

Heathrow Airport

Airport Charges for 2020 Consultation Document

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Executive Summary

Following over £12bn of investment, Heathrow has been transformed into a reliable airport of choice that passengers consistently rank as one of the best in the world. At Q2 2019 Heathrow is outperforming all other European hub airports with an Airport Service Quality (ASQ) score of 4.18 (out of 5.00) and 82% of passengers rating their experience as “Excellent” or “Very Good” – compared to just 50% in 2008.

At the 2019 Skytrax World Airport Awards Terminal 5 was voted the “World’s Best Airport Terminal”, building on Heathrow’s fifth consecutive win as “Best Airport in Western Europe” and “World’s Best Airport Shopping” for the tenth consecutive year.

Responsible investments in our operation have also yielded results. In 2018 83.9% of Heathrow’s flights operated within 15 minutes of schedule compared to 78.2% for the UK overall, an improvement of nearly 20% points at Heathrow since 2008^[1]. Baggage connection performance remains strong at 98.9% of passengers travelling with their bags in the 12 months to July 2019. This all against the backdrop of record passenger and movement numbers and severe congestion across European airspace.

Investments in passenger experience are balanced by a relentless focus on working with our airline customers to grow passenger volumes, streamline operations and reduce costs. Heathrow continues to be Europe’s airport of choice with 14 new international routes so far in 2019. We continue to achieve strong growth and record passenger numbers, with the busiest ever first half for passengers and movements in 2019. Our structure of tariffs continues to attract the cleanest, quietest fleet with strong passenger growth and commercial revenues contributing to near current user charges.

On 25th June 2018 Parliament voted overwhelmingly in favour of expanding Heathrow. Heathrow is currently conducting its public Airport Expansion Consultation on its preferred masterplan. Heathrow remains committed to delivering an expansion plan that is affordable, sustainable and financeable.

Heathrow has developed a landmark commercial deal with airlines for the iH7 period between 2020 and 2021, with rebates and incentives worth in excess of £260m outside of the airport charges structure.

This consultation document builds on success, outlining the shape of charges for 2020. In response to customer feedback a longer-term view of charges from 2021 is also presented. This document frames Heathrow’s proposed charges to achieve the objective of driving sustainable passenger growth.

Heathrow is proposing to set 2020 prices to recover the maximum allowable yield permitted by the regulatory settlement. The forecast maximum allowable yield for 2020 is £23.560 per passenger.

The consultation proposal includes:

- maintaining the European load factor and UK connectivity departing passenger discounts;
- introducing seasonality to all passenger charges including High, Low and Shoulder seasons;
- maintaining the passenger growth incentive
- noise charges on movement (arrival and departure) with night quota period multiplier applied to departing flights;
- a look ahead to 2021 Airport Charges.

^[1] CAA Punctuality Analysis

Publication of this consultation document initiates the consultation process. We are keen to listen to customer feedback throughout this process and we thank those who have already expressed early views.

Heathrow will be holding a consultation meeting on 11 September 2019. To help inform the consultation, Heathrow requests written responses from the airline community by 11 October 2019. Heathrow will then consider all comments received during the consultation period, ahead of issuing a decision on 31 October 2019 for implementation from 1 January 2020.

Chapter 1 – Introduction and Consultation Programme

Purpose

- 1.1 The purpose of this document is to set out Heathrow's proposal for the level of airport charges and invite the airline community to provide views on the proposals.
- 1.2 Heathrow is proposing to set airport charges for 2020 to recover the forecast maximum allowable yield.
- 1.3 This consultation document sets out the calculations for the 2020 forecast maximum allowable yield based on the CAA's Q6 price control licence condition and the implementation of the iH7 commercial agreement.
- 1.4 This document also includes information on major capital investment projects subject to capital triggers, passenger number forecasts/actuals and financial information on revenues and costs.

Economic Regulation

- 1.5 In December 2012, the Civil Aviation Act 2012 (the Act) came into force. The Act allows the CAA to set the maximum yield per passenger that may be levied by Heathrow through the application of the price control conditions under a new licence.
- 1.6 The CAA modified Heathrow's licence on 21 December 2016 under section 22 of the Act. The modifications extend the current price control for Heathrow, which currently runs from 1 April 2014 to 31 December 2018, by one year so that it will end on 31 December 2019. The modification rolled over the existing control in the last year of Q6 on the same terms, i.e. a price path of the Retail Price Index (RPI) - 1.5%. In April 2018 the CAA confirmed that an interim regulatory period would be implemented ahead of the H7 period. This period starts on 1 January 2020 until 31 December 2021 and is known as the interim H7 period or iH7. The CAA set out its minded to policy for the implementation of the iH7 period in February 2019 and confirmed its policy in August 2019.
- 1.7 2020 is the first year of the iH7 period. Calculation of the airport charge for the iH7 period will be in line with the CAA's Q6 decision and will continue to apply a price path of RPI -1.5%. In addition to this, a commercial agreement is in place between Heathrow and the airline community determining the additional rebates to be paid

to the airline community through the period. Further information on this agreement and its implementation is set out in chapter 2.

- 1.8 The basis of the price control regulation remains the application of the RPI-X formula under Single Till regulation to determine the maximum airport charge revenue yield.
- 1.9 Airport charges are levied on operators of aircraft in connection with the landing, parking or take off of aircraft at the airport (including charges that are to any extent determined by reference to the number of passengers on board the aircraft)¹.
- 1.10 The CAA also requires Heathrow to (i) meet service quality conditions and (ii) consult on capital investment and other regulated charges.
- 1.11 The CAA conditions for service quality require Heathrow to make payments to airlines if it fails to meet the assigned targets. The service quality measures include: seat availability; cleanliness; way-finding; flight information; passenger-sensitive equipment; arrivals reclaim; stands; jetties; pier service; fixed electrical ground power; pre-conditioned air; central security queuing; transfer security queuing; staff security queuing; control post queuing; stand entry guidance; and track transit system. Further details on the service quality measures, including targets and penalties, can be found at www.heathrow.com².
- 1.12 Details of Heathrow's capital investment plan can be found at www.heathrow.com³, a list of other regulated facilities and services can be found at www.heathrow.com/orc and a list of property accommodation can be found at www.heathrow.com/property. In addition, the full schedule of airport charges is listed in the Conditions of Use, which can be found at www.heathrow.com/cou.

Heathrow Expansion

- 1.13 On 25 October 2016, Heathrow welcomed the Government's decision to support its expansion and confirmed it will begin work to deliver the new runway, which will connect all of Britain to the world, bringing new jobs and economic growth to every nation and region in the UK. Plans for Heathrow expansion have since been approved by Parliament and Heathrow will now continue on its path to obtain planning permission through the DCO process.
- 1.14 In July 2016, the CAA commenced its consultation on the regulatory treatment of costs incurred in obtaining the DCO required to proceed with expansion, Category B costs. The CAA modified Heathrow's licence on 21 December 2016 to allow it to recover up to £10 million per annum of Category B costs through airport charges.
- 1.15 Following Parliament's unambiguous support for Heathrow expansion on 25 June 2018 and the Secretary of State's subsequent designation of the NPS, Heathrow is continuing to prepare its application for development consent, which is scheduled to be submitted to the Planning Inspectorate in mid-2020.
- 1.16 In June 2019, Heathrow began its Statutory Consultation, the Airport Expansion Consultation. This consultation exercise is required by law as part of the planning process and the feedback from this consultation will inform Heathrow's DCO submission.
- 1.17 In July 2019, the CAA consulted on its policy for the regulatory treatment of construction costs which are required to be incurred in advance of Heathrow

¹ The Airport Charges Regulations 2011

²<http://www.heathrow.com/company/investor-centre/results-and-performance/service-quality>

³<http://www.heathrow.com/company/investor-centre/document-centre/capital-investment-plans>

obtaining DCO consent. The CAA's proposals include that, once a programme of pre-DCO Category C expenditure consistent with the needs of consumers has been agreed, efficiently incurred pre-DCO Category C costs should be recoverable by Heathrow⁴. The CAA expects to finalise the principles for the regulatory treatment of these costs in September/ October 2019.

