL's business plan. The CAA has considered each of the consultants' evidence and efficiency proposals on a case by case basis and adopted proposals where the evidence for efficiency is convincing.
- E165 In some cases, the CAA has not adopted, or made amendments to efficiency proposals where there is uncertainty associated with the evidence or there are interactions with other proposals. The Helios central support and SDG maintenance efficiency proposals both interact with the IDS staff cost efficiency for example. Similarly it is necessary to take account of the efficiency savings included in HAL's own business plan for example in wages, pensions and frontier shift.

CAA's final view

- E166 A breakdown of the efficiency savings associated with each piece of evidence described above is shown in figure E.3 below. The figure also shows the CAA's projections of the likely increase in opex caused by the increase in traffic forecasts and 'other changes' including the CAA security charge, removal of Terminal 2 operational readiness costs and change to fixed post SQR measurement.

Figure E.3: Breakdown of CAA's final view on opex

£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	0	-4	-4	-4	-4	-16
Central Services	-	-	-	-	-	0
Wage efficiency	-7	-14	-20	-25	-31	-97
Pensions	-3	-2	-2	-2	-2	-9
Frontier shift	-1	-3	-4	-5	-7	-20
PRT	-2	-2	-2	-2	-2	-10
Change in traffic	8	6	6	6	6	31
Other changes	-7	3	3	3	3	4
Total	-14	-17	-25	-42	-59	-157
CAA final view	1,058	1,012	985	957	950	4,962

Sources: HAL and CAA

E167 Based on the CAA's final view, its projections for HAL's efficient opex over Q6 are set out in figure E.4 below. Overall, the CAA proposes that HAL should reduce its opex allowance by £157 million (3.1%) relative to the ABP. This would reduce opex by 2.0% per year over Q6 (equivalent to a 1.5% reduction from 2012/13). This compares to an equivalent per year reduction of 2.0% in the final proposals. The total opex allowance over Q6 is £4,962 million.

Figure E.4: CAA's final view on opex - 5 years basis

£ 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 FPs	1,057	1,006	980	953	947	4,944
CAA final view	1,058	1,012	985	957	950	4,962

Sources: HAL and CAA

E168 Adjusting the CAA's final view forecast to reflect the four years and nine months duration of the control period reduces the CAA's opex forecast to £4,731 million (see figure E.5 below).

Figure E.5: Forecast opex in Q6 - 4 years 9 months basis

£ millions	9 mo. 2014	2015	2016	2017	2018	Total
CAA final view	805	1,029	993	955	948	4,731

Source: CAA

APPENDIX F

Commercial Revenues

- F1 The forecasts for HAL's commercial revenues are an important element of the price control. Under the single till approach, they are deducted from its forecast costs to arrive at the regulated revenue requirement. This appendix outlines:
- the process in deriving commercial revenues forecasts to date;
 - the key issues between HAL and the airlines; and
 - the CAA's final view on commercial revenues to be taken into account in calculating the Q6 price cap.

CAA's final proposals

- F2 Projections for HAL's commercial revenues have been the subject of extensive consultation between HAL and the airlines. In its ABP, HAL projected commercial revenues to be £2,814 million in Q6. The CAA's initial forecasts of £2,912 million were revised in the CAA's final proposals to £2,880 million as set out in figure F.1 below.

Figure F.1: HAL and CAA projections for commercial revenues over Q6

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
HAL ABP	518	553	574	583	586	2,814
CAA IPs	549	567	586	596	613	2,912
CAA FPs	530	564	586	596	604	2,880

Source: HAL and CAA

- F3 The CAA's final proposals were based on a report from the CAA's consultants, SDG.¹²⁸ The final proposals used SDG's per passenger forecasts together with the CAA's traffic projections.

¹²⁸ Steer Davies Gleave, Assessment of Commercial Revenues - Heathrow Airport (Stage 3) Report, August 2013, available from:

- F4 Before forecasting total commercial revenues throughout Q6, the CAA adjusted SDG's forecasts to remove £8 million of revenues attributable to the T5 PRT, consistent with its policy of removing T5 PRT-related costs and revenues from regulated charges. After the T5 PRT adjustment, approximately one-fifth of the remainder of the difference between HAL's projections and CAA's final proposals was attributable to the higher traffic forecasts. Allowing for these factors reduced the difference between HAL and CAA's projections to £51 million, or less than 2% of forecast commercial revenues.

Issues

Overall projections

Issue

- F5 To set the Q6 price control, the CAA must project HAL's commercial revenues 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 airport charges.

CAA's final proposals

- F6 The CAA considered that the SDG study provided a balanced argument on the key issues concerning HAL's commercial revenues forecasts. After making some adjustments to SDG's updated revenue forecasts per passenger (for the removal of the Terminal 5 PRT), the CAA decided to maintain the methodology of calculating total revenue by uplifting SDG's per passenger forecasts as adjusted with its own passenger traffic forecasts.

Stakeholders' views

- F7 The CAA received four responses which addressed the level of commercial revenues over Q6.

<http://www.caa.co.uk/docs/78/SDG%20%20LHR%20Commercial%20Revenues%20REDACTED.pdf>.

- BA considered that the CAA's forecast underestimated Q6 commercial revenues by around £136 million. It expected commercial revenues to increase to account for additional traffic of about 10 million passengers. In general, BA maintained that the evidence submitted by its consultants, Nyras, was appropriate. It considered the CAA's proposal to be insufficiently stretching. BA was unclear what the CAA meant by stating that its forecasts were based on SDG's forecasts and expressed concern that the CAA has provided no rationale as to why it did not adopt its expert consultants' figures in every case. BA noted that the individual differences between Nyras and SDG were relatively small but added up to a significant difference overall.
- HAL considered that the CAA overstated the scope for commercial revenue growth in Q6. The CAA should acknowledge HAL's continued leading performance in the commercial area. It had included stretched income above that already assumed by HAL. HAL referred the CAA to its response to initial proposals. The CAA's methodology of uplifting SDG's forecast revenues per passenger in line with traffic was over-simplistic and resulted in additional stretch due to rounding adjustments. HAL also considered that the CAA had incorrectly expressed SDG's forecast of total commercial revenues. The airlines had had the opportunity to challenge the assumptions on which the CAA has developed its proposals. The CAA's forecasts were very challenging.
- The Heathrow Airline Community disagreed with the CAA's forecast for commercial revenues based on evidence from BA's consultants Nyras. It considered that the CAA's forecast was understated by around £136 million. The Heathrow Airline Community also identified an additional £80 million of revenue over Q6 from expected higher traffic forecasts.
- Virgin responded that commercial revenues forecasts needed to be updated to reflect the much higher traffic forecasts.

CAA's final view

F8 To derive the commercial revenues forecasts, the CAA:

- based the forecast commercial revenues forecasts in its final proposals on SDG per passenger figures for all retail categories and property;

- used SDG's per passenger figures for car parking and adjusted them to remove T5 PRT revenue. Apart from the T5 PRT adjustment, all the CAA's forecasts were based on projections by its consultants; and
- uplifted the per passenger forecasts with its own traffic forecast to arrive at the total commercial revenues forecast of £2,880 million in its final proposals.

F9 The CAA continues to consider its methodology of uplifting the forecasts for commercial revenues per passenger by traffic forecasts appropriate. The CAA acknowledges that the link between property revenues and traffic forecasts is not as direct as that between traffic and retail and car parking revenues. However, the CAA notes that property revenues consist of elements which are linked to passenger numbers. For example, the CAA considers it reasonable to assume that as passenger numbers at the airport increase, there will be room to increase hotel revenues and, less visibly, contractors' accommodation revenues as increases in passenger numbers will require increases in contractor numbers.

F10 HAL particularly disagreed with uplifting property revenues with passenger numbers stating that other factors drive revenue. The CAA points out that SDG undertook a thorough analysis of these factors and incorporated them in their per passenger forecasts, i.e. the base number for property revenues. The potential increase in the per passenger forecasts identified by SDG was 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. The CAA points out that its methodology of uplifting commercial revenues forecasts per passenger with traffic forecasts is consistent with that used previously by the CC in its price control review for Gatwick and Heathrow¹²⁹ as well as Stansted¹³⁰ in 2007 and the CAA in its Q5 decision.

¹²⁹ CC, Heathrow Airport Ltd and Gatwick Airport Ltd Q5 price control review, 2007, available from: <http://www.competition-commission.org.uk/our-work/directory-of-all-inquiries/heathrow-and-gatwick-quinquennial-review/final-report-and-appendices-glossary>.

¹³⁰ CC, Stansted Airport Ltd Q5 price control review, 2007, available from: <http://www.competition-commission.org.uk/assets/competitioncommission/docs/pdf/non->

- F11 The CAA considers that its use of SDG's retail, car parking (before adjusting for T5 PRT) and property revenues per passenger forecast as expressed in the consultants' report with two decimal places was appropriate. The CAA also notes that SDG did not provide its own single forecast of total commercial revenues over Q6. The number quoted by HAL (£2,873 million) is mentioned in SDG's report as an example of what the total commercial revenues would be if SDG's per passenger forecasts were uplifted with HAL's traffic projections. The forecast quoted by the CAA in its final proposals of £2,885 million represents SDG's per passenger revenues uplifted with the CAA's traffic forecasts before any adjustments.
- F12 Since the publication of the final proposals, the CAA has received updated traffic forecasts from HAL. On the basis of the updated forecasts, it has derived its own revised forecasts for commercial revenues for Q6. The impact of this change is shown in figure F.2 below. The CAA notes that this is the total impact of the increase in traffic forecast on HAL's commercial revenues before CAA's adjustments discussed in the sections below.

Figure F.2: Change in commercial revenues projections of the CAA's revised traffic forecasts

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
Change	8.3	8.8	9.0	9.1	9.1	44.2

Source: CAA

- F13 The CAA's final view on the level of commercial revenues, based on its conclusions on the detailed issues discussed in this appendix, and on its traffic forecasts, is shown in figure F.5 at the end of this appendix.

Retail

Tobacco sales

Issue

- F14 The main issue concerning the projections for HAL's duty free sales was the impact of the Tobacco Display Act (TDA). SDG agreed with

inquiry/rep_pub/reports/2008/fulltext/539.pdf.

HAL and the airlines that a decline in tobacco duty free sales was likely to occur as a result of the TDA. However, SDG's discussions with another UK airport operator that undertook trials suggested that the impact was likely to be lower than that envisaged by HAL and this view was reinforced by analysis of published results from the Dublin trial. HAL forecast a 40% impact (and 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. The CAA agreed with SDG. It did not believe that there was proof that a tobacco ban will be implemented in Q6.

CAA's final proposals

- F15 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 was that whilst such a ban was likely (as it is a probable outcome of a World Health Organisation (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 were uncertain. SDG also pointed out that given the fact that the study had not yet begun, a 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.
- F16 The CAA's final proposals were based on SDG's projections for the impact of the TDA because:
- World Duty Free (WDF) has not been able to justify each of its arguments with data;
 - SDG's projections have taken detailed account of projections at other airports; and
 - the airlines agreed with SDG's forecasts.
- F17 Based on SDG's views, the CAA assumed a 12% impact of the TDA on tobacco revenues.

Stakeholders' views

- F18 The CAA received one response commenting particularly on the forecast level of tobacco revenues over Q6. HAL maintained the likely impact of TDA to be 40% and clarified that this is the assumed impact in the first four years and an outright ban on tobacco sales in the final

year of Q6. HAL considered that the CAA's assumption was based upon data from a trial non-compliant with the TDA and therefore did not reflect the anticipated impact. HAL aligned its position on the tobacco ban with the assumptions of WDF, whom HAL considered to be the industry experts and best placed to judge this uncertainty. HAL continued to disagree with further income stretch from the negotiation of concessions.

CAA's final view

F19 Given the lack of additional information to justify HAL's 40% impact projections, the CAA's final view projects a 12% impact of the TDA on tobacco revenues.

Advertising

Issue

F20 The SDG report commented, in agreement with the airlines' view, that there might be an opportunity for further growth in revenue from advertising although they acknowledged that HAL's ABP included an additional £5 million in advertising revenues compared to the FBP. SDG identified potential stretch to HAL's FBP forecasts in this category. SDG identified opportunities for further income from sponsorship.

CAA's final proposals

F21 The CAA's final proposals were based on SDG's forecasts, which favoured HAL's approach of emphasising quality of advertising over quantity. Once the projections for advertising revenues were uplifted with the CAA's traffic forecasts, they amounted to £38 million over Q6.

Stakeholders' views

F22 The CAA received one response commenting on the forecast level of advertising revenue over Q6. BA responded that it was difficult to comment on advertising revenue as this information had been excised from the final proposals. BA maintained its position that the appropriate level of advertising revenue over Q6 was £172 million.

CAA's final view

F23 The CAA notes that although SDG's and Nyras' projections for advertising are almost identical, Nyras considered several factors which provided an upside to its forecast. These were discussed in the

CAA's final proposals. The CAA maintains its earlier methodology for advertising revenues which used SDG's advertising revenue per passenger uplifted by the CAA's traffic forecast. Due to the change in traffic forecast the total advertising revenues have increased from £~~2~~ million to £~~2~~ million. The CAA notes that this figure does not differ greatly from that suggested by the airlines.

Other retail issues

Issues

F24 In relation to other retail revenues, concerns were raised about the economic assumptions for HAL's commercial revenues.

CAA's final proposals

F25 The CAA's final proposals were based on SDG's forecasts.

Stakeholders' views

F26 The CAA received two responses commenting on other retail issues.

- BA considered that the CAA's forecasts based on SDG's projections were pessimistic and therefore inconsistent with the CAA's position of GDP growth with respect to wage inflation.
- Virgin stated that retail spend per passenger should increase if the CAA believes that real earnings are going to grow over Q6.

CAA's final view

F27 The CAA notes the potential upsides in the macroeconomic environment. However, it considers that the impact this would have on retail revenues is hard to quantify. There seems to be little correlation between various macroeconomic factors such as GDP or real household consumption and past retail revenues per passenger. The CAA also notes that the airlines did not appear to have a methodology to quantify this relationship. Recent findings pointing towards strengthening economy as GDP forecasts increase are already accounted for in the CAA's traffic forecasts which directly affect the value of commercial revenues. The CAA also notes that a rise in real earnings in the UK would not necessarily lead to higher spend at Heathrow, where, according to HAL, only about 38% of passengers are British.

Car parking

Issue

F28 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 arise from a combination of restructuring of short stay parking tariffs along with growth from pre-book parking categories.

CAA's final proposals

F29 The CAA based its final proposals on SDG's forecasts. The airlines generally supported SDG's car parking revenues forecasts. These forecasts were adjusted by the CAA by removing £8 million of revenues attributable to the T5 PRT.

Stakeholders' views

F30 The CAA received two responses which commented on its Q6 car parking revenue projections.

- BA supported the CAA's view that a market for short stay car parking exists but was unsure about the process that the CAA has gone through in order to reach lower per passenger yield than in its initial proposals. BA maintained that the car parking projections for staff in the CTA area did not reflect the commercial price that HAL was planning to charge as BA has not seen movement from HAL's FBP where HAL clearly states that commercial revenues do not include an uplift from the current rate. BA also did not support the CAA in removing £8 million revenue attributable to the PRT system as it was too difficult to judge the relevant incremental revenues relating to the PRT. BA also pointed out that the car park that is served by the PRT system has the same pricing structure as the off terminal car park that serves the central area, yet that car park has no PRT system.

- HAL did not consider that there were any opportunities within the sub 15 min price bracket in car parking pricing policy nor did it consider that increasing the pre-book opportunity would deliver returns given the estate capacity constraints and impact on margin dilution. Following its comments on capex, HAL stated that the CTA PRT will not be included in the RBP and ABP, the CAA must ensure revenue of £7.3 million is corrected accordingly.