Consultation Programme

1.18 Heathrow is consulting on the level of charges for 2020 with the airline community and plans to announce its final decision on 31 October 2019. The publication of this consultation document is the start of our consultation on the annual setting of airport charges.

1.19 The consultation programme is as follows:

Table 1

Date	Milestone
30 Aug 2019	Publication of Heathrow consultation document
11 Sep 2019	Consultation meeting
11 Oct 2019	Airline written responses submitted by close of business
31 Oct 2019	Heathrow announces 2020 prices
1 Jan 2020	Prices applicable from

1.20 The consultation meeting will be held on 11th September 2019 which will provide the airline community with the opportunity to comment on the price proposals, in addition to any written comments. The meeting will be open to all airlines and their representative bodies.

Date: Wednesday 11th September 2019
 Time: 14:30 to 16:30
 Location: Hyatt Place Hotel
 London Heathrow Airport
 The Grove, Bath Road
 Harmondsworth
 West Drayton
 Middlesex
 UB7 0DG

1.21 Please let us know if you would like to attend the consultation meeting using the contact details provided below.

How to Respond

1.22 We invite interested parties to submit written responses to the proposals set out in this document by close of business on 11 October 2019. Responses should be sent to: airline_relations@heathrow.com.

⁴ Economic regulation of capacity expansion at Heathrow airport: consultation on early costs and regulatory timetable (CAP1819)

Alternatively, comments may be posted to:

Airline Business Development
Heathrow Airport Limited
The Compass Centre
Nelson Road
Hounslow
Middlesex
TW6 2GW
UK

Or, if you have any questions on the consultation document or consultation process, please contact Airline Business Development on the above e-mail address.

Please clearly mark any information that should be treated as confidential in responses to this consultation.

Chapter 2 – iH7 Commercial Agreement and Regulatory Implementation

- 2.1 As set out in chapter 1, the iH7 period starts on 1 January 2020 until 31 December 2021. The regulatory framework for this period is consistent with the Q6 framework and decision, i.e. setting a price path of RPI -1.5%; and maintains all other conditions included in Heathrow's licence including but not limited to service quality, consultation and engagement conditions.
- 2.2 In addition to extending the Q6 conditions, Heathrow and a significant proportion of the airline community have signed a commercial agreement for the iH7 period.
- 2.3 Based on the conditions set out in the commercial agreement, and the proposed licence change proposed by the CAA in its CAP 1825 consultation document, Heathrow will offer a fixed rebate to all airlines provided a given threshold number of passenger is reached. It will also offer a volume rebate for airlines who have signed the commercial agreement associated with individual airlines volumes. The rebates set out in the commercial agreement were offered to all airlines and the thresholds for each of the fixed and volume rebates will be calculated using consistent principles in a non-discriminatory basis.
- 2.4 The fixed rebate mechanism operates for both 2020 and 2021 with half of the total fixed rebate amount being payable each year. The level of rebate paid to each airline is based on the number of passengers provided by that airline. The calculation is as follows:

$$\text{Airline 2020 Fixed Rebate} = \frac{\text{total Airline Provided Passengers during the 2020 calendar year}}{\text{total Passengers using Heathrow Airport during the 2020 calendar year}} \times \text{Total Fixed Rebate} \times 0.5$$

- 2.5 The amount of fixed rebate paid will reduce on a linear sliding scale from 100% to 0% in the event that overall passenger numbers at the airport reduce. Passenger numbers for 2020 must be between 74.5m and 79m in order for a rebate to be payable.

$$\text{Reduction in Airline 2020 Fixed Rebate \%} = \frac{79,000,000 - \text{total Passenger numbers at Heathrow Airport in respect of the calendar year 2020}}{4,500,000} \times 100$$

- 2.6 Full details of the fixed element of the rebate are set out in the draft Conditions of Use.
- 2.7 The CAA set out that it is minded to accept the iH7 commercial agreement in February 2019 and confirmed its policy for the implementation of iH7 in August 2019 in its CAP 1825 document. The licence changes required to implement the iH7 agreement were set out in the CAA's August 2019 consultation and will come into effect in December of 2019.
- 2.8 The commercial agreement will be implemented through Heathrow's economic licence. The agreement is additional to Heathrow's price control condition and the rebates paid through the agreement will not form part of the calculation of the maximum allowable yield. Calculation of the maximum allowable yield will continue

to be based on the formula set out in the CAA's Q6 decision, and confirmed in its August 2019 CAP1825 document, with a price path of RPI -1.5%.

Chapter 3 – Calculating the Maximum Allowable Yield

Calculating the Maximum Allowable Yield

- 3.1 Based on the CAA's Q6 price control licence condition the following price formula has been used for calculation of the 2020 yield:

$$M_{2020} = (1 + RPI_{t-1} + X + B_{t-2})Y_{t-1} + \frac{D_t}{Q_t} - \frac{T_t}{Q_t} + \frac{A_t}{Q_t} + \frac{BR_t}{Q_t} - K_t$$

Where:

M_{2020}	=	maximum revenue yield per passenger using Heathrow airport in Regulatory Year ("2020") expressed in pounds.
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. For 2020 this would be the change from April 2018 to April 2019.
X	=	-1.5%
B_{t-2}	=	bonus factor based on certain service quality performance in 2018.
Y_{t-1}	=	specified average revenue yield per passenger for the period t-1 (2019).
D_t	=	cumulative development capex adjustment.
T_t	=	reduction in maximum allowable charges when the airport has not achieved specific trigger dates associated with relevant projects (Triggers).
A_t	=	cost pass-through for runway expansion.
BR_t	=	business rates revaluation factor.
K_t	=	correction factor (K Factor) per passenger (whether positive or negative value) for 2018.
Q_t	=	forecast passengers using Heathrow airport in 2020.

- 3.2 The relevant year "2020", means the period of twelve months from 1 January 2020 to 31 December 2020.

Maximum allowable yield forecast for 2020

- 3.3 The combined impact of all the elements of the formula results in a forecast 2020 maximum allowable yield of £23.560 (passenger only flights). The full details of the formula are shown below.

Bonus Factor

- 3.4 The formula includes a bonus factor that allows the airport to recover a bonus when performance on certain service quality measures exceeds a specified service standard. The bonus term in any given year is based on actual service quality, based on the two-year period preceding the relevant year i.e. 2018. Heathrow achieved a bonus in 2018. Full details in Chapter 4.

Cumulative development capex adjustment

- 3.5 The cumulative development capex adjustment adjusts the maximum allowable yield to account for the cumulative difference between the development capex allowance in the Q6 settlement and forecast development capex spend. Heathrow forecasts to transition less cumulative development capex up to 31 December 2020 than the CAA's allowance. The projections for 2020 include forecast spend for both business as usual and expansion related expenditure. Further detail is provided in Chapter 5.

Triggers

- 3.6 Triggers reduce the maximum allowable charges when the airport has not met specified capital investment project dates. As at 1 June 2019, nineteen trigger projects have been agreed with the airline community, and two of these trigger projects have a completion date that falls in 2020:
- Completion of the kilo substructure excavation; and
 - Hold baggage screening standard 3 machines & asset replacement works in T4
- 3.7 Both of these projects are forecast to be completed by their respective milestone dates.
- 3.8 Any trigger payment which may arise in 2020 due to new triggered projects or any deviation in actual completion dates will be corrected through the K Factor when setting 2022 airport charges.

Cost pass through of Category B costs

- 3.9 Cost pass through of Category B costs increases the maximum allowable yield. Heathrow can recover up to £10 million per year for costs associated with obtaining planning permission for a new northwest runway (i.e. Category B costs).
- 3.10 Heathrow is recovering £10 million for 2020. Full details are shown in Chapter 7.

Business rates revaluation factor

- 3.11 The business rates revaluation factor adjusts the forecast maximum allowable yield to account for the difference between the actual change in the rates revaluation undertaken by the Valuation Office Agency in 2018 compared to the 9% allowance in the settlement.
- 3.12 The actual business rates revaluation has been lower than the 9%. This reduces the forecast maximum allowable yield. Full details are shown in Chapter 8.

Passengers

- 3.13 Heathrow passenger forecast for 2020 is 81,462k (twelve months – January 2020 to December 2020).

K Factor

- 3.14 The K Factor in the formula has increased the 2020 forecast maximum allowable yield to compensate for the unanticipated under-recovery against the maximum allowable yield in 2018, together with an allowance for interest. The K Factor calculation is shown in Chapter 9.

Application of the Regulatory Pricing Formula

- 3.15 Based on the regulatory pricing formula, the 2020 forecast maximum allowable is set out below.

$$M_{2020} = (1 + RPI_{t-1} + X + B_{t-2})Y_{t-1} + \frac{D_t}{Q_t} - \frac{T_t}{Q_t} + \frac{A_t}{Q_t} + \frac{BR_t}{Q_t} - K_t$$

Where :

RPI_{t-1}	=	3%	
X	=	-1.5%	
B_{t-2}	=	0.042%	- actual bonus achieved in 2018
Y_{t-1}	=	£23.183	
D_t	=	-£1,755k	- this figure is a forecast
A_t	=	£10,000k	
T_t	=	0	- this figure is a forecast
BR_t	=	-£34,638k	
K_t	=	-0.344	- this figure is a forecast
Q_t	=	81,462k	- this figure is a forecast

Hence:

$$M_{2020} = (1 + RPI_{t-1} + X + B_{t-2})Y_{t-1} + \frac{D_t}{Q_t} - \frac{T_t}{Q_t} + \frac{A_t}{Q_t} + \frac{BR_t}{Q_t} - K_t$$

$$M_{2020} = (1 + 3\% + -1.5\% + 0.042\%)23.183 + \frac{(-1755)}{81,462} - \frac{0}{81,462} + \frac{10,000}{81,462} + \frac{(-34,638)}{81,462} - (-0.344)$$

$$M_{2020} = (1.0154 * 23.183) + (-0.022) - 0 + 0.123 + (-0.425) - (-0.344)$$

$$M_{2020} = 23.560$$

Charges in 2019

3.16 The forecast maximum allowable yield at Heathrow in 2019 was calculated at £22.913.

Table 2

Specified yield 2019	£22.751
12 months RPI movement to April 2017	£0.774
X	-£0.341
Bonus term	£0.007
Trigger payments	£0.003
Development capex	-£0.242
Category B	£0.126
Business rates	-£0.343
K factor from 2017 under recovery	£0.184
Forecast 2019 maximum allowable yield	£22.913

Proposed pricing for 2020

3.17 Heathrow is proposing to set prices for 2020 to recover the forecast maximum allowable yield of £23.560 per passenger (details of the charges are shown in Chapter 10).

3.18 Full details of the individual tariffs are shown in chapter 10 and 11.

Chapter 4 – Bonus Factor

- 4.1 The price control licence condition for the maximum allowable yield includes a bonus component for performance of certain service quality measures. A service quality bonus can be achieved when performance for certain measures exceeds the specified target levels. Full details of the bonus can be found in the Licence granted to Heathrow Airport Limited.
- 4.2 The service quality bonus can be recovered from 2014 to 2021 for departure lounge seating availability, cleanliness, way-finding and flight information. For the purposes of the 2020 forecast maximum allowable yield the service quality bonus can be recovered for the Regulatory Period 2018 from 1 January 2018 to 31 December 2018.
- 4.3 Heathrow has achieved the service quality bonus for 2018 at 0.042%. This is included in the 2020 forecast maximum allowable yield.
- 4.4 Table 3 sets out the 2018 performance of these measures for the purpose of the bonus.