CAA's final view

- F31 The CAA maintains its view that in order to be consistent with the decision to not include the PRT in its capex and opex forecasts it is necessary to remove the impact of the PRT on commercial revenues. The CAA confirms that its final proposals included an adjustment in commercial revenues of £7.8 million for T5 PRT as forecast by HAL in August 2013.¹³¹ Since then, HAL has provided a forecast of £7.3 million for CTA PRT in September 2013.¹³² The CAA adjusted its forecast to represent the removal of CTA PRT.
- F32 The CAA does not agree with BA's view that it is too early to judge the appropriate amount of commercial revenues which HAL should forego if the PRT is removed from the RAB. The CAA understands that the commercial revenues include advertising/sponsorship opportunities within the PRT, and consequently are relatively easy to hypothecate. Accordingly, the CAA has excluded commercial revenues derived from the PRT from its calculations of HAL's Q6 price control.
- F33 In response to BA's comment that the car park that is served by the PRT carries the same pricing structure as the car park for CTA, HAL pointed out that this is incorrect as the CTA and the T4 business car parks are priced at one level, while T5 (served by the PRT) and T1 Business Plus (served with an 'on-demand' transfer minibus) are priced at a higher level to reflect the enhanced service proposition.
- F34 HAL also disagreed with BA that car park projections for staff in the CTA do not reflect the commercial price that HAL are planning to charge. HAL pointed out that these were based on experience from previous price rises (e.g. 2010/11), where any increase in price is

¹³¹ Letter from HAL, August 8, 2013.

¹³² Correspondence between James Mackay (HAL) and Peter John (CAA) on September 26, 2013.

balanced by a reduction in usage. HAL considered that although a decision has not been made yet on the appropriate price, it was assumed that the additional revenue from any increase in price will be offset by a reduction in the number of CTA staff passes on issue.

- F35 The CAA also notes that, without the PRT adjustment, the forecast car parking revenues have increased between the initial and final proposals as set out in CAA's final proposals. These increases have been offset by the PRT adjustment.

Property

Issue

- F36 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 final proposals

- F37 The CAA based its final proposals on SDG's property revenues forecasts.

Stakeholders' views

- F38 The CAA received one response on its forecasts for HAL's property revenues. HAL considered it unrealistic to re-let 1,700 square feet of currently void space in the next 12 months. HAL noted that the guide price mechanism required all components of the indicator to be updated and considered it inappropriate to "cherry pick" specific economic indicators such as the Investment Property Data Bank (IPD). A 10% average return for the fund used for property space rationalisation within the terminals (Flexi Pot) was a reasonable and considered assumption as it took into consideration the different nature of projects that are likely to be delivered over the Q6 period.

CAA's final view

- F39 Given the lack of additional information to justify HAL's disagreement with forecasts to re-let 1,700 square feet of currently void space in the

next 12 months the CAA maintains that SDG's forecasts adopted by the CAA are reasonable and achievable. The CAA acknowledges that IPD is not the only component of the guide price. However, as one of the three equally weighed components, the IPD has a strong influence on the guide price and the CAA considers it appropriate to account for the substantial improvement between July 2012 forecasts as used by HAL and now available actuals for 2012/13.

- F40 Given the lack of additional information to justify HAL's comment on average return for the fund used for property space rationalisation the CAA maintains that SDG's forecasts adopted by the CAA are appropriate. Given the explanation above, the CAA maintains its forecasts as set out in its final proposals.

CAA's final view

- F41 Given the CAA's final view on specific issues mentioned above, figure F.3 presents an overall breakdown of the CAA's final view on commercial revenues less PRT revenues. The CAA notes that SDG's and HAL's forecasts do not significantly differ, once the impacts of the CAA's decisions on the PRT and traffic forecasts are taken into account.

Figure F.3: 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	0.98	1.00	1.03
Property	1.44	1.47	1.45	1.44	1.42
Total	7.48	7.95	8.15	8.18	8.22
CAA passenger forecasts (millions)	71.9	72.1	72.8	73.6	74.3
£ millions					
Retail	370.3	398.0	416.4	422.5	428.7
Car parking	63.9	69.2	71.1	73.5	76.5
Property	103.5	106.0	105.6	106.0	105.5
Total	537.8	573.1	593.1	602.0	610.7

Source: SDG and CAA

F42 The CAA's final view on efficient level of HAL's commercial revenues is presented in figure F.4 below.

Figure F.4: CAA's final view for commercial revenues

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
Commercial revenues	537.8	573.1	593.1	602.0	610.7	2916.7

Source: CAA

F43 This represents a £37 million increase in the commercial revenue forecasts compared to the final proposals on a five-year basis, driven by the higher passenger forecasts and slightly offset by the CTA PRT adjustment. Adjusting the CAA's final view forecast to reflect the four years and nine months duration of the control period means that the CAA's commercial revenues forecast is reduced to £2,790 million (see figure F.5 below).

Figure F.5: Forecast commercial revenue in Q6 - 4 years 9 months basis

£ millions	9 mo. 2014	2015	2016	2017	2018	Total
Commercial revenues	413.3	573.9	591.2	601.2	610.7	2,790.2

Source: CAA

APPENDIX G

Other Revenues and Charges

- G1 Forecasts for other revenues (ORs) and other regulated charges (ORCs) are an important part of 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.

Other revenues and charges process to date

- G2 ORs includes the following activities:

- rail income;
- inter-company income; and
- other commercial income.

- G3 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.

G4 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. 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 charges 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 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.

G5 Other charges were considered by a CE sub-group, which agreed:

- that the transparency arrangements should continue through Q6;
- that the principles on the basis on which the charges are calculated as set out in Q5 should continue for Q6; and
- the apportionment mechanism for allocated costs.

G6 However, the sub-group did not produce agreed forecasts for revenue from the other charges in Q6. The CAA adopted HAL's forecasts for revenues from ORs and ORCs of £1,926.2 million for its calculation of HAL's allowed revenues in its initial proposals. The CAA also proposed to include the Transparency Condition in HAL's licence, with two changes:

- to remove from the list of activities check-in desks and baggage facilities and hydrant refuelling as charges for these items are already required to be transparent under the GHRs¹³³; and
- to remove the requirement to reconcile any differences with the Profit Centre Reports (PCRs) supplied to the CAA as this creates an unnecessary additional burden.

CAA's final proposals

G7 In its final proposals the CAA based its forecasts on HAL's ABP and its own opex efficiency assumptions. The proposals are contained in Figure G.1 below.

Figure G.1: Forecast revenue for other charges in Q6 (2011/12 prices) - 5 year basis

£ 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

¹³³ Regulation 16(d) of the Airports) Groundhandling Regulations 1997 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'.

Issues

Scope of ORCs

Issue

G8 Should check-in desks, baggage facilities and PRM charges be included in airport charges?

CAA's final proposals

G9 In its final proposals, the CAA saw value in retaining separate charges for baggage, check-in/common user self service (CUSS) and PRMs and thought they should not be included within airport charges.

Stakeholders' views

G10 The CAA received three responses commenting on the scope of ORCs:

- BA believed that as these charges were an integral and necessary component of the infrastructure and services provided to passengers that they should be justifiably treated as an aeronautical charge and included in the price control. It did not dispute the value in retaining separate charges, but thought this could be achieved within the price control.
- HAL supported the CAA's proposal to retain baggage, check-in/CUSS and PRMs within the scope of ORCs.
- The Heathrow Airline Community responded that baggage and PRM costs should remain under clear scrutiny. It thought that this could be achieved through a variety of methods, including aeronautical charges or the current ORC methodology.

CAA's final view

G11 The CAA notes that all respondents agreed with the importance of retaining separate transparent charges that are compliant with the European legislation on groundhandling and PRMs.¹³⁴ The CAA also notes airline satisfaction with the current process by which HAL and

¹³⁴ Council directive 96/67/EC of 15 October 1996 on access to the groundhandling market at community airports and Regulation 1107/2006 of the European Parliament and Council of 5 July 2006 concerning the rights of disabled persons and persons with reduced mobility when travelling by air.

airlines work together to reduce direct costs and to encourage the right behaviour in order to minimise charges to airlines. In its response to the CAA's initial proposals, the Heathrow Airline Community mentioned "many success stories that really highlight the benefits of collaboratively working in an open and transparent manner". The CAA wishes to maintain that collaborative working which, in its view, does not appear to apply to the price capped charges. The CAA's final view, therefore, is not to move check-in, baggage and PRM charges into the definition of price controlled airport charges. However, the CAA does recognise airline concerns that whilst the ORC processes have worked well in Q5 they are not as legally binding as the price control. The CAA, therefore, is stressing that it will retain the requirement that, where actual revenue diverges from forecast revenue for any of the activities covered by the Transparency Condition, HAL must provide the CAA and the airlines with a detailed explanation for the differences. If the CAA considers that the explanation provided by HAL is not reasonable, it might consider taking action under the licence to regulate the charge in question more directly.

The activities included in the Transparency Condition

Issue

G12 Which activities should be included in the Transparency Condition?

CAA's final proposals

G13 The CAA proposed that check-in desks, baggage facilities and hydrant refuelling should be removed from the list of activities in the Transparency Condition. The CAA did not propose that the list of activities should be amended to match the activities covered by the ORCs.

Stakeholders' views

G14 HAL considered that the list of specified activities in the Transparency Condition should be replaced by the list of activities in the ORCs. After receiving HAL's response, the CAA asked the Heathrow Airline Community to consider whether it would support HAL's suggested change to the list of activities. The Heathrow Airline Community agreed that the Condition should include all the items covered by the ORCs. It thought that the largest cost areas should be given the most

transparency, suggesting that security and maintenance costs should be added to the Transparency Condition.

CAA's final view

- G15 In the absence of any suggestions to amend the list of activities covered by the Transparency Condition, the CAA did not propose any changes beyond removing check-in desks, baggage systems and hydrant refuelling as these are covered by the European groundhandling directive. However, the CAA notes that the list of activities covered by the Condition has remained unaltered since it was first established in 1991, despite changes in the infrastructure and activities provided by the airport since then. The CAA sees logic in updating the Condition so that it matches the activities in the Transparency Condition with those covered by the ORC processes. While the CAA agrees that HAL's costs should be transparent, it does not consider that including security and maintenance in the Condition would be the most appropriate way to achieve this as the Condition is designed to explain how specific charges are calculated and these items are remunerated through airport charges rather than through a separate charge.
- G16 The CAA had previously proposed that check-in desks, baggage systems and PRM services should not be included in the Transparency Condition, as transparency for them was covered by other legislation. However, given support by both HAL and Heathrow Airline Community for their inclusion, the CAA considers that including them in the Condition would be a way of ensuring that sufficient transparency is given without imposing an additional burden on the airport operator. The CAA, therefore, has included these activities in the draft Condition.
- G17 Taking the views of HAL and the Heathrow Airline Community into account, the CAA decided to amend the Condition so that the activities in the Transparency Condition match those covered by the ORC processes. A list of the activities in the draft Transparency Condition, plus those in the Condition in Q5 and in the final proposals is given in figure G.2 below.

Figure G.2: Activities to be included in the Transparency Condition

Transparency Condition in Q5	Transparency Condition in final proposals	Transparency Condition in draft Licence (additions to the Q5 Condition in bold)
Check in desks		Check in desks
Baggage systems		Baggage systems
		Services for PRMs
Other desk licences	Other desk licences	
Staff car parking	Staff car parking	Staff car parking
Staff ID cards	Staff ID cards	Staff ID cards
FEGP	FEGP	FEGP
		PCA
Hydrant refuelling		
		Waste, recycling and refuse collection
Airside parking	Airside parking	
		Taxi feeder park
Airside licences	Airside licences	Airside licences
Cable routing	Cable routing	
Maintenance	Maintenance	
Heating and utility services	Heating and utility services	Heating and utility services (including electricity, gas and water and sewerage)
Facilities for bus and coach operators	Facilities for bus and coach operators	Facilities for bus and coach operators
		Common IT infrastructure
		HAL contribution to the funding of the AOC

Reconciliation with Profit Centre Reports

Issue

- G18 The reconciliation of differences with the PCRs could create an unnecessary regulatory burden.

CAA's final proposals

G19 The CAA considered that it should not set out HAL's accounts systems in the Licence. The CAA, therefore, proposed that the requirement to reconcile any differences with the PCRs should not be included in a licence condition.

Stakeholders' views

G20 The CAA received two responses commenting on reconciliation with PCRs:

- HAL supported the CAA's proposal to remove the requirement to reconcile any differences with PCRs; and
- the Heathrow Airline Community was disappointed that the CAA did not propose to retain the requirement as a licence condition. It considered that a reconciliation with the PCRs would provide an important safeguard without increasing the regulatory burden on HAL.

CAA's final view

G21 The CAA notes the Heathrow Airline Community's disappointment. However, it considers that airlines derive sufficient protection from other requirements in the Condition, such as the requirement that HAL "provide a statement of the pricing principles for each item" and "relevant cost information adequate to verify that the charges derive from the application of the principles", as well as the statement that the CAA might take licensing action if it considers that HAL has not provided a reasonable explanation for differences in revenue. To clarify, the CAA is not saying that HAL should not reconcile differences with PCRs, but that the Licence should not mandate the use by HAL of a particular way of accounting for its cost allocation.

Q6 forecasts of ORCs and ORs

Issue

G22 The CAA needs to decide what the forecasts for ORCs and ORs should be in the calculation of the Q6 price control.

CAA's final proposals

- G23 In its final proposals, the CAA accepted HAL's clarifications in response to specific points raised by BA and the Heathrow Airline Community about staff car parking and baggage projects. Consequently, the CAA included HAL's ABP forecasts for ORs and ORCs in its final proposals, with one adjustment. As ORC revenue largely involved cost recovery, the CAA adjusted HAL's ORC revenue forecasts downwards to take account of its proposed opex efficiencies. As the opex forecasts varied according to traffic and the ORCs are largely based on cost recovery, this adjustment also took into account the effects of the CAA's amended traffic forecasts.
- G24 The CAA noted the size of changes in forecast ORCs between the FBP and the ABP. Most of these parallel forecast opex efficiencies had been identified by the CAA and its consultants. The CAA noted that, given that there was 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.
- G25 Figure G.3 below reconciles HAL's ABP ORC forecasts with the CAA's forecasts in its final proposals. Besides making the efficiency adjustment highlighted, the CAA adopted HAL's ABP forecasts for ORCs unamended.

Figure G.3: Derivation of CAA's final proposals for ORCs

£ millions	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 Final Proposals	227	216	209	206	204	1,062

Source: CAA

Stakeholders' views

- G26 The CAA received three responses commenting on its final proposals for ORCs:

- BA and the Heathrow Airline Community believed that without transparency on why the CAA reduced ORC revenue by £34 million, this decision should be reversed as there appeared that there had been no warrant to make this adjustment. The Heathrow Airline Community repeated points it had made in its response to the CAA's initial proposals about staff car parking and revenues from baggage projects.
- HAL accepted the use of the ORC revenue in the ABP. It identified the need for a correction to the bus and coach revenue assumptions, which reduced revenues by £1 million per annum, included in the RBP and the ABP.

G27 After receiving Heathrow Airline Community's and British Airways' responses to its final proposals, the CAA provided them with information on the £34 million efficiency adjustment to HAL's ORC forecast in its final proposals. The CAA also sent them more information on how HAL had justified its treatment of staff car parking and baggage projects. The Heathrow Airline Community said it had been supportive of HAL's strategy of creating incremental commercial revenue by reducing the number of staff car parking passes in the CTA. Throughout Q5, airlines had given up CTA passes with HAL reducing the cost burden through ORCs as it gained additional incremental car parking revenue. However, the Heathrow Airline Community was surprised that HAL now considered that no more revenue could be earned as an increase in price would see a proportional reduction in volume. The Heathrow Airline Community feared that HAL planned to charge the airlines amounts over and above the amounts included in HAL's business plans. The Heathrow Airline Community thought the CAA needed to ensure this did not happen by fixing prices, or by allowing CTA passes to move back to the ORC governance arrangements. The Heathrow Airline Community said it still did not fully understand whether costs relating to baggage projects were included in ORCs, as the information provided seemed to contradict what HAL had said at meetings with airlines.

CAA's final view

G28 Since the publication of the final proposals, the CAA has updated its forecasts for HAL's efficient opex. Given that the projections for opex influence the projections for ORCs, the CAA has also updated its

projections for ORCs for these changes and some other small changes to HAL's forecasts for bus and coach and baggage systems. The overall figures are very similar, with forecast ORC revenue falling slightly over five years from £1,062 million over Q6 to £1,058 million.

- G29 The CAA notes that airlines are concerned about HAL's staff car parking forecasts and do not understand how HAL has derived its baggage systems forecasts. In monitoring ORC revenue during Q6, the CAA will pay particular attention to these two items to ensure that where actual revenue exceeds forecast revenue HAL provides a detailed reasonable explanation for the difference.