Table 3

Departure lounge seating availability (QSM)	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total
Terminal 1 (actual)	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Terminal 2 (actual)	4.36	4.36	4.35	4.35	4.34	4.33	4.34	4.36	4.36	4.37	4.38	4.38	
Terminal 3 (actual)	4.12	4.12	4.13	4.12	4.15	4.16	4.17	4.17	4.17	4.17	4.17	4.17	4.17
Terminal 4 (actual)	4.30	4.29	4.29	4.29	4.28	4.29	4.29	4.28	4.28	4.30	4.28	4.27	
Terminal 5 (actual)	4.06	4.06	4.06	4.06	4.06	4.07	4.07	4.08	4.07	4.07	4.09	4.10	
BNS(T1)KJ	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%
BNS(T2)KJ	0.0195%	0.0195%	0.0188%	0.0188%	0.0180%	0.0173%	0.0180%	0.0195%	0.0195%	0.0203%	0.0210%	0.0210%	0.0210%
BNS(T3)KJ	0.0015%	0.0015%	0.0023%	0.0015%	0.0038%	0.0045%	0.0053%	0.0053%	0.0053%	0.0053%	0.0053%	0.0053%	0.0053%
BNS(T4)KJ	0.0150%	0.0143%	0.0143%	0.0143%	0.0135%	0.0143%	0.0143%	0.0135%	0.0135%	0.0150%	0.0135%	0.0128%	
BNS(T5)KJ	-0.0030%	-0.0030%	-0.0030%	-0.0030%	-0.0030%	-0.0022%	-0.0022%	-0.0015%	-0.0022%	-0.0022%	-0.0007%	0.0000%	
Bonus term =	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.000%
Cleanliness (QSM)	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total
Terminal 1 (actual)	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Terminal 2 (actual)	4.39	4.39	4.40	4.39	4.39	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38
Terminal 3 (actual)	4.19	4.18	4.18	4.18	4.19	4.19	4.19	4.19	4.19	4.18	4.18	4.18	
Terminal 4 (actual)	4.21	4.21	4.21	4.21	4.21	4.21	4.23	4.23	4.23	4.25	4.25	4.24	
Terminal 5 (actual)	4.27	4.27	4.27	4.27	4.28	4.28	4.29	4.29	4.29	4.30	4.31	4.31	
BNS(T1)KJ	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%
BNS(T2)KJ	0.0190%	0.0190%	0.0200%	0.0190%	0.0190%	0.0180%	0.0180%	0.0180%	0.0180%	0.0180%	0.0180%	0.0180%	0.0180%
BNS(T3)KJ	-0.0010%	-0.0020%	-0.0020%	-0.0020%	-0.0010%	-0.0010%	-0.0010%	-0.0010%	-0.0010%	-0.0020%	-0.0020%	-0.0020%	-0.0020%
BNS(T4)KJ	0.0010%	0.0010%	0.0010%	0.0010%	0.0010%	0.0010%	0.0030%	0.0030%	0.0030%	0.0050%	0.0050%	0.0040%	
BNS(T5)KJ	0.0070%	0.0070%	0.0070%	0.0070%	0.0080%	0.0080%	0.0090%	0.0090%	0.0090%	0.0100%	0.0110%	0.0110%	
Bonus term =	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.000%
Way finding (QSM)	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total
Terminal 1 (actual)	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Terminal 2 (actual)	4.32	4.32	4.32	4.33	4.32	4.32	4.32	4.32	4.32	4.32	4.31	4.31	
Terminal 3 (actual)	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.24	4.25	4.25	4.25	4.24	
Terminal 4 (actual)	4.25	4.25	4.25	4.25	4.25	4.25	4.27	4.27	4.27	4.27	4.27	4.26	
Terminal 5 (actual)	4.23	4.23	4.23	4.23	4.24	4.24	4.24	4.24	4.24	4.24	4.25	4.25	
BNS(T1)KJ	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%
BNS(T2)KJ	0.0120%	0.0120%	0.0120%	0.0130%	0.0120%	0.0120%	0.0120%	0.0120%	0.0120%	0.0120%	0.0110%	0.0110%	
BNS(T3)KJ	0.0030%	0.0030%	0.0030%	0.0030%	0.0030%	0.0030%	0.0030%	0.0040%	0.0050%	0.0050%	0.0050%	0.0040%	
BNS(T4)KJ	0.0050%	0.0050%	0.0050%	0.0050%	0.0050%	0.0050%	0.0070%	0.0070%	0.0070%	0.0070%	0.0070%	0.0060%	
BNS(T5)KJ	0.0030%	0.0030%	0.0030%	0.0030%	0.0040%	0.0040%	0.0040%	0.0040%	0.0040%	0.0040%	0.0050%	0.0050%	
Bonus term =	0.0030%	0.0030%	0.0030%	0.0030%	0.0030%	0.0030%	0.0030%	0.0040%	0.0040%	0.0040%	0.0050%	0.0040%	0.042%
Flight information (QSM)	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total
Terminal 1 (actual)	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70
Terminal 2 (actual)	4.42	4.42	4.42	4.42	4.42	4.42	4.42	4.43	4.43	4.43	4.43	4.44	
Terminal 3 (actual)	4.39	4.40	4.40	4.39	4.40	4.40	4.40	4.41	4.40	4.40	4.41	4.41	
Terminal 4 (actual)	4.40	4.39	4.39	4.39	4.39	4.39	4.40	4.39	4.39	4.39	4.38	4.36	
Terminal 5 (actual)	4.37	4.38	4.38	4.38	4.37	4.38	4.38	4.38	4.37	4.38	4.39	4.38	
BNS(T1)KJ	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%	0.0300%
BNS(T2)KJ	0.0020%	0.0020%	0.0020%	0.0020%	0.0020%	0.0020%	0.0020%	0.0030%	0.0030%	0.0030%	0.0030%	0.0040%	
BNS(T3)KJ	-0.0010%	0.0000%	0.0000%	-0.0010%	0.0000%	0.0000%	0.0000%	0.0010%	0.0000%	0.0000%	0.0010%	0.0010%	
BNS(T4)KJ	0.0000%	-0.0010%	-0.0010%	-0.0010%	-0.0010%	-0.0010%	0.0000%	-0.0010%	-0.0010%	-0.0010%	-0.0020%	-0.0040%	
BNS(T5)KJ	-0.0030%	-0.0020%	-0.0020%	-0.0020%	-0.0030%	-0.0020%	-0.0020%	-0.0020%	-0.0030%	-0.0020%	-0.0010%	-0.0020%	
Bonus term =	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.000%
Bonus term =	0.0030%	0.0030%	0.0030%	0.0030%	0.0030%	0.0030%	0.0030%	0.0040%	0.0040%	0.0040%	0.0050%	0.0040%	0.0420%
Rounded to 3 decimal places Bt =	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%	0.004%	0.004%	0.004%	0.005%	0.004%	0.042%

Chapter 5 - Development Capital

- 5.1 Heathrow, the airlines and the CAA have recognised that agreeing investment plans at the time of the price review for the next five to six years does not reflect the need for flexibility. Therefore, it was agreed that a two-tier approach would be adopted where capital investment would be classified as either Development or Core, to ensure flexibility of the capital investment programme throughout Q6. This mechanism will be continued for the iH7 period.
- 5.2 Core capital represents firm investment commitments where scope and cost estimates can be reasonably certain. Core capital investment is estimated at a P50 level (where the likelihood of the cost being higher than the estimate is equal to the likelihood being lower). Development capital projects have a lower definition of scope and cost estimations than Core projects (and are estimated at a P80 level).
- 5.3 Development and Core capital investment are subject to the Gateway process with airlines. The Gateway process has a number of Gateway events. The first two Gateways are where the scope and cost estimates are developed. The project is transitioned to Core after Gateway 3 when the scope and cost estimates are well defined. The project is then progressed through the remaining Gateways.
- 5.4 This two-tier approach to capital investment is designed so that Heathrow does not earn a return on any Development capital allowance that has not been used. The mechanism to take this into effect is the cumulative development capex adjustment in the maximum allowable yield. This requires Heathrow to make an estimate (on a cumulative basis throughout Q6 and continued into iH7) of how much Development capital allowance will be spent or transitioned to Core. This adjustment only applies to Development capital investment.
- 5.5 Capital projects are subject to the on-going Gateway process with the airline community and the current trajectory of project approvals, as at 1 June 2019, indicates that more projects are transitioning to Core than originally anticipated in the settlement. Therefore a higher cumulative capex spend to 2020 than the CAA's Q6 and iH7 settlement of up to £409m (2020 prices) is now expected.
- 5.6 As specified in the terms of the agreement, Heathrow and the airlines have based the iH7 commercial agreement on the levels of capital investment included in table D.4 of the CAA's CAP1658 document. This specifies capital investment for 2020, i.e. iH7+1, of £951m (2020 prices), which includes both business as usual and expansion expenditure related to pre-DCO Category C. Therefore, our forecast maximum allowable yield is calculated on this basis and includes our projection of 2020 spend for both business as usual and expansion. As set out below, the level of spend specified for 2020 and resulting development capex adjustment is a forecast and will be adjusted to reflect actual spend through the K factor in 2020 in future years. Additionally, should future CAA policy specify any adjustment to the recovery of expansion related spend for 2020 in advance of charges being set for the 2020 period, i.e. before 31st October 2019, we will reflect this in the maximum allowable yield.
- 5.7 Table 4 sets out the actual and projected Development and Core capex compared to the settlement in 2020 prices.

Table 4

£m and in 2020 prices	2014*	2015	2016	2017	2018	2019	2020	Q to date
Development plus core	419.8	665.0	762.9	733.2	693.3	590.4	1834.8**	5672.8
Settlement	568.0	865.4	835.1	684.0	690.6	669.8	950.7	5263.5
Difference	(148.2)	(200.4)	(72.2)	49.2	2.7	(79.3)	884.1	409.2

*9 months

** Forecast includes £757.8m business as usual spend and £1,077m expansion related expenditure

- 5.8 The cumulative spend translates into a lower 2020 average RAB of £-33m. Applying the cumulative development adjustment results in the 2020 maximum allowable yield reducing by £1.75m, equivalent to 0.022 pence per passenger.
- 5.9 Any subsequent change in actual development capex transitioning to Core capex will be adjusted in the K Factor when setting charges for 2022.
- 5.10 The formula to calculate the 2020 cumulative development capex adjustment of £1.75m is set out below:

Year t =	9mo.2014	2015	2016	2017	2018	2019	2020
Additional revenue requirement for 2014 projects	$0.5 \times d_{2014}$	$\frac{P_{t-1}}{P_{t-2}} \times d_{2014}$	$\frac{P_{t-1}}{P_{t-3}} \times d_{2014}$	$\frac{P_{t-1}}{P_{t-4}} \times d_{2014}$	$\frac{P_{t-1}}{P_{t-5}} \times d_{2014}$	$\frac{P_{t-1}}{P_{t-6}} \times d_{2014}$	$\frac{P_{t-1}}{P_{t-7}} \times d_{2014}$
Additional revenue requirement for 2015 projects	0	$0.5 \times d_{2015}$	$\frac{P_{t-1}}{P_{t-2}} \times d_{2015}$	$\frac{P_{t-1}}{P_{t-3}} \times d_{2015}$	$\frac{P_{t-1}}{P_{t-4}} \times d_{2015}$	$\frac{P_{t-1}}{P_{t-5}} \times d_{2015}$	$\frac{P_{t-1}}{P_{t-6}} \times d_{2015}$
Additional revenue requirement for 2016 projects	0	0	$0.5 \times d_{2016}$	$\frac{P_{t-1}}{P_{t-2}} \times d_{2016}$	$\frac{P_{t-1}}{P_{t-3}} \times d_{2016}$	$\frac{P_{t-1}}{P_{t-4}} \times d_{2016}$	$\frac{P_{t-1}}{P_{t-5}} \times d_{2016}$
Additional revenue requirement for 2017 projects	0	0	0	$0.5 \times d_{2017}$	$\frac{P_{t-1}}{P_{t-2}} \times d_{2017}$	$\frac{P_{t-1}}{P_{t-3}} \times d_{2017}$	$\frac{P_{t-1}}{P_{t-4}} \times d_{2017}$
Additional revenue requirement for 2018 projects	0	0	0	0	$0.5 \times d_{2018}$	$\frac{P_{t-1}}{P_{t-2}} \times d_{2018}$	$\frac{P_{t-1}}{P_{t-3}} \times d_{2018}$
Additional revenue requirement for 2019 projects	0	0	0	0	0	$0.5 \times d_{2019}$	$\frac{P_{t-1}}{P_{t-2}} \times d_{2019}$
Additional revenue requirement for 2020 projects						0	$0.5 \times d_{2020}$
D_t =	Sum Rows x W	Sum Rows x W	Sum Rows x W	Sum Rows x W	Sum Rows x W	Sum Rows x W	Sum Rows x W

Where:

W	=	Weighted Average Cost of Capital of 5.35%
d ₂₀₁₄	=	Annual development capex adjustment in 2014
d ₂₀₁₅	=	Annual development capex adjustment in 2015
d ₂₀₁₆	=	Annual development capex adjustment in 2016
d ₂₀₁₇	=	Annual development capex adjustment in 2017
d ₂₀₁₈	=	Annual development capex adjustment in 2018
d ₂₀₁₉	=	Annual development capex adjustment in 2019
d ₂₀₂₀	=	Annual development capex adjustment in 2020
P _{t-1}	=	ONS CHAW Retail Price Index in April 2019 is 288.2
P _{t-2}	=	ONS CHAW Retail Price Index in April 2018 is 279.7
P _{t-3}	=	ONS CHAW Retail Price Index in April 2017 is 270.6
P _{t-4}	=	ONS CHAW Retail Price Index in April 2016 is 261.4
P _{t-5}	=	ONS CHAW Retail Price Index in April 2015 is 258.0
P _{t-6}	=	ONS CHAW Retail Price Index in April 2014 is 255.7
P _{t-7}	=	ONS CHAW Retail Price Index in April 2013 is 249.5

The annual development capex adjustment for d₂₀₁₄, d₂₀₁₅, d₂₀₁₆, d₂₀₁₇, d₂₀₁₈, d₂₀₁₉ and d₂₀₂₀ is calculated as follows:

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

Where:

O _t	=	total capex in Regulatory Period or Regulatory Year t associated with all development capex that has transitioned to core projects including the actual capital spend incurred during development stages of projects (irrespective of whether projects have transitioned from development to core)
V _t	=	development capex allowance in Regulatory Period or Regulatory Year t
P _{t-1}	=	Value of the ONS CHAW Retail Price Index in April in Regulatory Period or Regulatory Year t-1

Hence d_{2014} :

$$d_{2014} = O_{2014} - \left(V_{2014} * \frac{P_{t-1}}{222.80} \right)$$

$$O_{2014} = \text{£}363,400\text{k}$$

$$V_{2014} = \text{£}439,100\text{k}$$

$$P_{t-1} = \text{ONS CHAW Retail Price Index in April 2013 is 249.5}$$

$$d_{2014} = 363,400 - \left(439,100 * \frac{249.5}{222.8} \right)$$

$$d_{2014} = -\text{£}128,321\text{k}$$

Hence d_{2015} :

$$d_{2015} = O_{2015} - \left(V_{2015} * \frac{P_{t-1}}{222.80} \right)$$

$$O_{2015} = \text{£}590,000\text{k}$$

$$V_{2015} = \text{£}669,000\text{k}$$

$$P_{t-1} = \text{ONS CHAW Retail Price Index in April 2014 is 255.7}$$

$$d_{2015} = 590,000 - \left(669,000 * \frac{255.7}{222.8} \right)$$

$$d_{2015} = -\text{£}177,789\text{k}$$

Hence d_{2016} :

$$d_{2016} = O_{2016} - \left(V_{2016} * \frac{P_{t-1}}{222.80} \right)$$

$$O_{2016} = \text{£}683,000\text{k}$$

$$V_{2016} = \text{£}645,600\text{k}$$

$$P_{t-1} = \text{ONS CHAW Retail Price Index in April 2015 is 258.0}$$

$$d_{2016} = 683,000 - \left(645,600 * \frac{258.0}{222.8} \right)$$

$$d_{2016} = \text{-£}64,598\text{k}$$

Hence d_{2017} :

$$d_{2017} = O_{2017} - \left(V_{2017} * \frac{P_{t-1}}{222.80} \right)$$

$$O_{2017} = \text{£}665,000\text{k}$$

$$V_{2017} = \text{£}528,800\text{k}$$

$$P_{t-1} = \text{ONS CHAW Retail Price Index in April 2016 is 261.4}$$

$$d_{2017} = 665,000 - \left(528,800 * \frac{261.4}{222.8} \right)$$

$$d_{2017} = \text{£}44,586\text{k}$$

Hence d_{2018} :

$$d_{2018} = O_{2018} - \left(V_{2018} * \frac{P_{t-1}}{222.80} \right)$$

$$O_{2018} = \text{£}626,000\text{k}$$

$$V_{2018} = \text{£}533,900\text{k}$$

$$P_{t-1} = \text{ONS CHAW Retail Price Index in April 2017 is 270.6}$$

$$d_{2018} = 626,000 - \left(533,900 * \frac{270.6}{222.8} \right)$$

$$d_{2018} = \text{-£}22,444\text{k}$$

Hence d_{2019} :

$$d_{2019} = O_{2019} - \left(V_{2019} * \frac{P_{t-1}}{222.80} \right)$$

$$O_{2019} = \text{£}573,000\text{k}$$

$$V_{2019} = \text{£}517,800\text{k}$$

$$P_{t-1} = \text{ONS CHAW Retail Price Index in April 2018 is 279.7}$$

$$d_{2019} = 573,000 - \left(517,800 * \frac{279.7}{222.8} \right)$$

$$d_{2019} = \text{-£}77,000\text{k}$$

Hence d_{2020} :

$$d_{2020} = O_{2020} - \left(V_{2020} * \frac{P_{t-1}}{222.80} \right)$$

$$O_{2020} = \text{£}1,834,752\text{k}$$

$$V_{2020} = \text{£}734,927\text{k}$$

$$P_{t-1} = \text{ONS CHAW Retail Price Index in April 2019 is 288.2}$$

$$d_{2020} = 1,834,752 - \left(734,927 * \frac{288.2}{222.8} \right)$$

$$d_{2020} = \text{£}884,907\text{k}$$

Therefore d_{2014} , d_{2015} , d_{2016} , d_{2017} , d_{2018} , d_{2019} and d_{2020} is applied to the development capex adjustment table in 2019, as follows to determine the adjustment:

Hence:

Year t =	2020	Results in
Additional revenue requirement for 2014 projects	$\frac{288.2}{249.5} \times -128,321$	-148,225
Additional revenue requirement for 2015 projects	$\frac{288.2}{255.7} \times -177,789$	-200,386
Additional revenue requirement for 2016 projects	$\frac{288.2}{258.0} \times -64,598$	-72,159
Additional revenue requirement for 2017 projects	$\frac{288.2}{261.4} \times 44,586$	49,157
Additional revenue requirement for 2018 projects	$\frac{288.2}{270.6} \times -22,444$	-23,904
Additional revenue requirement for 2019 projects	$\frac{288.2}{279.7} \times -77,000$	-79,340
Additional revenue requirement for 2020 projects	$0.5 \times 884,907$	442,048
D_t =		-32,809 x 5.35%

$$D_t = -£1,755$$

Therefore for the 2020 forecast maximum allowable yield is adjusted to account for the -£1,755k cumulative development capex adjustment.

Chapter 6 – Capital Triggers

- 6.1 The CAA's maximum allowable yield formula for Q6 includes a trigger element which means that if a trigger project is not complete by a specified project trigger date then the allowable yield is reduced.
- 6.2 Q6 triggers are placed around a subset of "key projects". However, unlike Q5, projects that triggers will be attached to have not been defined in the CAA's Q6 price control licence condition. In Q6, triggers are attached to projects at Gateway 3 of the projects process. This means trigger projects will be developed during the Gateway Process with airlines, where triggers for individual projects will be developed, and then formally attached to applicable key projects at Gateway 3.
- 6.3 As at 1 June 2019, nineteen capital trigger projects have been agreed with the airline community. Table 5 sets out the agreed trigger projects.

Table 5

Project	Trigger date	Completion date	Actual/Forecast
Northern Runway Returned to Cat III Operations	Sep-14	Sep-14	Actual
Reconfigure Stand 410 to handle Code F Aircraft	Dec-14	Nov-14	Actual
T3IB cut-ins completed and baggage system operational	Jan-16	Jul-16	Actual
Main Tunnel Life Safety Systems	Dec-16	Dec-19	Forecast
Bravo taxiway open for code f operations	Sep-17	Oct-17	Actual
Access via new South escalator from transfer arrivals (from level 10 to level 30)	May-16	Mar-16	Actual
T3 Pier 7 Roof - Permanent M&E services to be fully operational and temporary plant	Mar-17	Mar-17	Actual
Replacement of 12 airbridges on 9 stands across T3	Jan-18	Jan-18	Actual
To deliver a new Permanent FCC to T3 and demolish the interim Facility on Stand 323	Jan-19	Jan-19	Actual
T5 additional fast track capacity	Jun-17	Feb-17	Actual
New Cellular platform available for MNO connection (G5)	Mar-18	Feb-18	Actual
Hold baggage screening standard 3 machines installed in Terminal 2	Sep-18	Jun-19	Forecast
Proposed % of Hold baggage screening standard 3 machines installed and in use in Terminal 5	Sep-18	Sep-18	Actual
kilo apron developments - delivery of stands 211, 212 and 213 into operational use	Mar-19	Feb-19	Actual
T4 LV power on to the replaced final switch	Oct-19	Oct-19	Forecast
Completion of the conversion of 4 racks to 6 racks in existing bag store in Terminal 5	Oct-19	Oct-19	Forecast
Completion of the kilo substructure excavation	Sep-20	Sep-20	Forecast
Out of gauge facility relocated and ready for operations including a recovery facility to support the operation	Dec-19	Dec-19	Forecast
Hold baggage screening standard 3 machines & asset replacement works in T4	Sep-20	Sep-20	Forecast

- 6.4 Two projects have a completion date that fall into 2020. These are (i) Completion of the kilo substructure excavation (ii) Hold baggage screening standard 3 machines & asset replacement works in T4.
- 6.5 Both projects are forecast to be delivered by their trigger milestone dates.
- 6.6 Any triggers that are attached to projects and have trigger dates for 2020, which are finalised after 1 June 2019, will be accounted through the K Factor when setting 2022 airport charges.

Chapter 7 – Cost pass through of Category B

- 7.1 Heathrow’s Licence was modified by the CAA on 21 December 2016 to allow an annual recovery of £10 million of Category B costs for a new northwest runway. This followed the Government’s announcement on 25 October 2016 that it was in favour of a northwest runway and associated infrastructure at Heathrow.
- 7.2 The CAA has allowed Heathrow to recover up to £10 million per annum in each Regulatory Year for reasonably incurred costs (capital and operating) used for applying for planning permission for a new northwest runway (i.e. Category B costs). These Category B costs must, in the CAA’s view, have been efficiently incurred.
- 7.3 Category B costs above £10 million will be added to Heathrow’s Regulatory Asset Base (RAB) in accordance with the Q6 methodology to roll forward the RAB. These costs will be recovered after the outcome of the Heathrow Expansion DCO process is known.
- 7.4 Heathrow is including £10 million for 2020. This increases the 2019 forecast maximum allowable yield.
- 7.5 Table 6 sets out total estimated Category B costs for 2016 to 2020.

Table 6

£million	2016	2017	2018	2019	2020	2021
Category B	10.5	77.8	124.7	198.2	79.7	38.9

* Including Capital and Operating Costs

Chapter 8 – Business Rates Revaluation Factor

- 8.1 The business rates revaluation factor (i.e. BRt) adjusts the forecast maximum allowable yield to account for the difference between the actual change in the rates revaluation undertaken by the Valuation Office Agency in 2018 compared to the 9% allowance in the settlement. This impacts the Regulatory Year 2020 i.e. the 2020 forecast maximum allowable yield.
- 8.2 The actual business rates revaluation has been lower than the 9%. The final revaluation outcome at Heathrow resulted in a 17% decrease in potential liability. Heathrow will not benefit from the full saving generated through revaluation until 2021.
- 8.3 However, the Government has put in place transitional relief. Transitional relief limits how much a rates bill can change each year as a result of the revaluation. This applies when rates increase or decrease to avoid any shocks in the market. This means changes to the rates bill are phased in gradually and apply to all UK properties.
- 8.4 Heathrow must apply the Government’s transitional arrangements for the 2017 business rates revaluation which in effect phases the reductions. Heathrow will not benefit from the 17% decrease because it is greater than the actual saving after the transitional relief. The Government’s transitional arrangements for the 2017 business rates revaluation when a rates bill is decreasing (i.e. downwards cap) are as follows:

Table 7

Transitional Arrangements 2017 revaluation (before inflation) funded by 3 caps on reductions⁵						
	Property Size	2017/18	2018/19	2019/20	2020/21	2021/22
Upwards cap	Small	5.0%	7.5%	10.0%	15.0%	15.0%
	Medium	12.5%	17.5%	20.0%	25.0%	25.0%
	Large	45.0%	50.0%	50.0%	16.0%	5.0%
Downwards cap	Small	20.0%	30.0%	35.0%	55.0%	55.0%
	Medium	10.0%	15.0%	20.0%	25.0%	25.0%
	Large	4.1%	4.6%	5.9%	5.8%	4.8%

- 8.5 Transitional relief is applied to calculate the actual change in the business rates revaluation for the purposes of the business rates revaluation factor. For the purposes of the transitional arrangement, Heathrow is designated as a large property (i.e. property with rateable value over £100,000). Therefore, the downward cap percentage for a large company is used.
- 8.6 This involves two steps before applying to the business rates revaluation factor. Firstly, to adjust to a calendar year to reflect the regulatory year. Secondly to accumulate the annual percentage for the relevant years, 2017, 2018, 2019 and 2020. This is set out below:

⁵https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/572823/Transitional_Relief_consultation_response.pdf

Table 8

Regulatory Year	Adjusted transitional relief	Cumulative
2017	-3.08%	-3.08%
2018	-4.48%	-7.41%
2019	-5.58%	-12.57%
2020	-5.83%	-17.67%
2021	-5.05%	-21.82%

8.7 Therefore -17.67% is used for the purposes of the calculation as actual percentage change in the Cumulo Rateable Value due to the revaluation and the actual percentage increase in the national Uniform Business Rate. This results in a lower forecast maximum allowable yield by £34.6m. The formula to calculate the business rates revaluation factor is set out below:

$$BR_t = 0.8 * Z_{2020}$$

Where:

Z_t = business rate forecast variance in Regulatory period or Regulatory Year t, calculated in accordance with the below table:

Period t =	Z_t =
9mo. 2014	0
2015	0
2016	0
2017	$(U_t - £136,900,000) * \frac{P_{t-1}}{222.80}$
2018	$(U_t - £136,800,000) * \frac{P_{t-1}}{222.80}$
2019	$(U_t - £136,800,000) * \frac{P_{t-1}}{222.80}$
2020	$(U_t - £136,800,000) * \frac{P_{t-1}}{222.80}$

Where:

U_t = regulatory allowance for business rates (that is £136,800,000 in 2020) multiplied by the revaluation impact⁶.

P_{t-1} = value of the ONS CHAW Retail Price Index in April in Regulatory Period or Regulatory Year t-1.

⁶ 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.

Hence Z_{2020} :

$$Z_{2020} = (U_t - £136,800,000) * \frac{P_{t-1}}{222.80}$$

$$U_t = [£136,800,000 / (1+9\%)] * (1+-17.67\%)$$

$$P_{t-1} = \text{ONS CHAW Retail Price Index in April 2019 is 279.7}$$

$$Z_{2020} = (£103,327,927 - £136,800,000) * \frac{288.2}{222.8}$$

$$Z_{2020} = -43,297,359$$

BR_t formula is applied:

$$BR_{2020} = 0.8 * -33,984,980$$

$$BR_{2020} = -34,637,887$$

Chapter 9 - Correction Factor for 2018

The Correction factor

9.1 The K Factor sets out the level of over recovery or under recovery on a per passenger basis. This over recovery is when Heathrow exceeds the maximum allowable yield on a per passenger basis. The under recovery is when Heathrow does not achieve the maximum allowable yield on a per passenger basis. This over/under recovery generally reflects a change in mix of actual passengers and movements compared to the forecasts used to set the airport charges for that relevant year.

9.2 The K Factor formula has a component to calculate the actual allowable yield, the K Factor formula is shown below:

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

Formula for 2018 actual maximum allowable yield

9.3 The combined impact of all the elements of the formula results in 2018 actual maximum allowable yield of £22.005 (passenger only flights). 2018 is the Regulatory Period from 1 January 2018 to 31 December 2018. The section below presents the components of the formula.

9.4 M_{t-2} relates to 2018 and its calculation is shown below:

$$M_{2018} = (1 + RPI_{t-1} + X + B_{t-2})Y_{t-1} + \frac{D_t}{Q_t} - \frac{T_t}{Q_t} + \frac{A_t}{Q_t} + \frac{BR_t}{Q_t} - K_t$$

Where:

M_{2018} = maximum revenue yield per passenger using Heathrow airport in Regulatory Year ("2018") expressed in pounds.

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. For 2018 this would be the change from April 2016 to April 2017.

X = -1.5%

B_{t-2} = The formula includes a bonus factor that allows the airport to recover a bonus when performance on certain service quality measures exceed a specified service standard. The bonus term in any given year is based on actual service quality, based on the two year period preceding the relevant year.

Y_{t-1}	=	specified average revenue yield per passenger for the period t-1 (2017).
D_t	=	cumulative development capex adjustment.
T_t	=	reduction in maximum allowable charges when the airport has not achieved specific trigger dates associated with relevant projects (Triggers).
A_t	=	cost pass-through for runway expansion.
BR_t	=	business rates revaluation factor.
K_t	=	correction factor (K Factor) per passenger (whether positive or negative value) for 2016.
Q_t	=	actual passengers using Heathrow airport in 2018.

Application of the Regulatory Pricing Formula

Where :

RPI_{t-1}	=	3.5%	
X	=	-1.5%	
B_{t-2}	=	0.021%	- this figure is an actual
Y_{t-1}	=	£22.305	
D_t	=	-£19,268k	- this figure is an actual
T_t	=	£2,884	- this figure is an actual
A_t	=	£10,000	- this figure is an actual
BR_t	=	-£34,750	
Q_t	=	80,102k	- this figure is an actual
K_t	=	0.165	- this figure is an actual

Hence:

$$M_{2018} = (1 + RPI_{t-1} + X + B_{t-2})Y_{t-1} + \frac{D_t}{Q_t} - \frac{T_t}{Q_t} + \frac{A_t}{Q_t} + \frac{BR_t}{Q_t} - K_t$$

$$M_{2018} = (1 + 3.5\% + -1.5\% + 0.021\%)22.305 + \frac{(-19,268)}{80,102} - \frac{2,884}{80,102} + \frac{10,000}{80,102} + \frac{-34,750}{80,102} - 0.165$$

$$M_{2018} = (1.02 * 22.305) + (-0.241) - 0.036 + 0.125 + (-0.434) - 0.165$$

$$M_{2018} = 22.025$$

9.5 The actual maximum allowable yield for 2018 is £22.005.

9.6 The components of the formula are explained in the following sections.

Bonus term (2016)

- 9.7 The regulatory pricing formula includes a bonus component for performance of certain service quality measures.
- 9.8 The CAA decided through its Q6 price control licence condition to formalise the recovery of the bonus on actual performance based on two-year lag. The recovery of the actual bonus for 2012/13 and 2013/14 is recovered through the K Factor when setting charges for 2014 and 2015, respectively. The actual bonus for these two periods, 2012/13 and 2013/14, shall be calculated by reference to the conditions as to airport charges imposed to the Airport under the Airports Act 1986 in force at 31 March 2014⁷.
- 9.9
- 9.10 The actual bonus for the period 2014 to 2021 shall be calculated by reference to the Licence conditions that came into force 1 April 2014.
- 9.11
- 9.12 A bonus of 0.021% was achieved in 2016.