CAA forecasts

- G30 Based on the forecasts in the ABP and its opex efficiency assumptions, the CAA's final view on the level of ORCs during Q6 are contained in figure G.4 below.

Figure G.4: Forecast revenue from ORCs in Q6

£000's	2014/15	2015/16	2016/17	2017/18	2018/19
Check-in desks	4,964	5,097	5,073	4,758	4,602
Baggage systems	122,286	110,261	104,990	107,447	108,533
Services for PRMs	17,117	17,228	16,615	14,866	14,704
Staff car parking	14,056	14,306	14,133	13,801	13,607
Staff ID cards	1,131	1,126	1,116	1,103	1,091
FEGP	10,192	9,942	9,450	9,053	8,903
PCA	5,558	5,457	5,256	5,155	4,950
Airside licences	927	921	921	920	919
Waste, recycling and refuse collection	2,793	2,981	2,824	2,832	2,852
Taxi feeder park	1,927	1,906	1,908	1,868	1,866
Heating	969	969	969	969	969
Electricity	36,754	36,416	36,010	35,266	34,367
Gas	151	154	151	152	150
Water and sewerage	4,920	4,596	4,461	4,332	4,192
Facilities for bus and coach operators	2,181	2,189	2,166	2,117	2,049
Common IT infrastructure	363	353	342	331	319
HAL contribution to the funding of the AOC	404	403	402	401	401

Source: HAL ABP adjusted to reflect the CAA's opex efficiency and traffic assumptions.

G31 The total level of ORCs and ORs on a five-year basis is set out in figure G.5 below.

Figure G.5: Forecast revenue from ORCs and ORs in Q6 - 5 year basis

£ millions	2014/15	2015/16	2016/17	2017/18	2018/19	Total
ORCs	227	214	207	205	204	1,058
ORs	140	139	141	144	144	708
Total	367	353	348	349	348	1,766

Source: CAA

G32 Consistent with the decision to change to a duration of four years and nine months, the CAA has recalculated the ORCs and ORs forecasts for Q6. These numbers are set out in figure G.6 and figure G.7 below.

Figure G.6: Forecast revenue from ORCs and ORs in Q6 - 4 years 9 months basis

£ millions	9 mo. 2014	2015	2016	2017	2018	Total
ORCs	174	215	206	205	204	1,004
ORs	108	139	141	144	144	675
Total	282	354	346	348	348	1,679

Source: CAA

Figure G.7: Forecast revenue from ORCs in Q6 - 4 years 9 months basis

£000's	9 mo. 2014	2015	2016	2017	2018
Check-in desks	3,815	5,103	5,056	4,752	4,602
Baggage systems	93,974	110,403	104,652	107,308	108,532
Services for PRMs	13,154	17,250	16,561	14,846	14,704
Staff car parking	10,802	14,325	14,088	13,783	13,607
Staff ID cards	869	1,128	1,112	1,102	1,091
FEGP	7,832	9,955	9,420	9,041	8,903
PCA	4,271	5,464	5,238	5,148	4,950
Airside licences	712	923	918	918	919
Waste, recycling and refuse collection	2,146	2,984	2,814	2,828	2,852
Taxi feeder park	1,481	1,909	1,902	1,865	1,865
Heating	745	970	966	968	969
Electricity	28,245	36,463	35,894	35,220	34,366
Gas	116	154	151	151	150
Water and sewerage	3,781	4,602	4,447	4,327	4,192
Facilities for bus and coach operators	1,676	2,191	2,159	2,115	2,049
Common IT infrastructure	279	353	340	331	319
HAL contribution to the funding of the AOC	310	404	402	401	401

Source: HAL ABP adjusted to reflect the CAA's opex efficiency and traffic assumptions

APPENDIX H

Q6 Regulatory Asset Base

- H1 This appendix:
- summarises the CAA's analysis and its final proposals with respect to HAL's RAB, and
 - concludes with the CAA's final view for the RAB, which is then incorporated in the CAA's financial modelling to derive its final view for the price cap.

Deriving the opening RAB for Q6

Q5 capex efficiency

Issue

- H2 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 final proposals

- H3 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.

Stakeholders' views

- H4 The CAA received three responses which commented on the CAA's proposals to disallow some expenditure incurred during Q5:
- BA endorsed the airline community's response. It was extremely concerned that the CAA had not followed its consultants' recommendations to make further reductions to the expenditure on T3IB. In addition, it listed a number of other projects which it considered should be disallowed from the RAB.

- HAL argued that the CAA should demonstrate why the CAA should disallow the value of the T3IB assets from the RAB, as HAL had already paid £28 million in rebates to airlines over Q5. HAL considered that the CAA must demonstrate why the trigger rebates to airlines on T3IB are not being taken into account in the analysis.
- The Heathrow Airline Community provided detailed argumentation and evidence as to why the recent increase in the T3IB budget should be disallowed. They commented that the CAA's final proposals ignored its duty to ensure that capital was spent efficiently and only after HAL had consulted airlines about the expenditure, neither of which happened. It called on the CAA to arrange a detailed study into the latest £75 million on costs. If those costs were proved to be unsubstantiated or to have been incurred inefficiently or without sufficient consultation, they should be disallowed from the RAB. In these circumstances keeping future expenditure increases on this project under review was inadequate.

CAA's final view

- H5 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, the CAA considers that this expenditure was inefficiently incurred. The CAA has also disallowed £35 million of expenditure on T3IB during Q6 (see Appendix C).
- H6 The CAA disagrees with HAL's point that invoking triggers means that HAL has been penalised twice for inefficient expenditure on T3IB. Triggers are designed to encourage HAL to deliver benefits from the capex programme to airlines at the time assumed in the settlement and thereby not to delay capex. However, once the expenditure is incurred, it is included in the RAB. Accordingly, disallowing expenditure from the RAB is logically distinct from invoking capex trigger payments. The CAA does not accept that there is any double-counting involved.

Rolling forward the RAB for Q6

CAA's final proposals

H7 The CAA's final 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 final proposals for HAL's RAB throughout Q6 are set out in figure H.1.

Figure H.1: 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

Note: The RAB forecast is based on a financial year estimate, i.e. a total regulatory period of 5 years.

CAA's final view

H8 The CAA's final view for the Q6 RAB is out in figure H.2 below.

Figure H.2: CAA final view for RAB for Q6

£ millions	9 mo. 2014	2015	2016	2017	2018	Total
Opening RAB	13,816	13,788	13,812	13,805	13,661	13,816
Net capex	439	669	646	529	534	2,816
Depreciation	(467)	(645)	(653)	(672)	(676)	(3,113)
Closing RAB	13,788	13,812	13,805	13,661	13,519	13,519
Average RAB	13,802	13,800	13,808	13,733	13,590	n/a

Source: CAA

Note: The RAB forecast is based on a calendar year estimate, i.e. a total regulatory period of 4 years and 9 months.

APPENDIX I

WACC, Calculation of a Price Cap and Financeability

- I1 This appendix sets out:
- the CAA's decision on HAL's WACC;
 - the CAA's analysis and its final proposals for HAL's price cap;
 - the responses which the CAA received to its final proposals;
 - maximum limits on airport charges for HAL in Q6, derived using the building blocks forecast in the preceding appendices; and
 - the extent to which the price cap would enable HAL to finance its projected investment in Q6.
- I2 Alongside this document, the CAA has published a Technical Appendix setting out its analysis of the WACC.¹³⁵ The detail is not reproduced in this appendix.

WACC

CAA's final proposals

- I3 The CAA's final proposal for HAL's WACC was 5.60% on a pre-tax real basis. This equated to a vanilla WACC¹³⁶ of 4.85%.

¹³⁵ Estimating the cost of capital: a technical appendix for the economic regulation of Heathrow and Gatwick from April 2014: notices of the proposed licences, available at www.caa.co.uk

¹³⁶ 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.

CAA's final view

- I4 Based on the analysis contained in the CAA's Technical Appendix on WACC, the CAA's final view for HAL's WACC is 5.35% on a pre-tax real basis. This equates to a vanilla WACC of 4.66%. The main reason for the change from the final proposals as set out in the WACC Technical Appendix (published alongside this document) is a reduction in the cost of equity from lower assumed total market returns. This takes into account the additional new evidence set out in the CC's provisional findings on NIE. Combined with the forecast RAB derived in Appendix H of this document, the forecast WACC charge for HAL over Q6 is shown in Figure I.1 below.

Figure I.1: Allowed return included within the final projections for HAL's Q6 price cap

£ million	9 mo. 2014	2015	2016	2017	2018	Total
Mid-year RAB	13,802	13,800	13,808	13,733	13,590	n/a
Allowed return	550	738	739	735	727	3,489

Source: CAA

Level of the price cap

CAA's final proposals

- I5 The CAA's final proposals for HAL were to set a price cap equivalent to a maximum increase in average airport charges of RPI+0% per year. Figure I.2 shows each building block component which contributed to the CAA's final price cap proposal.

Figure I.2: 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		(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
<i>Year-on-year change</i>		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
<i>Year-on-year change</i>		0.0%	0.3%	(0.1%)	(0.7%)	0.7%	n/a

Source: CAA

Note: The CAA's final proposals were based on financial year estimates, i.e., a price control period of 5 years.

16 The CAA profiled the resulting yield per passenger in figure I.2 across the Q6 period. It equated to a price change of RPI+0% per year. This compares to HAL's ABP of RPI+4.6% and BA's proposed RPI-9.8%.

Stakeholders' views

17 The CAA received 11 responses commenting on its final proposals for the level of prices at Heathrow during Q6.

- BA commented that HAL would start Q6 "inefficient, over-rewarded and making record profits and attracting investment". Under the CAA's final proposals, this would remain the case. BA rejected the CAA's proposals for a settlement of RPI, which was indefensibly high and not in passengers' interests. The final proposals were not consistent with the CAA's statutory duties. In coming to its final proposals, the CAA had not fully considered the evidence before it and had made a number of errors.

- The Board of Airline Representatives (BAR) commented that its member airlines had been shocked by the CAA's decision to revise the regulatory pricing cap from the initial RPI-1.3% to RPI. It firmly believed that the evidence provided by the airline community clearly demonstrated that HAL had not achieved anything like the level of operating efficiency improvements that have had to be implemented by the rest of the industry. It urged the CAA to reconsider fully the extensive evidence provided by the entire airline community in order to achieve a fair and challenging target for HAL and deliver the globally competitive infrastructure demanded by its passengers.
- The British Air Transport Association argued that a significant reduction in airport charges would still permit an adequate shareholder return and allow the £3 billion capital plan to be delivered.
- HAL commented that the CAA had not evidenced how a real terms price freeze at Heathrow favoured passengers' interests. Nor did the CAA's analysis demonstrate the extent to which its proposals would flow through to positive passenger outcomes. In practice the final proposals created unachievable challenges for Heathrow and therefore the wider airport community, carrying substantial risk to passengers and to airlines. HAL had recovered 40% less than its allowed rate of return over Q5, and was not therefore "over-rewarded". HAL had reinvested its profits in its business. The dividend to date was marginally more than 1%.
- The Heathrow Airline Community did not believe that the CAA's final proposals set a fair and challenging target for HAL, based on an analysis of the opex efficiency targets and the cost of capital.
- Unite, Prospect and PCS commented that a settlement of RPI would not allow for increased investment.

- Virgin responded that the CAA had also proposed an over-inflated price in its initial proposals. It was therefore extremely disappointed with the final proposals from the CAA for Q6, which increased both the price and return to airport shareholders from the initial proposals. Virgin was concerned that the CAA was failing to meet its primary duty to consumers by providing over-generous and insufficiently challenging settlements which over-reward airport shareholders at the expense of passengers.

18 In addition, four airlines and airline alliances (Lufthansa (also on behalf of Swiss and Austrian), oneworld, SkyTeam and Star Alliance) 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 view

- 19 The CAA has carefully considered both HAL's view that the final proposals were too tight, and the airlines' and airline alliances' view that the final proposals were too loose. On balance, the CAA can accept neither criticism, for the following reasons.
- The final 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 some extent the costs of providing new terminal infrastructure. The lower level of investment during Q6, will, if maintained, eventually lead to lower regulated charges.
 - While the CAA acknowledges HAL's WtP analysis provided useful insights into passengers' preferences, price controls for companies with SMP are based on efficient costs rather than WtP. An unregulated company with SMP 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.
- 110 The CAA has also taken account of the Heathrow Unions' view that the settlement would not allow for adequate investment. The level of

prices contained in the CAA's final proposals is not designed to allow for increased investment. The capital expenditure programme proposed in Q5 was approximately £5 billion, while that in Q6 is around £3 billion. As a result, Heathrow's RAB was projected to decline from £13.8 billion in the first year of Q6 to £13.4 billion in the final year.

- I11 The CAA does not accept HAL's view that it had not "evidenced" how a real terms price freeze was in passengers' interests. The Executive Summary of the final proposals reconciled the final proposals with the CAA's statutory duties, and in particular its duty to further passengers' interests.
- I12 On the basis of the revised building blocks forecast in the preceding appendices, the CAA has derived the yield per passenger for HAL over Q6 as set out in Figure I.3 below.

Figure I.3: CAA's final view for HAL's Q6 price control

£ million	2013/14	9 mo. 2014	2015	2016	2017	2018	Total
Operating costs		805	1,029	993	955	948	4,731
Depreciation		467	645	653	672	676	3,113
Cost of capital		550	738	739	735	727	3,489
Total revenue requirement		1,822	2,412	2,385	2,362	2,352	11,333
Commercial revenues		(413)	(574)	(591)	(601)	(611)	(2,790)
Other regulated charges (ORCs)		(174)	(215)	(206)	(205)	(204)	(1,004)
Other revenues		(108)	(139)	(141)	(144)	(144)	(675)
Net revenue requirement		1,127	1,485	1,447	1,412	1,393	6,863
Passengers (in millions)		55.4	72.0	72.7	73.4	74.2	347.7
Unprofiled yield per pax (£)	20.60	20.34	20.63	19.91	19.22	18.78	n/a
<i>Year-on-year change</i>		-1.3%	1.4%	-3.5%	-3.5%	-2.3%	n/a
Profiled yield per pax (£)	20.60	20.40	20.13	19.86	19.46	19.10	n/a
<i>Year-on-year change</i>		-1.0%	-1.3%	-1.4%	-2.0%	-1.8%	n/a

Source: CAA

Note: The CAA's final view is based on calendar year estimates, i.e., a price control period of 4 years 9 months.

- I13 In order to convert these real numbers into nominal terms, the CAA must make a decision on which inflation forecasts to use.
- I14 Virgin commented on the appropriate inflation index for use in the Q6 regulatory determination. It noted that the ONS¹³⁷ had found that:
- RPI overstates actual inflation; and
 - the use of the RPI index inflates the airport charges.
- I15 The CAA has examined the ONS findings in detail. The ONS concluded that the RPI does not meet international standards, and recommended that a new index be published. This could support the case for making an allowance to reflect an overstatement of the rate of inflation. However, the CAA notes that the ONS also commented that there is significant value to users in maintaining the continuity of the existing RPI's long time series without major change. Based on the ONS's recommendation and the CAA's own assessment, the CAA has decided to continue the use of RPI-based index, and not to adjust the treatment of inflation, for two reasons:
- the CAA sees considerable merit in regulatory consistency. This provides certainty for investors, management, and customers; and
 - many of HAL's cost items, such as wages, are calculated using RPI as it is currently comprised.
- I16 Accordingly, the CAA's final proposals do not contain an adjustment for any overstatement of RPI.
- I17 On the CAA's RPI indices in its Q6 final proposals, HAL considered that more accurate inflation forecasts could be obtained by using the actual indices for 2012/13 and the latest forecasts by Oxford Economics Forecasting. The CAA has adopted the following in its RPI series:
- the actual RPI indices (CHAW series) up to October 2013 published by the Office of National Statistics (ONS);
 - monthly RPI indices obtained by interpolating the quarterly RPI forecasts from OEF for the period November 2013 to December 2017; and

¹³⁷ <http://www.ons.gov.uk/ons/rel/mro/news-release/rpirecommendations/rpinewsrelease.html>

- annual RPI forecasts from Consensus Forecasts for 2018 (3.8%) and 2019 (3.2%).

- I18 Adopting this RPI series results in a decrease in maximum allowable yield for the year 2013/14 to £20.60. The CAA profiled the resulting yield per passenger in figure I.3 across the Q6 period. It equated to a price change of RPI-1.5% per year based on calendar year estimates. This outcome compares to HAL's ABP proposal of RPI+4.2% (calendar year estimates) and BA's proposed RPI-9.8% (financial year estimates). The change in the maximum allowable yield in the year 2013/14 to £20.60 leads to a change in the value of X (from 4.2% to 4.1%) and profiled yields (from £25.33 to £25.29 in 2018/19) in HAL's proposed ABP and BA's position. The comparison is illustrated in figure I.4. The change in the yield in 2013/14 does not change HAL's proposed revenue in each year of the Q6 regulatory period. The CAA considers this judgement is best calculated to further its general duty.

- I19 Under the CAA's final decision of RPI-1.5%, prices are expected to be £19.10 in 2018/19, which is 24.6% lower than HAL's FBP and 53.1% higher than BA's position paper. Furthermore, the price by the end of Q6 would be £1.50 lower than the price in Q5+1.

- I20 The X in the formula $RPI \pm X$ 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 $P_2 = P_1 \cdot (\Delta RPI + X + 1)$, 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 $P_2 = P_1 \cdot (1 + \Delta RPI) \cdot (1 + Y)$, 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.¹³⁸ This means that if the formula $P_2 = P_1 \cdot (\Delta RPI + X + 1)$ 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.

¹³⁸ $X=Y$ where $\Delta RPI = 0$, $\Delta RPI = \infty$, or $P_2 = P_1 \cdot (\Delta RPI + 1)$

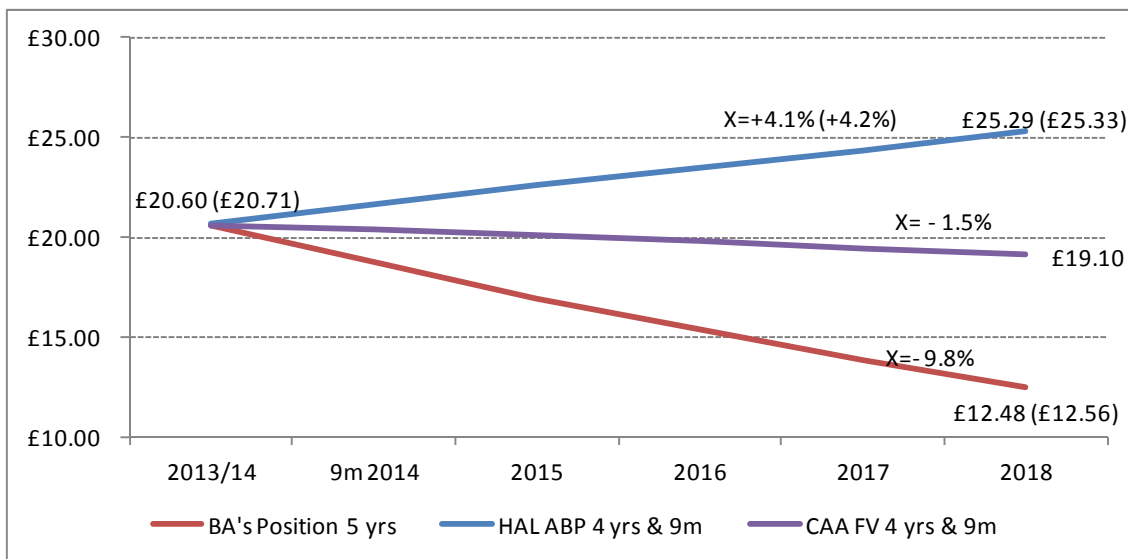
- The RPI used in the price cap formula is the index as at 31 August each year, while the CAA's modelling uses average index for the year ending/ended 31 March each year. So, if forecast inflation based on these slightly different time periods is different, then even using

$$P2 = P1.(1+\Delta RPIAUG).(1+Y)$$

will give a price change in real prices (year ending/ended 31 March) which is not equal to Y.

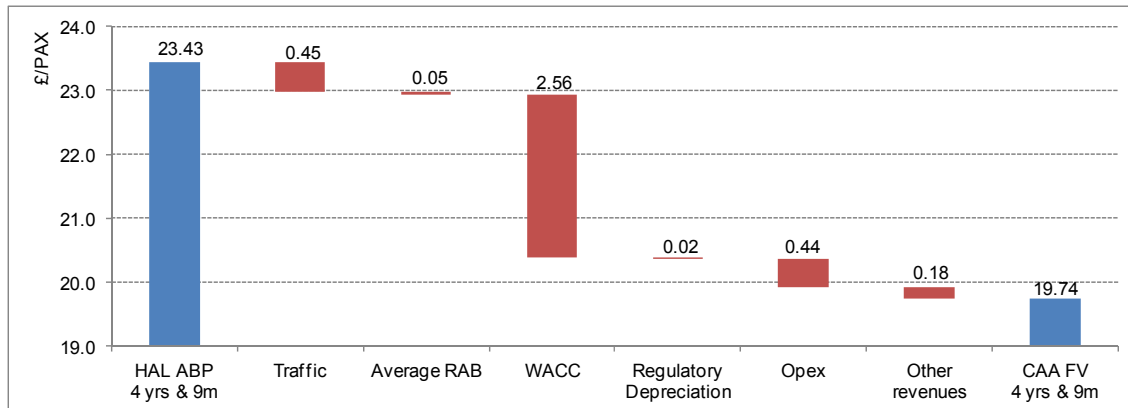
I21 In this document, where an X has been quoted it is the X to be used in a RPI+X formula, and is a constant value over the quinquennium. The profiles (in this case no profiling and a constant X) give the same expected net present value of the revenue requirement (at the regulatory WACC), and the airport is not expected to gain or lose from the CAA's choice of profile.

Figure I.4: Smoothed yield per passenger



Source: CAA

I22 Figure I.5 shows how the CAA's final view compares to HAL's ABP by comparing a simple average of the yield in each of the five years.

Figure I.5: Average yield per passenger – HAL compared to CAA

Source: CAA

N.B. The "Other revenues" category in the table above includes commercial revenues, ORCs and other income

I23 Figure I.5 shows that the main differences in the resulting price profiles arise from different assumptions for the WACC and traffic.

Financeability

I24 In addition to proposing maximum levels of airport charges, the CAA has assessed the financeability of its Q6 final view. 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.

I25 The CAA therefore considers it appropriate to establish whether the Q6 final view 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.

Stakeholders' views

- I26 The CAA's financeability analysis in the final proposals suggests that HAL should be able to finance the final proposals and retain a solid investment grade credit rating. HAL commented that the CAA's analysis shows that HAL will have no flexibility to absorb downside shocks due to the level of the post maintenance interest cover ratio (PMICR)¹³⁹. HAL also quoted Fitch's report in June 2013 'should the final determination be even lower [than the Initial Proposals], a downgrade could be justified', and emphasised that the CAA needs to take it into account when assessing the cost of debt.
- I27 After the CAA publish its final proposals, Standard & Poor's Ratings Services (S&P) released two credit rating reports¹⁴⁰ in October 2013 and affirmed the credit ratings as unchanged, which are A- on the class A notes and BBB on the class B notes. S&P continued to view HAL's business risk profile as 'excellent' and indicated that HAL will perform robustly over the next two years in terms of passenger numbers, regulatory performance, and profitability.

Maintaining a solid investment grade credit rating

- I28 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 the requirements of 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.
- I29 The CAA has gathered evidence directly from three credit rating agencies: Fitch, Moody's and S&P. In determining a credit rating, an

¹³⁹ Post-maintenance interest cover ratio (PMICR) = (EBITDA – corporation tax paid – regulatory depreciation)/interest paid.

¹⁴⁰ Standard & Poor's Rating Services, 'A-(sf)' rating assigned to Heathrow Funding's £750 million class A-23 fixed rate notes due 2048, 31 October 2013.

Standard & Poor's Rating Services, *Ratings on all notes in Heathrow Funding deal affirmed; Outlook stable*, 25 October 2013.

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;
- c) the diversity of the airports owned or operated by the company;¹⁴¹ and
- d) charges (for example landing, passenger and security charges).

I30 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.

I31 Before 28 February 2013, BAA SP Limited was the holding company that owned Heathrow and Stansted. Heathrow accounted for 92% of BAA SP's earnings before interest, tax, depreciation and amortisation (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

¹⁴¹ 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.

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.

- I32 The CAA's final view does not propose fundamental changes to the form of regulation for HAL and hence is not expected to weaken HAL's credit strength. However, the ability of a licensing regime to revisit the price control if key assumptions, such as traffic, are significantly worse than the forecast, could be a credit strength. 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.
- I33 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.
- I34 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

- I35 The CAA has considered whether the forecast performance of HAL under the CAA's Q6 final view is consistent with a solid investment grade based on assumed gearing of 60% and has considered six ratios used by the various agencies:¹⁴²

¹⁴² These ratios and some of the terms used in them do not have agreed definitions.

- interest cover;¹⁴³
- funds from operations (FFO¹⁴⁴) interest cover;¹⁴⁵
- PMICR;¹⁴⁶
- adjusted interest cover (adjusted ICR);¹⁴⁷
- FFO to debt;¹⁴⁸ and
- regulatory asset ratio (RAR¹⁴⁹ or gearing).

136 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 terms¹⁵⁰ 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 decisions. This assumes:

- a constant gearing level of 60%, with the level of dividends being the balancing item used to keep gearing at this level;¹⁵¹
- a nominal cost of debt of 5.95%;
- index-linked debt making up 35%¹⁵² of the total debt balance; and

¹⁴³ 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.

¹⁴⁴ 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.

¹⁴⁵ FFO/interest expense = FFO (as above) + gross interest paid on debt/gross interest expense on debt.

¹⁴⁶ PMICR = (EBITDA – corporation tax paid – regulatory depreciation)/interest paid.

¹⁴⁷ Adjusted ICR is FFO + interest expense – regulatory depreciation + profiling adjustment divided by interest expense.

¹⁴⁸ FFO/net debt, where FFO is as defined above and net debt = closing RAB x gearing ratio.

¹⁴⁹ RAR = debt less cash and authorised Investments/total RAB.

¹⁵⁰ In contrast, the rest of the HAL model used for the price control was specified in real terms.

¹⁵¹ The CAA relaxed this assumption and after allowing for a modest dividend yield, gearing was in the range of 56% to 60%.

¹⁵² 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

- a cost of index-linked debt of 3.05%.¹⁵³

I37 The CAA has had to make some additional assumptions and adjustments in order to derive the financial ratios in figure I.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.

Figure I.6: CAA financial ratios for HAL in Q6

Key financial ratios: benchmarks and calculations	Benchmark			CAA (Q6)		
	Moody's (Baa2)	Fitch (BBB)	Fitch (A-)	Average	Min	Max
PMICR		1.2x – 1.3x	1.5x – 1.6x	1.5x	1.4x	1.5x
Net debt/EBITDA	n/a	10.0x	7.0x	6.1x	5.8x	6.4x
ICR	1.4x - 1.6x	n/a	n/a	2.4x	2.2x	2.5x
RAR - Net debt/RAB	68% – 75%	n/a	n/a	60%	60%	60%
Other financial ratios						
FFO interest coverage	2.25x – 3.0x	n/a	n/a	2.5x	2.4x	2.6x
FFO to net debt	6-10%	n/a	n/a	15%	14%	16%

Source: CAA analysis

Note: Fitch's rating thresholds can be found on its credit report: 'Fitch affirms Heathrow Funding's bonds & Heathrow Finance's high-yield bonds, 26 June 2013'.

The first year of Q6 has a 9-month-period from 1 April 2014 to 31 December 2014. For the purpose of ratio analysis, the financial ratios should be calculated on an annual basis; therefore, the ratios of the first year of Q6 are calculated based on an extended period from 1 April 2014 to 31 March 2015.

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.

¹⁵³ The cost of index-linked debt of 3.05% is consistent with the top of the range of PwC's recommendation (excluding fees). The nominal cost of debt includes inflation of 2.90%, which is a weighted average of forward-looking inflation assumption and historical actual inflation.

- I38 Since the publication of the final proposals, the CAA has held teleconferences with the credit rating agencies. The CAA notes that the final proposals omitted Fitch's net debt to EBITDA ratio. This has been included in the analysis of the CAA's final view. The CAA has evaluated a broad range of credit ratios, in particular the PMICR and Net debt to EBITDA. The net debt to EBITDA ratios are all below 7.0, indicating that HAL is able to generate sufficient earnings to finance its debt. The PMICR ratios are all above Fitch's BBB rating threshold; the average PMICR has reached the benchmark of 'A-', suggesting that the notionally financed airport operator would meet the requirements of a solid investment grade credit rating.
- I39 In the case of the price determination for NIE, the Utility Regulator focused on the PMICR with a threshold value of 1.4. The UR's assessment of NIE's PMICR indicated a weak interest cover: just above 1.4 at the beginning of the period and just below 1.4 at the end of the period. CC recognised that NIE's PMICR is a potential source of concern. CC had regard to target values for a broader range of credit ratios and concluded that the CC's determination is consistent with NIE maintaining an investment grade credit rating.
- I40 The CAA has used HAL's financial model to calculate the price cap for the Q6 decisions 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 view

- I41 The CAA's final view is to set a price cap equivalent to a maximum increase in average airport charges of RPI-1.5% per year for a four years and nine months duration, compared to RPI-0.2% in the final proposals for a control of the same duration. The CAA considers that,

given efficiency and economy on its part, HAL should be able to finance its business and retain a solid investment grade credit rating.

APPENDIX J

Service Quality

- J1 This chapter sets out the CAA's final view for the SQRB¹⁵⁴ scheme for HAL for Q6. It details the process to date, the issues that have been raised by stakeholders and the CAA's final view on the licence condition of the SQRB scheme. The licence condition proposed consists of two parts:
- the main text of the licence condition; and
 - the Statement of Standards, Rebates and Bonuses (the Statement), which is included as Schedule 1 to the licence.
- J2 The draft licence, including the Statement, is set out in Chapter 3 of this document.

Service quality process to date

- J3 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. In Q5, the SQR scheme captures five areas of HAL's service quality:
- passenger satisfaction – with metrics taken from HAL's 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 system, and arrivals reclaim (baggage carousels);

¹⁵⁴ '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.

- airline operational elements – with metrics covering pier service, stands, jetties, FEGP, PCA, and stand entry guidance. Metrics are generally based on the availability of these elements; and
- an ACT.

J4 For each of these elements, the CAA sets a standard for HAL to meet. Many of the standards are subject to financial incentives – rebates for failing to achieve standards and bonuses where certain elements outperform the CAA's targets. For Q5, the total amount of HAL's airport charges at risk per year is around 7% and the total bonus potential is 2.24% of airport charges. Figure J.1 shows the total rebates paid out by HAL and bonuses received by HAL during Q5 as at October 2013.

Figure J.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 – Oct 2013*	1,413.63	7.35	0.52%	6.63	0.47%

* Provisional figures for Apr – Oct 2013

Source: HAL

Discussion of the issues

J5 The CAA considers that the issues concerning service quality regulation for Q6 that it needs to resolve are shown in Figure J.2 below.

Figure J.2 Service quality issues discussed in this Appendix

Nature of issue	Issue
Licence condition and the Statement	The licence condition including a self-modification mechanism
	Comments on the Statement
General issues on the SQRB scheme	Rebates
	Bonuses
	Publication of results and record keeping
	Definitions
	Averaging and precision of measurements
	Subjective and objective measures
	Terminal 1
Specific elements in the SQRB scheme	Passenger satisfaction – removal/retention of standards
	Passenger satisfaction – service standards and bonus payment
	Passenger satisfaction – Wi-fi
	Central and transfer search – design of metrics
	Central and transfer search – service standards
	Central and transfer search – definition of queues
	Central and transfer search – fast track lanes
	Central and transfer search – assistance lanes
	Central and transfer search – redirection of passengers
	Staff search
	Control posts
	Passenger operational elements
	Airline operational elements – pier service
	Airline operational elements – others
Aerodrome congestion term	
Issues outside of the SQRB scheme	Performance of third parties
	HAL service charter
	Commercial contracts between HAL and the airlines

Source: CAA

The licence condition including a self-modification mechanism

Issue

- J6 The SQRB scheme consists of elements, metrics, service standards, levels of rebates and levels of bonuses. The service quality condition set out in the initial proposals consists of the condition itself which would give effect to a schedule containing the Statement.

CAA's final proposals

- J7 For its final proposals, the CAA reviewed the drafting of the condition. This obligation required HAL to comply with the Statement in its entirety, which includes other requirements such as carrying out the QSM, bonuses and publication. Given the general support for the self-modification provisions for agreed changes to the SQRB scheme, the CAA included these provisions in the proposed licence.
- J8 The CAA noted the comments on the provision for the CAA to act as an arbiter in some cases. It considered 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.
- J9 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 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. The CAA also considered that its proposal to limit the period in which self-modification can be made to every six months did not give enough flexibility and revised its proposal to once every three months.

Stakeholders' views

- J10 The CAA received three responses commenting on this issue.

- BA continued to support a mechanism to modify the service quality scheme subject to agreement or CAA arbitration, and a three-monthly cycle for amendments. It did not support having the AOC act as a single point of approval for self-modification as the AOC does not have the mandate to appeal a decision (as they are not a direct user themselves). Therefore, it would be inappropriate for the AOC to be considered to have a sole mandate for approvals. BA proposed to change the second party for agreement to 'the Q6 Service Quality Consultation Forum' (currently the service quality working group) to ensure the proposed changes are discussed and endorsed in sufficient detail by AOC, IATA and major airlines and alliances.
- HAL requested a clarification on the definition of 'a representative proportion of airlines'. The airlines' proposal for any changes to the Statement to have to secure their approval was unacceptable.
- The Heathrow Airline Community made the following points:
 - while welcoming the CAA's indication to use section 22 of the Act to make substantive changes, it considered that any changes to the Statement should be made only upon agreement of the airlines;
 - it supported a three-month cycle of self-modification, and believed that the CAA should establish guidelines on how consultations should be undertaken; and
 - in response to HAL's request for clarification on the definition of 'a representative proportion of airlines', the Heathrow Airline Community stated that the AOC and Heathrow Airline Community provide cross-campus airline representation of the airline community covering all aspects of strategic development and operational needs, and that the AOC has an airport-wide constitutional governance structure with a democratically elected executive committee of senior airline managers combined with terminal AOC standing committees.

CAA's final view

- J11 The CAA notes BA's comments that the AOC does not always have the mandate of all airlines in all its decisions, but is not convinced that the Service Quality Consultation Forum suggested by BA as an

alternative to the AOC for agreeing changes to the SQRB under the self-modification provisions is necessarily the right option. The AOC has the processes and agreements in place to provide a fair representation of the airlines at Heathrow.

- J12 The self-modification provision includes a safeguard for those airlines that do not agree with the AOC's position in that the CAA must also agree to the change before it issues the notice making the modification. In making decisions, the CAA will take into account any written objections to the proposals from individual airlines. This safeguard should be a sufficient incentive for the AOC to be sure of its mandate before seeking a change under self-modification.
- J13 The CAA remains open to the AOC or HAL requesting that the CAA makes a change under section 22 where they cannot reach an agreement. In some cases, for example, where the CAA considered the change was in the interests of users but was opposed by HAL and some airlines, the CAA may decide to make a decision under section 22 of the Act instead of the self-modification provisions.

Comments on the Statement

Issue

- J14 This part contains comments raised by stakeholders on the licence condition and the Statement.

Stakeholders' views

- J15 The CAA received the following responses:
- HAL stated that the definition of dead band would reduce flexibility in Q6 and in effect rule out the approach to dead band periods that was agreed with the airlines as being consistent with passengers' interests and which has successfully operated throughout Q5.
 - The Heathrow Airline Community made the following comments on the licence:
 - it welcomed the licence condition and the Statement;

- it expressed concern that the service quality measurement (SQM) surveys may miss the commercially-important passengers at departure gates, and noted that HAL is prepared to work with the airlines to consider alternative locations. Therefore, paragraphs 2.4(e) and (f) should be expanded to include a reference to other locations determined by agreement with the AOC;
- in paragraph 2.6, the CAA should require HAL to conduct surveys with both forms of progression (from (1) extremely poor to (5) excellent, and reverse) in order to remove any possible positive or negative bias;
- the question in paragraph 2.9(a) and (c) are similar, and therefore it seems that one is for departing passengers and the other arriving passengers;
- it welcomed the opportunity to review queue time measurements in part 2(b);
- in the definition of exclusions (paragraphs 2.24(a) and (b)), the more appropriate definition of the period "01 April – 31 March" was changed to "any Relevant Year". Also, paragraph 2.24(c) should only be applicable to the specified terminal(s) or control post(s) at which any evacuation had to occur;
- it welcomed the clarity on the definition of the 'dead band', and expressed that HAL should not be able to earn a bonus due to any agreed exclusion that enabled HAL to keep service levels in the bonus range;
- in paragraph 2.35, the CAA should require the Licensee to evidence the estimate the Licensee considers to be contributory causes beyond its control to a Material Events with a Material Operational Impact; and
- in paragraph 3.4(b), to be consistent with paragraph 3.4(a), the Licensee should be able to forgo receiving rebate credits.

CAA's final view

- J16 The CAA considers it important to have clearly-defined dead-band periods in the processing of exclusions. This is to safeguard passengers' interests by ensuring a reasonable level of asset

availability during the busier months. In addition, the CAA makes the following changes and comments to Schedule 1:

- in paragraphs 2.4(e) and (f), the range of possible locations for QSM surveys has been expanded;
- paragraph 2.6 remains the same. The Q6 standards are set based on past performance, therefore there should be no benefits to correct for any possible bias by changing the order of the ratings;
- in paragraph 2.9(c), the question is applicable to arriving passengers;
- in the definition of exclusions and indeed throughout Schedule 1, 'Regulatory Period' and 'Regulatory Year' are clearly defined in Part A of the draft licence;
- paragraph 2.24(c) is amended so that exclusions apply only to the specified terminal(s) or control post(s) at which any evacuation had to occur;
- paragraph 2.35 is amended so that evidence of the contributory causes shall be provided;
- in paragraph 3.4(a), the additional payments shall be made as soon as practicable and no more than three calendar months after the publication of the Licensee's audited accounts; and
- paragraph 3.4(b) remains the same. The Licensee is not obliged to recover rebate credits and is able to forgo rebate credits should it choose to.

Rebates

Issue

- J17 For Q5, HAL was required to pay rebates to the airlines for performance lower than certain SQR standards. The proportion of airport charges payable to the airlines as rebates 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.
- J18 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 final proposals

J19 Given the success of the scheme over Q5 and agreement amongst stakeholders, the CAA proposed that the proportion of airport charges at risk 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. The CAA noted the possibility of an undesirable trade-off of service quality and cost if a sliding scale approach is put in place, and proposed to maintain the Q5 rebate calculation arrangement.

Stakeholders' views

J20 The CAA received three responses to its final proposals on this issue.

- BA strongly agreed with the CAA's recognition of the undesirable unintended consequences of the sliding scale arrangement, and supported the division of the rebates for the first six months of service failure. It considered the overall level of 7% of airport charges appropriate when there is no bonuses in SQRB, and that the level should be 9.24% to negate the effect of 2.24% in bonuses.
- HAL put forward the following comments:
 - a 'sliding scale' approach would genuinely incentivise HAL to deliver for every passenger irrespective of previous performance, and would better align with per-passenger measurement;
 - it disputed the CAA's remarks that a 'sliding scale' approach might lead to the undesirable trade-off of service quality and cost, and commented that the proposed very narrow range (98% to 100%) should incentivise HAL to achieve success for every passenger;
 - the 'knife-edge' approach would not incentivise HAL to deliver for the rest of a month when performance falls below standard before the end of that month; and

- rebates should apply on a monthly basis to incentivise HAL to deliver equally for passengers at any time throughout the year.
- The Heathrow Airline Community welcomed the retention of the level of rebates at risk at 7% of airport charges and the application of rebates to the first six occasions (measured monthly) of service failure in a regulatory year. It considered that this is important for HAL to restore 'normal service' to failing assets within a 6-monthly payment schedule. It also supported the Q5 arrangements for the calculation of the rebates, which would prevent undesirable trade-offs between the costs of HAL maintaining quality and the level of rebates. Moreover, it believes that the requirement for HAL to account for more than six failures to the CAA should continue during Q6.

CAA's final view

- J21 The CAA maintains the same view as in its final proposals. The proportion of airport charges at risk is kept 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.
- J22 On the sliding scale arrangement, the CAA has to balance its benefit of encouraging early remedy to service failures in the latter part of a month and its limited size to offer meaningful incentives. It proposes to maintain the Q5 arrangement on rebate calculation. HAL should focus on delivering quality service at all times to the benefit of passengers.
- J23 The CAA considers that, for the SQRB to be effective, the amount of rebates payable should be comparable regardless of the length of the regulatory period. In light of the change of regulatory period to four years and nine months, the CAA has amended Schedule 1 of the draft licence to reflect the changes to the calculation of rebates.

Bonuses

Issue

- J24 Bonuses, in the form of increased airport charges on a sliding scale up to a limit, were introduced by the CAA in Q5 to incentivise ongoing service improvements. Bonuses cannot be earned if one or more terminals do not meet the standard, and are aimed at encouraging a

common minimum baseline standard across all terminals. Figure J.3 shows the bonus elements and their respective bonus limits.

Figure J.3 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 final proposals

- J25 The CAA considered that bonuses should provide an incentive to attain a common minimum baseline standard across all terminals, therefore proposed that, for Q6, a bonus of 0.36% should be allocated to each QSM element. It might not be appropriate to allocate bonuses to direct and transfer security, as this might incentivise HAL to move passengers through security inappropriately quickly. As no other SQRB element was identified as a potential bonus area, the CAA proposed to keep the maximum bonus at 1.44% from the start of Q6.
- J26 The CAA recognised that, within the duration of the price control period, passengers' priorities may change. There might be areas in which bonuses become an appropriate and effective tool to incentivise performance. Accordingly, the CAA proposed 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. There should be no presumption that the CAA will allocate part or all of these unallocated bonuses. Any possible reallocation of bonuses would require licence modification as specified in section 22 of the Act.

Stakeholders' views

- J27 The CAA received three responses to its final proposals on this issue.

- BA noted that HAL had counted periods of exclusion towards its calculations of bonuses, and therefore requested the CAA to provide clarity on the issue of symmetry of incentives. Specifically, this means that where performance is exempted from rebate for a period, including where exclusion is in place for work during a dead band, the performance during this time is also excluded from counting towards bonuses.
- HAL had the following views:
 - bonuses and the symmetry of incentives were important for HAL to deliver service improvement, therefore they needed to be at a level that actually incentivises performance above the baseline level. It disagreed with the change of potential bonus from 2.24% to 1.44% as it would further reduce the symmetry within the service quality scheme;
 - it disputed the CAA's view that a bonus on security would cause HAL to move passengers inappropriately quickly as this was contrary to HAL's security compliance obligations;
 - the CAA's statement 'reallocation of bonuses would require licence modification as specified in section 22 of the Act' appeared inconsistent with Schedule 1 of the draft licence; and
 - it proposed alternative treatments of bonuses: (1) if bonuses are to be reduced, the level of rebates should also be reduced by an equivalent amount, and (2) the bonuses shall be reallocated to other elements such as passenger security, control posts and staff search.
- The Heathrow Airline Community raised the following points on bonuses:
 - the basis of the quality-based public interest finding was specifically in regard to the performance of the airport and the need for HAL to pay rebates for service failures. Therefore, HAL's comment on symmetry in the SQRB was not relevant;
 - bonuses should not be part of the service quality regulation of HAL, which possesses SMP. They legitimised a culture in HAL that extra bonuses are required for service improvements;

- it welcomed the removal of bonuses on PSE (general) and baggage carousels, which would bring the maximum amount of bonus available at 1.44% of airport charges. Bonuses should not be available for security queue measures; and
- while disagreeing with the CAA's suggestion that the 0.8% may still be available to HAL over Q6, it welcomed that bonus allocation would require a licence modification in accordance with section 22 of the Act.

CAA's final view

J28 The CAA agrees that when performance is exempted from rebate for a period, it should also be discounted from bonus calculations. Recognising the effect of bonuses to the price control equation, the CAA prefers to use a licence modification under Section 22 of the Act, to process changes to bonuses. This has been stated clearly in Condition D1.6 to D1.9. For Q6, a bonus of 0.36% should be allocated to each QSM element, keeping the maximum bonus at 1.44%. For direct and transfer security, the CAA does not consider it necessary to allocate bonuses to incentivise performance over and above the standard.

Publication of results and record keeping

Issue

J29 The CAA considers that transparency of information provides an important non-financial incentive in the area of airport service quality. For Q5, HAL is required 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 final proposals

J30 In light of the importance of transparency of information to passengers and the value of publication as a non-financial incentive, the CAA maintained its position as in the initial proposals, with the addition of one further measure on Wi-fi provision. The CAA proposed that HAL should publish within the terminal building and on its SQRB website a QSM measure on Wi-fi provision (see the section on 'Passenger satisfaction – Wi-fi').

- J31 There is a provision in the service quality licence condition 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 enhance transparency further, the CAA proposed that HAL should report audited rebates paid and audited bonuses earned annually in the regulatory accounts. Detailed publication requirements are set out in Section 5 and Table 9a to Table 9e of the Statement.

Stakeholders' views

- J32 The CAA received one response commenting on this issue. The Heathrow Airline Community:
- welcomed the expanded scope and the monthly frequency of service quality reporting, and proposed that HAL should be required to publish information in prominent places (subject to agreement with the CAA and the airlines) in each terminal;
 - welcomed the requirement on HAL to publish areas of performance which will lead to inclusion in a bonus calculation with an estimate of the likely bonus amount, and to publish final bonus calculation within two months of the regulatory year end;
 - proposed a requirement for HAL to consult with the airlines before publishing information on final bonuses;
 - supported the CAA's proposal for HAL to maintain records and to report rebates and bonuses in the regulatory accounts; and
 - proposed the inclusion of PSE (general), PSE (priority), track transit system (Terminal 5), arrivals baggage and pier-served stand usage in HAL's monthly reporting in each terminal.

CAA's final view

- J33 The CAA believes that the enhanced reporting requirement would act as an effective non-financial incentive to deliver quality services. A more concise monthly report with passenger-focused elements in terminals should give passengers a clearer idea of the services they can expect. Accordingly, the CAA considers that the measures set out in the initial proposals and restated in the final proposals remain appropriate.

Definitions

Issue

J34 There was a specific disagreement on interpretation of the phrase 'time available', which was used in Q5 for a number of asset measures (figure J.4).

Figure J.4 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

J35 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 Policy¹⁵⁵ in the SQR. 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).

J36 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. 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.

¹⁵⁵ Paragraph H.14 of Annex H to Economic Regulation of Heathrow and Gatwick Airports 2008-2013, CAA Decision.

CAA's final proposals

J37 The CAA considered that, if the elements of the SQRB are not treated separately, the interdependencies would affect the levels of risk attached to failure adding impractical complexity to the target setting. It proposed that asset availability should be defined as “serviceable and available for use, independent of any other element”.

Stakeholders' views

J38 The CAA received one response commenting on this issue. The Heathrow Airline Community argued that the airlines' definition of 'availability', which was 'available for use as intended and at the time required', should be adopted, and that HAL should be required to pay a rebate should it fail to make an element available, as the airlines will have been paying charges for a service not being provided by HAL. The Heathrow Airline Community highlighted that rather than being 'penalised' in having to pay rebates, HAL simply returns money to the airlines and passengers for not having delivered a service which has already been paid for through airport charges. It argued that this was the reason for calling payments from HAL for service failures "rebates".

CAA's final view

J39 The CAA notes the Heathrow Airline Community's proposal for the definition of 'availability'. It believes that the Heathrow Airline Community's proposal could add unnecessary complexity to the SQRB. The proposed definition is open to interpretation, and could make the scheme difficult to enforce. Accordingly, the CAA has retained the definition of 'availability' contained in the final proposals. It has also retained its proposals for the separate consideration of each asset.

Averaging and precision of measurements

Issue

J40 In Q5, performance metrics used for the QSM and pier service elements of the SQR were based on moving annual averages. 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.

- J41 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. A move to a monthly measure would affect the sampling error of the estimate due to the reduced sample size. This in 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.
- J42 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.
- J43 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 final proposals

- J44 After considering the responses, the CAA maintained the same view as in its initial proposals. While the move to two decimal places might translate into slightly more stretching targets for HAL, the CAA believed that this effect is unlikely to be inappropriately large in any element of the mechanism. The CAA proposed that the moving annual average measure for the QSM and pier service elements of the SQRB 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.

Stakeholders' views

- J45 Two respondents commented on this issue:
- BA supported the reporting of performance to two decimal places.

- The Heathrow Airline Community had the following views:
 - it disagreed with HAL's claim that monthly reporting would cause the scores for QSM and pier-served stand usage more volatile;
 - it objected to using the 12-month rolling average as it resulted in the monthly reported score not being reflective of passenger experience; and
 - it supported the reporting of QSM elements to two decimal places as this would ensure true compliance rather than allowing HAL to meet a standard by providing a lower level of service and rounding up scores that are below the target score.

CAA's final view

J46 Changing the annual average measure to two decimal places should apply to the QSM and pier-served stand usage elements of the SQRB. It is unlikely to affect the penalties faced by HAL significantly. Accordingly, the CAA maintains its view as in its final proposals.

Subjective and objective measures

Issue

J47 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.

J48 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. 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 final proposals

J49 After considering the responses, the CAA proposed 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 would not be subject to financial incentives.

Stakeholders' views

J50 The CAA received one response commenting on this issue. The Heathrow Airline Community welcomed the CAA's distinction between subjective and objective measures, and the retention of actual security waiting times when a subjective QSM measure on security is introduced. This was because the subjective views of passengers regarding security performance were open to influence by factors other than actual waiting times.

CAA's final view

J51 The CAA will 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 would not be subject to financial incentives. The CAA agrees that objective measures in the standard are important in central and transfer search.

Terminal 1

Issue

J52 This issue was not raised in the CAA's final proposals.

Stakeholders' views

J53 HAL proposed that flexibility be applied regarding service quality performance and on applications for exclusions, especially for asset availability elements, where it may not be in the interests of passengers to invest in replacement equipment shortly before closure. HAL requested the CAA to take note of this matter, and supported the development of a process for review.

CAA's final view

J54 The CAA recognises that investments at Heathrow should be cost-effective, and agrees that some flexibility in applying the SQRB standards to Terminal 1 may be required in the few months before its closure. Nevertheless, the CAA also recognises the importance of agreements between various stakeholders on this, especially the time

periods and proposed levels of service. It urges HAL to engage with stakeholders by submitting its proposals to the SQWG as soon as practicable, so as to allow ample time for discussion and agreement.

Passenger satisfaction – removal/retention of standards

Issue

- J55 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. 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.
- J56 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).¹⁵⁶

CAA's final proposals

- J57 The CAA's final proposal was that departure lounge seating availability and flight information standards should be retained in the SQRB for Q6.

Stakeholders' views

- J58 The CAA received one response commenting on this issue. The Heathrow Airline Community welcomed the CAA's proposals to retain the measures of departure lounge seating availability and flight information in the SQRB, and highlighted the need to maintain the same QSM questions in the surveys.

¹⁵⁶ SHM, Issues facing passengers during the snow disruption, final report, April 2011, available at:
<http://www.caa.co.uk/docs/5/CAA%20Issues%20facing%20passengers%20during%20the%20snow%20disruption%20FINAL.pdf>

CAA's final view

J59 The CAA considers that the four Q5 QSM standards should be retained in the SQRB for Q6.

Passenger satisfaction – service standards and bonus payment

Issue

J60 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 earned bonuses in all four areas since January 2013.

CAA's final proposals

J61 The CAA was keen to avoid setting lower bonus limits too high such that they incentivise performance over and above the level for which passengers are willing to pay. On the other hand, to encourage consistent good performance across the terminals and to ensure that HAL was not immediately earning bonuses, the lower bonus limit should be set higher compared with the improved performance towards the end of Q5. The CAA proposed to maintain the Q6 rebate and bonus allocations, standards, upper and lower bonus limits as per its initial proposals (which will also apply to Terminal 2 when opened), as shown in figure J.5 below.

Figure J.5: Q5 standards and proposed Q6 standards and bonus limits

QSM Element	Standards		Q6 Rebate	Q6 Bonus		
	Q5	Q6	Annual max	Lower limit	Upper limit	Annual max
Departure lounge seating availability	3.8	3.80	0.36%	4.10	4.50	0.36%
Cleanliness	3.9	4.00	0.36%	4.20	4.50	0.36%
Way-finding	4.0	4.10	0.36%	4.20	4.50	0.36%
Flight information	4.2	4.30	0.36%	4.40	4.70	0.36%

Source: CAA

Stakeholders' views

J62 The CAA received two responses commenting on this issue:

- BA supported introducing the dead bands, but was disappointed at the low entry level for bonuses. It also supported the removal of bonuses on PSE (general) and arrivals reclaim.
- The Heathrow Airline Community's views are as follows:
 - it proposed the following Q6 service standards and bonus limits:

Figure J.6: The Heathrow Airline Community's proposed standards and bonus ranges for QSM

QSM Element	Q6 standards	Bonus	
		Lower limit	Upper limit
Departure lounge seating availability	3.80	4.30	4.60
Cleanliness	4.00	4.40	4.70
Way-finding	4.10	4.40	4.70
Flight information	4.30	4.60	4.90

Source: Heathrow Airline Community

- notwithstanding its view on bonuses, it welcomed the introduction of a 'dead band' level above each QSM target, and believed that there should be a greater level of 'dead band' stretch that the CAA's proposed levels in order to ensure significant service improvement before any bonuses are paid;
- it noted that HAL is considering changes to the structure and design of the QSM survey, and welcomed the CAA's comment that this may affect the QSM scores; and
- there should be a review and a possible re-calibration led by the CAA a few months after the launch of the new questionnaires.

CAA's final view

J63 The CAA considers that the bonus limits are set at appropriate levels. The CAA expects to work with HAL and the airlines on re-calibration of the QSM scores should there be changes introduced in the questionnaires. Accordingly, the CAA has retained the levels for bonus payments set out in figure J.5.

Passenger satisfaction – Wi-fi

Issue

J64 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 to provide information to passengers, the CAA considered ways to incentivise Wi-fi provision at the airport, possibly through a published monthly measure. It invited stakeholders' views on this area after publication of the initial proposals.

CAA's final proposals

J65 The CAA took the views of stakeholders and the CAA's Consumer Panel into consideration. Given the importance of information to passengers, particularly in times of disruption, and the likely increase in passengers' usage of Wi-fi devices, the CAA viewed it necessary to incentivise provision of free Wi-fi at Heathrow. The CAA therefore proposed the introduction of a new published measure on passengers' satisfaction on Wi-fi provision at Heathrow. The CAA considered that the addition of a published Wi-fi measure should encourage HAL to provide Wi-fi to a level that satisfies passengers.

Stakeholders' views

J66 The CAA received two responses commenting on this issue:

- HAL noted the CAA's proposal to include Wi-fi as a reporting requirement. It proposed the removal of elements less relevant to passengers, such as flight information and departure lounge seating availability, in order to maintain an appropriate balance and avoid an unnecessary increase in regulatory burden.
- The Heathrow Airline Community believed that there is already sufficient commercial incentive for HAL to provide Wi-fi. HAL can drive retail revenue through advertising and offering free Wi-fi for passengers who join the airport retail loyalty scheme. Therefore, it did not support the inclusion of a Wi-fi element with a service standard and level of rebates. The Heathrow Airline Community believed that the proposed passenger satisfaction measure on Wi-fi would be open to influence by HAL.

CAA's final view

J67 The CAA considers that it is in the passengers' interests to include a Wi-fi performance report in the SQRB, and to retain essential passenger service elements such as flight information and departure lounge seating availability in the scheme. The QSM question as specified in paragraph 2.12 of the Statement is straightforward and should have limited scope to be influenced.

Central and transfer search – design of metrics**Issue**

J68 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 commitment to all passengers, whilst simplifying the current standards.

J69 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.

J70 The CAA proposed that a possible interim metric might be based on queuing times measured once every 15 minutes with results weighted differently by peak and off-peak hours, in order to obtain a sample of passengers more representative of the population by time of day. However, it did not feel that a modification of the current metric would benefit passengers overall because:

- variation in passenger throughput both between terminals and over time 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.

CAA's final proposals

Design of interim metric

J71 While proposing to retain the current metric, the CAA considers it to be less suitable than an automated system which would allow for per-passenger measures to be made robustly and a consistent sampling proportion to be maintained. The CAA encouraged HAL to minimise the period for which reliance will be placed on this interim metric.

Design of automated measurement metric

J72 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 passenger throughput in those periods.

J73 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 was 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

J74 The CAA proposed that the introduction of automated queue measurement follow the progress set out below. The CAA strongly encouraged HAL in the work it is doing to implement such a system at Terminal 5 and in the other terminals in phases. The CAA expected the system to be operational and capable of delivering robust performance measurements at a per-passenger level by 31 March 2015, if not before.

Figure J.7: CAA's proposed progress on automation

Date	Progress
Up to 31 March 2014	Maintain Q5 metrics and standards for central search and transfer search
1 April 2014	Harmonisation of interim central search and transfer search standards ^{note}
By 30 June 2014	HAL to publish the first progress report on automated queue time measurements – such reports are to 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'.

J75 To ensure full transparency as to progress of the project, the CAA proposed that HAL publish quarterly updates with forecast implementation dates on the SQRB pages of its website, and provided such updates to the CAA and terminal AOCs. The first progress update would be due by the end of June 2014.

Stakeholders' views

J76 The CAA received three responses to its final proposals.

- BA proposed ways to formulate the per-passenger metric.
- HAL proposed an additional monthly penalty if per-passenger queue measurement is not implemented in line with the CAA's proposed timetable. The move to the harmonised per passenger standard in Terminal 3 and Terminal 5 will take place after additional search capacity is delivered. The expected time of automation is April 2015 for Terminals 2 and 4, mid-2016 for Terminal 3 and April 2016 for Terminal 5. The amount of this additional penalty would be 1% and 0.5% of airport charges for central and transfer search respectively. This is on the basis that the existing Q5 security wait time standards continue to apply during the interim period.

- The Heathrow Airline Community stressed the importance of capturing the actual passenger experience. Neither a passenger perception metric nor averaging the 15-minute measurements would achieve this objective. It welcomed the introduction of a metric based on actual percentage of passengers experiencing a particular waiting time, the CAA's proposed timetable of automation, and the quarterly progress updates on automation. It was working with HAL on the facial recognition queue measurement technology.

CAA's final view

- J77 On the design of the interim and automated measurement metrics, the CAA maintains the same view as in its final proposals. The CAA notes BA's proposed formulation of the automated measurement metric. It encourages HAL and the airlines to work together to develop this metric in passengers' interests.
- J78 The CAA considers HAL's proposed additional penalty an effective way to incentivise provision of automation of queue time measurement. On top of the additional penalty, the CAA proposes that HAL should publish quarterly progress report if automation is not implemented after the proposed target months.
- J79 The CAA notes that barcode and facial recognition are two possible solutions of automation. The licence condition does not specify a particular technology to use. Regardless of the technology, the CAA must be satisfied that the automated measurement metric is a true representation of passengers' experience. The CAA expects to work together with HAL and the airlines to make sure that the automated solution is fit for purpose.

Central and transfer search – service standards

Issue

- J80 The Q5 standards for central search and transfer search are set out in figure J.8.

Figure J.8: 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

J81 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. 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.

J82 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 final proposals

Standards of the interim metric

J83 The CAA proposed interim security standards for Q6 until the introduction of the automated queue measurement technology.

Figure J.9: 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

- J84 The CAA noted that harmonisation of central search and transfer search standards is widely supported. Therefore, it proposed that such harmonisation takes place at the beginning of Q6, by way of extending the central search (interim) standards to transfer search.
- J85 The CAA further proposed 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'. The CAA believed that this minor change could achieve consistency across all the security standards in the SQRB scheme, and could satisfy the expectation of 86% of departing passengers and 89% of connecting passengers, as supported by the CAA’s passenger research¹⁵⁷ results shown below.

Figure J.10: 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

- J86 The CAA proposed 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.

Stakeholders' views

- J87 The CAA received the following stakeholder responses on this issue:

¹⁵⁷ CAA, May 2013, CAA passenger research: satisfaction with the airport experience: Heathrow, Gatwick and Stansted, www.caa.co.uk/cap1044

Standards of the interim metric

- BA supported the introduction of the 5-minute standard at transfers as being both an effective tool to incentivise HAL to move towards automation, but also as being strongly aligned with the position of the interest of the passengers at a hub airport such as Heathrow. It considered that HAL's presentation on this issue lacking in compelling evidence to support HAL's case, and that HAL must improve flow rate rather than seeking capex solutions.
- HAL expressed that the rollout of harmonisation is dependent on delivery of additional search capacity in Terminal 3 and Terminal 5, and considered the proposed harmonised interim standards unachievable and would require a very significant increase in opex and considerably more search capacity. It proposed to apply the Q5 security waiting time standards for direct and transfer passengers.
- The Heathrow Airline Community raised the following points:
 - it is extremely supportive of the harmonisation of central and transfer search standards at the start of Q6 as proposed by the CAA, as this is particularly in the interests of passengers;
 - HAL and the airlines share a long-term vision for Heathrow to be a well-functioning international hub airport. The agreed Joint Priorities and Joint Passenger Principles and Service Propositions made a compelling case for a harmonised transfer search standard to the level of central search;
 - HAL did not voluntarily make information available to the airlines in a timely manner. It disagreed with the additional evidence submitted on 28 October, and believed that its weaknesses reduced its value to objectively inform the debate;
 - it has become evident that HAL is pushing for an interim automated measurement proposal in order to avoid being measured against a 5-minute standard for transfer search; and
 - it should not be acceptable to the CAA for HAL to implement a sub-optimal automated solution.

Standards of the automated measurement metric

- BA supported the move to per-passenger measures, but not the removal of the 5-minute standard, as this would result in a large proportion of its customers queuing for longer than 5 minutes and therefore receiving a noticeably worse experience. It reserved the right to refer back to the CAA for a modification to the measure under the new licence condition. BA proposed different ways to formulate the metric. It continued to propose tightening the standard to 99% passengers queuing for less than 8 minutes, following investments coming on line, because this would
 - provide a reasonable level of service as the passengers are likely to consider a 10-minute queuing time satisfactory for the whole security process and not up to the roller bed;
 - avoid the regulatory burden of a final dual measure metric; and
 - address HAL's concern of the ability to meet a 5-minute per-passenger measure.
- HAL believed that the harmonised standard of 99% of passengers waiting less than 10 minutes would be easier for passengers and provide a more reliable and consistent service to airlines while not increasing operational costs. It stated that it is not aware of the Heathrow Airline Community communicating its support for the 8-minute standard.
- The Heathrow Airline Community put forward the following comments:
 - it welcomed the introduction of a per-passenger metric and the move from 'less than or equal to 10 minutes' to 'less than 10 minutes', but did not think that the standard of 99% of passengers queuing less than 10 minutes was optimal;
 - it was unclear that passengers are satisfied with 10 minutes for the length of queue up to the end of the roller bed or for the whole process of queue waiting (including waiting alongside the roller bed and completion of the overall search function);
 - a 99% of passengers waiting for less than 8 minutes would reduce the impact on the tail of the distribution of those who wait for longer than 8 minutes; and

- it is important for any automated means to capture the actual queuing time of passengers, and would continue to work with HAL in the consideration of the facial recognition queue measurement technology.

CAA's final view

Standards of the interim metric

J88 The CAA proposes to retain the Q5 standards prior to automation of queue time measurement. While this is a lower standard than in the final proposals for transfer passengers, the CAA considers that given HAL's clear commitment to introduce automation (see previous section), this should be beneficial to passengers in the long term.

Standards of the automated measurement metric

J89 The CAA will monitor closely the queuing time performance under the new metrics, and does not rule out the possibility of introducing a 5-minute standard if it discovers that the standard of 99% of passengers queuing for less than 10 minutes is insufficient to safeguard passengers' interests (for example, if passenger satisfaction levels deteriorate or the average queuing time materially lengthens within the 10-minute range).

Central and transfer search – definition of queues

Issue

J90 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.

CAA's final proposals

J91 The CAA considered that the performance standard should apply on security queuing times and not security processes. It therefore considered 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 considered that a standard on queuing times without restrictions on the length of the security maze should be sufficient to ensure good passenger experience.

- J92 The CAA proposed 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.
- J93 The CAA agreed that unimpeded walk times was an area for further consideration for Q6, and encouraged HAL and the airlines to come to an agreement prior to the start of Q6.

Stakeholders' views

- J94 Three respondents commented on this issue:
- BA noted the long roller beds at Heathrow and the benefit of the resultant improvement of flows due to additional space for passengers to organise their items. However, this has given HAL a distinct advantage in measured queue time. It asked the CAA to re-examine the definition of the queue areas to allow for this and future changes to physical structure of the lanes, and would be keen to work with HAL, the CAA and the AOC on this issue.
 - HAL stated that it would work with the airlines to review security unimpeded walk times and to minimise the redirection of passengers between search areas in Terminal 5. It considered that the airlines had misunderstood some features of the security screening process, and that the processing of passengers for security begins at the roller bed. HAL stated that Heathrow tends to have short security lanes and roller beds compared with some other airports due to terminal layouts and physical constraints, and that the length of roller beds does not materially impact the overall security wait time.
 - The Heathrow Airline Community raised the following points:
 - the recent installation of extended roller beds further exacerbates the difference between the service quality queue finish definition and the actual queuing times;
 - it welcomed the CAA's indication to reconsider the start and finish points once an automated measurement is put in place;

- at the start of Q6, the CAA could define the finishing point of queues as a bag enters an x-ray machine or a passenger enters the archway metal detector, so as to address the disparity of passenger experience across terminals and to provide a baseline service across the airport;
- a passenger queuing beside a roller bed is not part of the security process; and
- the unimpeded walk times are an important dimension of the queuing times, and they are different at each terminal and can change over time. The airlines and HAL need to work together to agree on it.

CAA's final view

J95 After considering the responses, the CAA believes that its final proposals remain appropriate. This area will be part of the joint work between the CAA, HAL and the airlines on automated queue measurement. The CAA will want to be satisfied that the current definition of queue is not open to abuse by, for example, extending the roller beds.

Central and transfer search – fast track lanes

Issue

J96 This issue was not covered in the CAA's initial proposals.

CAA's final proposals

J97 The CAA agreed with the Heathrow Airline Community'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.

Stakeholders' views

J98 The CAA received the following responses to its final proposals on this issue:

- BA had the following comments:
 - fast track is a critical and valued product for the majority of airlines at Heathrow and particularly to BA, which can have up to 40% of passengers eligible to use a fast track product;

- as premium traffic is the main driver of profitability in BA's business, BA is reliant on HAL as the sole monopoly provider. Unfortunately the fast track products have failed to meet the agreed standard;
- HAL should provide sufficient lanes to pass the SQRB standard without the benefit of the additional airline-funded fast track lanes;
- excluding passengers using the fast track product from performance measurement will (1) not be in passengers' interests as up to 40% of passengers would have an unregulated security experience, (2) enable HAL to use the fast track lane as a valve to prevent breaches in the main queue;
- all passengers are included in the opex/capex calculations used to determine service and infrastructure provision, and so be assured of at least the basic level of service. Therefore, fast track should remain measured against the same basic queuing standards, and any improvement to that standard should then be counted separately; and
- the same queue measurement technology must be provided in all lanes so that passengers using fast lanes can be discounted from performance measurements.
- HAL noted the CAA's proposal that passengers using fast track lanes paid for separately by the airlines should be excluded from the security queue time measure.
- The Heathrow Airline Community made the following comments:
 - the fast-track product is paid for by the airlines to provide a faster security processing time and exclusivity for the commercially important passengers, and is critical for the airlines for the service to be provided to the contracted level;
 - HAL leveraged its SMP in negotiations over the service provision and delivery for fast-track lanes;

- fast-track lanes are often used to process non-fast-track passengers and therefore are used to supplement any capacity shortfall in the general lanes. HAL meets the standard by diverting passengers to the fast-track lanes rather than delivering the required level of service to non-fast-track users; and
- to enable successful commercial arrangements to be made, the CAA should ensure that (1) the performance of fast-track queue times is to the SQRB standard, (2) HAL does not divert passengers from the general lanes to the fast-track lanes, (3) the same automated per-passenger measurement technology is provided to the fast-track lanes.

CAA's final view

- J99 The CAA welcomes stakeholders' work to develop commercially-based solutions in delivering services, and recognises the importance of fast track lanes for Heathrow to compete with other hubs. As fast track lanes are aimed at providing enhanced service to premium passengers, their quality of service should be maintained at a high level by the contractual parties. It is preferable to let various parties enter into commercial negotiations and agreement for services over and above the baseline standard covered in SQRB, and for them to seek commercially-based solutions to resolve disputes.
- J100 The CAA agrees that fast track lanes, if paid for separately by the airlines, should never be used to supplement any capacity shortfall in the general lanes. HAL should make sure that there is sufficient capacity to meet the central and transfer search standards in the SQRB without having to rely on fast track lanes that are covered by separate commercial agreements.
- J101 The CAA notes that the proof of concept of the facial recognition queue measurement technology has been completed using data from fast track lanes. There is a potential to implement this technology in fast track lanes, subject to agreement between HAL and the airlines that pay for these lanes.

Central and transfer search – assistance lanes

Issue

- J102 This issue was not covered in the CAA's initial proposals.

CAA's final proposals

J103 The CAA considered that every passenger should be treated equally, therefore proposed that no exclusion be applied to family or assistance lanes. HAL was required to make sure that these lanes are clearly signposted, and passengers who do not need special assistance will not be diverted to these lanes.

Stakeholders' views

J104 The CAA received the following responses to its final proposals on this issue:

- BA fully supported the inclusion of PRM/assistance lanes in the overall performance.
- HAL noted the CAA's proposal that no exclusion be applied to family or assistance lanes, and considered this inconsistent with the CAA's previous policy statements.
- The Heathrow Airline Community welcomed the CAA's proposals not to exclude 'family' security lanes or lanes specifically for PRMs from the queuing time measurements.

CAA's final view

J105 The CAA considers that the performance of family and assistance lanes should not be excluded in the overall performance measurement. The CAA's previous policy statement was made in a different context with the agreement by the airport operator concerned and the airlines operating at that airport. This is clearly a different situation from Heathrow, where no such agreement is envisaged.

Central and transfer search – redirection of passengers

Issue

J106 The CAA encouraged HAL and the airlines to work collaboratively on enhancing the passenger experience, and in particular to agree when redirection of passengers should take place.

CAA's final proposals

J107 In the final proposals, the CAA commented that redirection should only happen in exceptional circumstances (e.g. for health and safety reasons), and never to meet security queuing time targets.

Stakeholders' views

J108 The CAA received the following responses:

- BA made the following comments:
 - it raised the issue of HAL unilaterally closing a direct search portal (usually North) and redirecting passengers to the other portal, with the impact of a significant additional walk and poor customer experience not captured in the service quality scheme;
 - it had agreed with HAL that direct search portals should not be closed, and that passengers should be offered information about comparative queue time at the other portal to allow them to decide on which portal to use. However, HAL regularly closes the portal despite this agreement;
 - it was disappointed that the CAA has not yet proposed a remedy to this redirection of direct passengers, which allows HAL to prevent breaches and meet their targets, and proposed three potential solutions to capture redirection of direct passengers; and
 - redirection would become an issue for transfer passengers when a second escalator is introduced at the south facility. It noted that passengers held back from proceeding upstairs are not captured in the service quality scheme, and HAL should be held accountable for this.
- The Heathrow Airline Community welcomed the CAA's proposals on redirection, and considered that the CAA should require HAL to agree with the AOC on the circumstances which qualify for health and safety reasons and the unimpeded walk times between portals. It considered that redirection of passengers between portals when the agreed health and safety reasons are not met should be count against HAL's performance.

CAA's final view

J109 The CAA considers that redirection should happen in exceptional circumstances only. The CAA notes BA's proposed solutions to address this issue. It believes that detailed regulation in this area could be disproportionate, given the relative rarity of such incidents and the amount of regulation and monitoring which would be required.

However, it expects HAL and the airlines to work together during Q6 to minimise the number of redirections, and to minimise the inconvenience to passengers when these are unavoidable.

Staff search

Issue

- J110 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. 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.
- J111 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. 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 final proposals

- J112 The CAA acknowledged the importance of staff search to airline operations, and hence the passenger experience. The CAA also noted 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 proposed to maintain the Q5 service standard for Q6 and expected this to limit any further falls in performance.

Stakeholders' views

- J113 The CAA received three responses commenting on this issue.
- BA made the following points:

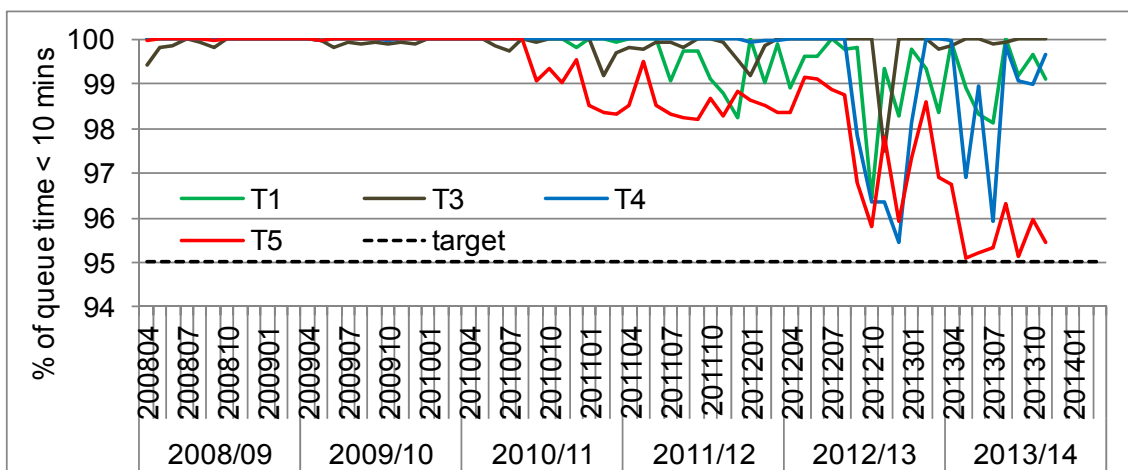
- the worsening performance appears to have been caused by closure of staff search lanes in support of central and transfer search. These closures caused delays by staff re-routing and high demand for the remaining lanes, and also risked departure punctuality, baggage reconciliation and delivery, among other services;
 - it proposed that each terminal nominate core hours where search facility must be kept open, with further detail (such as the minimum number of lanes) to be agreed. This should address the airlines' concerns and offer HAL flexibility in staff deployment;
 - the interim Q5 standard would have been in place for 10 years if it is maintained for Q6; and
 - it reserved the right to monitor performance and revert to the CAA to tighten the measure.
- HAL's comments were as follows:
 - it supported the application of the Q5 staff search standard for Q6, and expressed that there was no evidence of any decline in staff search performance over Q5, as the Q5 standard has been and will continue to be met;
 - it had communicated to the airlines that any increase to the standard during Q5 would depend on a more efficient use of security, including requiring changes to rostering for many staff who use the staff search facilities and sharing central search facilities to avoid additional opex and capex; and
 - The Heathrow Airline Community's proposed 5-minute standard is inconsistent with the principles set out by the airlines in the outputs of CE, and the cost implication does not seem to be considered.
 - The Heathrow Airline Community put forward the following comments:
 - while welcoming the CAA's acknowledgement that staff search performance has deteriorated, it was surprised that the CAA did not propose an improvement in the standard;

- it highlighted the anomaly that HAL continues to meet the standard with a worsening of the quality of staff search, and commented that HAL has plans which evidence that HAL recognises the lower service standard for staff search means HAL can move resources from staff search to meet demand in central search without this resulting in service failures in staff search;
- staff search is important for the smooth operation of airline staff and passengers (especially in times of disruption), and that the airlines are regularly frustrated by the long queues for customer service staff and the regular closure of staff search lanes;
- the current standard was intended to be a temporary one, and it would have been in place for two regulatory periods if it is not tightened for Q6; and
- the standard should be the per-person equivalent of 95% of 15-minute blocks being less than 5 minutes, and that staff search should not be closed during operational hours. Also, the unimpeded walk time between staff search portals should be added to the performance of the alternative portal.

CAA's final view

J114 HAL's staff search performance is shown below. It is evident that the percentage of queue time less than 10 minutes has started to drop in 2011/12, in particular in Terminals 4 and 5.

Figure J.11: HAL's staff search performance, April 2008 to November 2013



Source: HAL

- J115 The CAA maintains its view as in its final proposals. While maintaining the Q5 service standard for Q6, the CAA will continue to monitor performance to passengers' benefit, and does not rule out tighter controls if there is evidence that the current standard is not sufficient in ensuring smooth airline operation. Staff search performance must never be compromised in favour of central search.

Control posts

Issue

- J116 The CAA considered control posts 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. 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.
- J117 HAL proposed that the standard remain at that agreed for Q5 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 final proposals

- J118 The CAA noted that, while some control posts are used as alternatives for each other, some were not substitutable when they were designed for different types of traffic or are far apart from each other, or both. Averaging the performance of non-substitutable control posts potentially masked the actual performance for specific types of traffic and at different locations. The CAA therefore proposed to apply the Q5 standard of 95% of vehicles waiting less than 15 minutes to control post groups individually as in figure J.12. In meeting this target, HAL must not risk meeting its other legal commitments especially in relation to safety and security.

Figure J.12: 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

Stakeholders' views

J119 The CAA received the following responses commenting on this issue.

- HAL noted that the service standard had been improved from 20 minutes to 15 minutes in April 2013. It would continue to work collaboratively with the airlines to optimise control post performance and publish monthly performance. It disagreed with the application of the standard to each group of control posts separately, and expressed that the CAA had not conducted a cost-benefit analysis. HAL considers that the CAA's proposal would:
 - increase the regulatory burden on HAL for no apparent incremental passenger benefit;
 - require an additional £1.6 million opex per annum;
 - reduce flexibility for HAL as well as the airlines, as restrictions on the use of control posts might have to be applied;
 - increased administrative burden with more exclusions required in Q6 for events outside HAL's control; and
 - the CAA would need to consider how rebates would be appropriately allocated between control post groupings.

- The Heathrow Airline Community considered the control posts essential to punctuality and welcomed the CAA's final proposals. It highlighted that HAL kept passing the overall standard while performance at some control posts (e.g. Control Posts 10A, 20 and 24) have consistently fallen below the standard. It stressed that HAL agreed to tightening the standard from 20 minutes to 15 minutes after the first year of Q5, but implemented this only in 2013 as part of the negotiations to extend Q5 by one year. The Heathrow Airline Community considered that for Q6 control post performance should be measured individually but was content with the CAA aggregation of groups of control posts which needed to pass for the quality standard to be passed by HAL. This was in contrast to the Q5 metric in which the performance of all the control posts was averaged into a single performance measure.

CAA's final view

- J120 The CAA has scrutinised carefully the disadvantages which HAL has advanced for the new control post measures. It considers that it is unlikely that the costs of implementation will be as high as HAL projects. Much of the monitoring can be done by existing staff, and it seems unlikely that 40 new staff are required solely to attain this metric. However, some additional opex has been allowed for HAL to meet the standard.
- J121 The CAA notes the Heathrow Airline Community's point that the control posts are essential to airline performance. However, it considers that individual monitoring of each control post would be unduly burdensome. Accordingly, the CAA considers that its final proposals for grouping the control posts should better reflect users' experience, and the Q6 SQRB will be constituted on this basis.

Passenger operational elements

Issue

- J122 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 final proposals

J123 The CAA considered 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 proposed that for Q6, the Q5 standards and financial incentives for all passenger operational elements should be retained.

Stakeholders' views

- J124 The CAA received three responses commenting on this issue:
- BA proposed an additional metric on transfer/departure baggage, in recognition of the importance of baggage performance and with the knowledge of its introduction at Gatwick. It requested the CAA to make an interim statement of support for the development of such measure, and to ask HAL to constructively engage with the community to develop an acceptable measure, with the intent that it be introduced once a proposal has been formulated.
 - HAL stated that BA's proposed baggage performance measure had not been raised during the Q6 process, and that this measure could have a material impact on Heathrow's business. It reserved the right to submit comments and information as necessary should the CAA be minded to consider this issue.
 - The Heathrow Airline Community continued to support a distinction between a general and a priority list of PSE, as this would ensure a focus from HAL on the list of critical assets. It expressed that it is currently working with HAL to develop a list of priority assets for Q6, and the list for Terminal 2 will be delivered later.

CAA's final view

J125 The CAA notes BA's proposal. It considers that the new standard on transfer/departure baggage proposed by BA could be in passengers' interests. However, the CAA does not propose to include this standard in the Q6 SQRB at this stage. It believes that further discussion and agreement in the SQWG is required before such a metric can be introduced.

Airline operational elements – pier service

Issue

J126 HAL proposed that this element should be 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. The CAA considers that the purpose of the SQRB 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 final proposals

J127 The CAA considered that the party who had operational control of stand allocation should be responsible for meeting the service quality standard. Therefore, the CAA proposed 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) performs stand allocation at Terminal 5. This standard would remain in place at the other terminals.

J128 The CAA proposed 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.

J129 In addition, the CAA proposed to re-name pier service 'pier-served stand usage' to reflect this service element more accurately.

Stakeholders' views

J130 The CAA received three responses commenting on this issue:

- BA put forward the following points:
 - it disagreed with the change of the name, as there may be unintended consequences of shifting the focus from ensuring that HAL invest in sufficient infrastructure at Heathrow to a measure of HAL's stand planning. Therefore, it asked the CAA to revert to the previously acceptable terminology;

- the intent of the CAA in creating the pier service measure was clearly delivery of infrastructure, and for this purpose it created a highly visible service quality standard;
 - at Terminal 5, the 95% target is unachievable no matter who carry out stand planning, and the current shortage in infrastructure is not in passengers' interests. The CAA should therefore re-introduce a metric for Terminal 5 to incentivise HAL to rectify the situation;
 - it proposed an enhanced version of the current metric adjusted to take into account any agreed efficiency losses in stand planning, and noted that this was not accepted by the CAA; and
 - it outlined an methodology to determine the pier service achievability per season, and stressed that it has been agreed between HAL and BA.
- HAL's comments are as follows:
 - it disagreed with the inclusion of this element in the service quality scheme, and this element, if included, needs to be consistent with the delivery of infrastructure, airline terminal moves and planned airline schedules;
 - it faces uncertainty due to changes in the nature of demand and airline schedules;
 - the HAL-BA joint work was undertaken to demonstrate how various constraints affect stand planning, and was not intended to forecast achievable pier service levels. BA's proposal is inconsistent with the CAA's 2013 decision;
 - it did not agree with BA that irrespective of who carried out stand planning, a 95% target could not be met and had not agreed a methodology with BA for calculating pier service by season; and
 - it proposed the following exceptions to the 95% standard:

Figure J.13: HAL proposed exceptions to the standards for pier-served stand allocation over Q6

Terminal	Proposal	Periods of exceptions	Remarks
1 and 2	Combined target, no exceptions (95%)	N/A	Significant changes to Eastern Campus operations
3	83% or no exceptions (95%) (excluding Delta Airlines and BA off-pier short-haul services)	April to June 2014 [until Air Canada relocate from Terminal 3 to Terminal 2]	Consistent with CAA 2013 and 2010 decisions
3	93%	October 2015 to June 2016 [current forecast dates]	Completion of transfer search project and return of stand 323 to operational use

Source: HAL

- The Heathrow Airline Community made the following points:
 - it welcomed the retention of this element and also the Q5 standard, and stated that at Terminal 3, the only agreement was that Delta and Virgin will accept service levels below 95% until Air Canada relocates away. HAL's proposed combined Terminal 1/Terminal 2 standards and the wider alleviation at Terminal 3 has not been communicated with the airlines;
 - it was unsure of the implications from the change of the name of this element and would welcome an opportunity to discuss this with the CAA; and
 - it was disappointed with the CAA's proposals that 'the party who had operational control of stand allocation should be responsible for meeting the service quality standard'. The CAA's view was that the standard was designed to incentivise the provision of infrastructure, and therefore HAL should be held to account for the provision of the infrastructure.

CAA's final view

J131 The CAA agrees that HAL should provide sufficient infrastructure at Heathrow to allow for an appropriate level of pier-served stand usage. However, the CAA considers that the service quality standards have a

limited effect on incentivising the significant, long-term investments required to increase pier-served stand usage. Delivery of such projects should be discussed in the capital investment workstream.

- J132 The CAA proposes to implement HAL's proposed exceptions and urges HAL to be specific about the period of exception when information becomes available. It encourages HAL reach agreement with airlines that will be affected by its proposals as soon as possible.

Airline operational elements – others

Issue

- J133 Apart from pier-served stand usage, there are a number of other airline operational elements, including stands, jetties, FEGP, PCA and stand entry guidance. 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.

CAA's final proposals

- J134 Given the reasons stated in the initial proposals, and after considering the response received, the CAA proposed the inclusion of PCA and the retention of other airline operational elements in the SQRB. The CAA proposed to reconsider 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.

Stakeholders' views

- J135 The CAA received one response commenting on this issue. The Heathrow Airline Community welcomed the inclusion of PCA and the related financial incentives in the SQRB, and noted the need to reconsider the allocation of rebates in the relevant terminals and the need to update as new terminal infrastructure is delivered.

CAA's final view

- J136 The CAA considers that its final proposals in this area remain appropriate. Accordingly, it will implement the proposals listed above.

Aerodrome congestion term

Issue

J137 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, as shown below:

Figure J.14: ACT rebates in Q5

£	2008/09	2009/10	2010/11	2011/12	2012/13	Apr – Nov 2013
Rebates paid	0	0	194,980	54,435	130,376	0

Source: HAL

CAA's final proposals

J138 After considering stakeholders' responses, the CAA proposed the retention of this element of the SQR in line with the Q5 standard. The CAA acknowledged that escalation and consultation processes were areas worth further deliberation and clarification. It intended to discuss this with HAL and the Heathrow Airline Community in due course.

Stakeholders' views

J139 The CAA received two responses commenting on this issue:

- HAL noted that proposed retention of ACT in the service quality scheme was in line with the Q5 standard. It commented that the consultation and escalation process had been clarified at the SQWG.
- The Heathrow Airline Community welcomed the retention of ACT in the SQRB and the CAA's acknowledgement that the escalation and consultation processes are areas worth further deliberation and clarification. It looked forward to participating in these discussions. However, it considered that the value of the rebates payable for each level of lost movements is too low and should be increased because
 - the ACT standard has been used by the HAL ACT team for building business cases for asset repair or replacement;
 - higher rebates can provide meaningful incentives; and

- lost movements have a direct and detrimental impact on passengers.

CAA's final view

- J140 The CAA does not accept that the level of the rebate for this term is too low. It notes the Heathrow Airline Community's point that lost movements can have a direct and detrimental impact on passengers. Allocating the level of rebates involves the exercise of regulatory judgement. However, the relative rarity of 'events' which trigger the term would seem to indicate that an additional incentive is not required. In addition, the 1% level of the ACT rebate is, for example, almost equal to the combined level of way-finding, cleanliness and flight information rebates combined. This does not seem inappropriately low.
- J141 Accordingly, the CAA will retain the ACT term in the Q6 SQRB. The CAA will work with HAL and the airlines on escalation and consultation should further clarification be necessary.

Performance of third parties

Issue

- J142 HAL's FBP suggested reporting performance (with no targets or financial incentives) of the following:
- UKBF;
 - companies providing baggage services; and
 - airline punctuality.
- J143 The airlines disagreed that HAL should report third party performance and that the SQR should only relate to HAL as the regulated company.
- J144 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 final proposals

- J145 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 licence could not 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 considered that this should be addressed through its information duty under section 83 of the Act.
- J146 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 understand better options for data provision in the area of airline reliability (e.g. cancellations). The CAA will publish a final Statement of Policy with regard to its duties and powers to provide information to users of air transport.

Stakeholders' views

- J147 The CAA received one response to its final proposals commenting on this issue. The Heathrow Airline Community agreed that the licence could not lawfully be used to impose obligations on third parties, and noted that the CAA is reviewing responses to its information powers consultation. It urged the CAA to be cautious in considering the publication of airline performance data, as the airlines are in competition at Heathrow and there did not seem to be a market failure.

CAA's final view

- J148 The CAA expects to publish its final Statement of Policy in early 2014. Alongside this, next steps for further engagement and the development of proposals for specific information areas will be set out.

HAL service charter**Issue**

- J149 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 final proposals

- J150 The CAA acknowledged that a service charter could help to facilitate flexible commercial solutions on service quality across the whole airport community. The CAA 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 licence was a not suitable vehicle for ensuring airline standards, given the accountability for meeting the conditions of the licence lies with the airport operator. Therefore, the CAA did not feel it appropriate to include a service charter within the licence.
- J151 For Q6, the CAA considered that the proposed SQRB is in the best interests of passengers.

Stakeholders' views

- J152 The CAA received three responses commenting on this issue:
- BA strongly agreed that HAL's proposal for a service charter remains premature, because of HAL's market power and that as a consequence a suite of minimum service quality standards are needed.
 - HAL disagreed with the CAA's proposal not to introduce a service charter, and considered that the CAA should advocate and seek to facilitate more commercial practices. It noted the possibility of moving some service quality elements to a service charter in Q7, if performance is satisfactory in Q6.
 - The Heathrow Airline Community agreed that the inclusion of a service charter within the licence is not appropriate, and the SQRB was in the best interests of passengers for Q6.

CAA's final view

- J153 The CAA notes HAL's point that it is likely to be in passengers' interests that more commercial practices be facilitated. However, given HAL's current market power and the prospective strength of its market position over Q6, the CAA believes that it minimum service standards are likely to be necessary during Q6. Nevertheless, the CAA encourages HAL and the airlines 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.

Commercial contracts between HAL and the airlines

Issue

J154 This issue was not raised in the CAA's final proposals.

Stakeholders' views

J155 The CAA received three responses to its final proposals on this issue:

- BA commented that the airlines do not hold sufficient negotiating power to effect an acceptable agreement with HAL, and that it is in the CAA's and passengers' interests to have the enhanced standards reported even if these are not included for rebate purposes. It considered that a mechanism whereby HAL's adherence to negotiated enhanced passenger standards can be visibly tracked is required for the airlines to develop sufficient trust that HAL will deliver commercial contracts.
- HAL considered BA and the Heathrow Airline Community's position on this issue has not been raised before, and appeared to be inconsistent with the development of a more commercial approach. BA and the Heathrow Airline Community's proposal would have a material impact on Heathrow's business.
- The Heathrow Airline Community's comments are as follows:
 - an individual airline should only be able to contract separately with HAL for levels of quality which are above the baseline levels of quality in the SQRB. Airlines should not be able to agree levels of quality below the common baseline with the expectation that they will be able to pay lower charges; and
 - where a service level is contracted up, passengers should remain under the regulatory protection of the SQRB scheme to the baseline level of service paid for by all passengers at Heathrow.

- Both BA and the Heathrow Airline Community believed that given HAL's SMP and its propensity to abuse its SMP, commercial arrangements between HAL and the airlines would require significant regulatory oversight (through the licence), which may include (1) the CAA allowing the airlines or their nominated representatives to take over the provision of the service or facility in question in case HAL fails to deliver the agreed level of service; and (2) the airlines securing approval from the CAA to provide enhanced services that could be implemented without detriment to other passengers or other airlines in case HAL refuses to enter into negotiations with the airlines.

CAA's final view

J156 The CAA noted the stakeholders' views. The CAA encourages more commercially-oriented solutions to service quality, and considers that HAL and individual airlines should be free to negotiate levels of service outside of the SQRB. Where such agreements are put in place, the contractual parties should be responsible for monitoring the delivery of service. The CAA considers that the proposals on taking over service provision are likely to be disproportionate and administratively burdensome, and are not sufficiently targeted at the specific problems. Accordingly, the CAA will not undertake detailed oversight of individual contracts between HAL and the airlines during Q6.

CAA's final views

J157 The CAA's final views for the SQRB scheme set out in this chapter are incorporated in Condition D.1 (and the associated Schedule 1 to Condition D.1) in the draft licence, which is set out in Chapter 3 of this document. The Q6 scheme in the CAA's final view 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;
- an improved metric for control post search; and
- a rationalised metric of pier-served stand usage.

APPENDIX K

Rolling forward the Regulatory Asset Base

Purpose and basis of the calculation

- K1 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.
- K2 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 December 2018.

Inflation indices

- K3 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) as at 31 December of financial year t divided by the average of the relevant monthly RPI figures for the financial year 2011/12, which (based on the All Items index¹⁵⁸ and based on 13 January 1987 = 100) equals 237.3

Annual RPI Growth t = The RPI as at 31 December of financial year t divided by The RPI as at 31 December of financial year t-1

Within Year RPI Growth t = The RPI as at 31 December of financial year t divided by

¹⁵⁸ All Items (CHAW) index, source: ONS.

the average of the monthly RPI figures for the relevant number of preceding months (nine for the first Regulatory Period, 12 for all subsequent Regulatory Years)

Heathrow Airport RAB

K4 This section describes how the RAB at Heathrow Airport will be rolled forward from one Regulatory Period or year to another.

$$\text{RAB } t = (\text{Basic RAB}) t + (\text{Cumulative Profiling Adjustment})t$$

K5 Both the Basic RAB and the Cumulative Profiling Adjustment are to be separately identified. This is to allow full visibility to interested parties.

$$\begin{aligned} \text{Closing} &= \text{Opening RAB } t \\ \text{(Basic RAB) } t &+ (\text{Total Actual Capex } t \times \text{Within Year RPI Growth } t)^{159} \\ &- (\text{Proceeds from Disposals } t) \\ &- (\text{CAA's Assumed Ordinary Depreciation } t \times \text{RPI Growth from 2011/12}) \end{aligned}$$

$$\begin{aligned} \text{Opening} &= \text{For the first Regulatory Period (1 April to 31 December 2014, where} \\ \text{(Basic RAB) } t &t=1), \text{ this figure will be set according to the following formula:} \\ &\text{£ 13,815.828 million} \times \text{RPI Growth from 2011/12} \\ &+ \text{Actual Capex 2013/14} \times \text{RPI Growth from 2013/14} \\ &- \text{£ 1,292.874 million} \times \text{RPI Growth from 2011/12} \\ &- (\text{Actual proceeds from Disposals 2013/14}) \times \text{RPI Growth from} \\ &\text{2013/14)} \\ &= \text{For the remaining Regulatory Years, this figure will be set according} \\ &\text{to the following formula:} \\ &\text{Closing RAB } t-1 \times \text{Annual RPI Growth } t \end{aligned}$$

$$\begin{aligned} \text{Assumed} &= \text{For each financial year this figure will be fixed at the following values:} \\ \text{Ordinary} &\text{Regulatory Period 1 (1 April to 31 December 2014): £ 467.255 million} \\ \text{Depreciation } t \text{ in} & \end{aligned}$$

¹⁵⁹ Accrued capex with no adjustment for movements in working capital.

2011/12 prices

Regulatory Year 2 (calendar year 2015): £ 644.921 million

Regulatory Year 3 (calendar year 2016): £ 652.732 million

Regulatory Year 4 (calendar year 2017): £ 672.132 million

Regulatory Year 5 (calendar year 2018): £ 676.246 million

APPENDIX L**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 1998
CAGR	Compound Annual Growth Rate
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

Abbreviation	
DC	Defined Contribution
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 Fuel Company
HAL	Heathrow Airport Limited
Heathrow	Heathrow Airport
HADACAB	Heathrow ATM Demand and Capacity Balancing group
HHOPCO	Heathrow Hydrant Operating Company
IAPA	Independent Airport Parking Association
IBP	Initial Business Plan
ICR	Interest Cover Ratio
IDS	IDS Thomson Reuters
IFRS	International Financial Reporting Standards
IFS	Independent Fund Surveyor
IPD	Investment Property Databank
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

Abbreviation	
OBR	Office of Budget Responsibility
ONS	Office for National Statistics
opex	Operating Expenditure
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
SQM	Service Quality Measurement
SQR	Service Quality Rebate
SQRB	Service Quality Rebate and Bonuses
STAL	Stansted Airport Limited
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

Abbreviation	
the airlines	the airlines operating at Heathrow
the Statement	the Statement of Standards, Rebates and Bonuses
TPI	Tender Price Index
UKBF	UK Border Force
Virgin	Virgin Atlantic Airways
WACC	Weighted Average Cost of Capital
WDF	World Duty Free
WHO	World Health Organization
WtP	Willingness-to-Pay