Cumulative development capex adjustment

- 9.13 The cumulative development capex adjustment, adjusts the actual maximum allowable yield to account for the actual difference between the development capex allowance and actual development capex spend. Heathrow has used less than the development capex allowance on a cumulative basis to 2018.
- 9.14 The below table sets out the formula used to calculate the cumulative development capex adjustment. The 2018 formula is used:

⁷ Economic regulation at Heathrow from April 2014: Notice granting the licence, page 131.

Year t =	9mo.2014	2015	2016	2017	2018
Additional revenue requirement for 2014 projects	$0.5 \times d_{2014}$	$\frac{P_{t-1}}{P_{t-2}} \times d_{2014}$	$\frac{P_{t-1}}{P_{t-3}} \times d_{2014}$	$\frac{P_{t-1}}{P_{t-4}} \times d_{2014}$	$\frac{P_{t-1}}{P_{t-5}} \times d_{2014}$
Additional revenue requirement for 2015 projects	0	$0.5 \times d_{2015}$	$\frac{P_{t-1}}{P_{t-2}} \times d_{2015}$	$\frac{P_{t-1}}{P_{t-3}} \times d_{2015}$	$\frac{P_{t-1}}{P_{t-4}} \times d_{2015}$
Additional revenue requirement for 2016 projects	0	0	$0.5 \times d_{2016}$	$\frac{P_{t-1}}{P_{t-2}} \times d_{2016}$	$\frac{P_{t-1}}{P_{t-3}} \times d_{2016}$
Additional revenue requirement for 2017 projects	0	0	0	$0.5 \times d_{2017}$	$\frac{P_{t-1}}{P_{t-2}} \times d_{2017}$
Additional revenue requirement for 2018 projects	0	0	0	0	$0.5 \times d_{2018}$
D_t =	Sum Rows x W	Sum Rows x W	Sum Rows x W	Sum Rows x W	Sum Rows x W

Where:

W	=	Weighted Average Cost of Capital which shall have a value of 5.35%
d ₂₀₁₄	=	Annual development capex adjustment in 2014
d ₂₀₁₅	=	Annual development capex adjustment in 2015
d ₂₀₁₆	=	Annual development capex adjustment in 2016
d ₂₀₁₇	=	Annual development capex adjustment in 2017
d ₂₀₁₈	=	Annual development capex adjustment in 2018
P _{t-1}	=	ONS CHAW Retail Price Index in April in 2017 is 270.6
P _{t-2}	=	ONS CHAW Retail Price Index in April in 2016 is 261.4
P _{t-3}	=	ONS CHAW Retail Price Index in April in 2015 is 258.0
P _{t-4}	=	ONS CHAW Retail Price Index in April in 2014 is 255.7
P _{t-5}	=	ONS CHAW Retail Price Index in April in 2013 is 249.5

D₂₀₁₇: Annual development capex adjustment is calculated as follows:

$$d_{2014} = O_{2014} - \left(V_{2014} * \frac{P_{t-1}}{222.80} \right)$$

$$O_{2014} = \text{£}363,400\text{k}$$

$$V_{2014} = \text{£}439,100\text{k}$$

$$P_{t-1} = \text{ONS CHAW Retail Price Index in April 2013 is 249.5}$$

$$d_{2014} = 363,400 - \left(439,100 * \frac{249.5}{222.8} \right)$$

$$d_{2014} = -£128,321k$$

Hence d_{2015} :

$$d_{2015} = O_{2015} - \left(V_{2015} * \frac{P_{t-1}}{222.80} \right)$$

$$O_{2015} = £590,000k$$

$$V_{2015} = £669,000k$$

$$P_{t-1} = \text{ONS CHAW Retail Price Index in April 2014 is 255.7}$$

$$d_{2015} = 590,000 - \left(669,000 * \frac{255.7}{222.8} \right)$$

$$d_{2015} = -£177,789k$$

Hence d_{2016} :

$$d_{2016} = O_{2016} - \left(V_{2016} * \frac{P_{t-1}}{222.80} \right)$$

$$O_{2016} = £683,000k$$

$$V_{2016} = £645,600k$$

$$P_{t-1} = \text{ONS CHAW Retail Price Index in April 2015 is 258.0}$$

$$d_{2016} = 683,000 - \left(645,600 * \frac{258.0}{222.8} \right)$$

$$d_{2016} = -£64,598k$$

Hence d_{2017} :

$$d_{2017} = O_{2017} - \left(V_{2017} * \frac{P_{t-1}}{222.80} \right)$$

$$O_{2017} = £665,000k$$

$$V_{2017} = £528,800$$

$$P_{t-1} = \text{ONS CHAW Retail Price Index in April 2016 is 261.4}$$

$$d_{2017} = 665,0000 - \left(528,800 * \frac{261.4}{222.8} \right)$$

$$d_{2017} = \text{£44,586}$$

Hence d_{2018} :

$$d_{2018} = O_{2018} - \left(V_{2018} * \frac{P_{t-1}}{222.80} \right)$$

$$O_{2018} = \text{£626,000k}$$

$$V_{2018} = \text{£533,900k}$$

$$P_{t-1} = \text{ONS CHAW Retail Price Index in April 2017 is 270.6}$$

$$d_{2018} = 626,000 - \left(533,900 * \frac{270.6}{222.8} \right)$$

$$d_{2018} = \text{-£22,444k}$$

9.15 Therefore d_{2014} , d_{2015} , d_{2016} , d_{2017} and d_{2018} is applied to the development capex adjustment table, as follows to determine the adjustment:

Year t =	2017	Results in
Additional revenue requirement for 2014 projects	$\frac{270.6}{249.5} \times -128,312$	-139,173
Additional revenue requirement for 2015 projects	$\frac{270.6}{255.7} \times -177,789$	-188,149
Additional revenue requirement for 2016 projects	$\frac{270.6}{258.0} \times -64,589$	-67,753
Additional revenue requirement for 2017 projects	$\frac{270.6}{261.4} \times -44,586$	46,155
Additional revenue requirement for 2018 projects	$0.5 \times -22,444$	-11,222
$D_t =$		-360,141 x 5.35%

$$D_t = \text{-£19,268k}$$

Triggers

9.16 The K Factor for 2018 adjusts the completion dates for trigger projects that had trigger completion dates in 2018.

9.17 There are four projects that had a completion date falling into 2018: (i) Replacement of 12 airbridges on 9 stands across T3 (ii) New Cellular platform available for MNO connection (G5) (iii) Hold baggage screening standard 3 machines installed in Terminal 2 (iv) Proposed percentage of Hold baggage screening standard 3 machines installed and in use in Terminal 5.

9.18 Two projects, Main Tunnel Life Safety Systems and Hold baggage screening standard 3 machines installed in Terminal 2 have not met their milestone dates. Therefore, there is a trigger payment in 2018.

Table 9

	Trigger Month	Forecast Completion Date
Main Tunnel Life Safety Systems	Dec-16	Dec-19

- **Main Tunnel Life Safety Systems**

Trigger date	= December 2016
Forecast Completion	= December 2019
Actual Delay	= 36 months
Months falling into 2018	= 12 months
Monthly Payment	= £91,400 in 2011/12 prices
Actual Payment	= £1,096,800 in 2011/12 prices
Inflation Index (RPI)	= 1.215 ⁸
Actual Payment	= £1,332,612 in 2018 prices
Actual Passengers (000s)	= 80,102 in 2018
Impact on Yield	= £0.017 in 2018

Table 10

	Trigger Month	Forecast Completion Date
Hold baggage screening standard 3 machines installed in Terminal 2	Sep-18	Jun-19

⁸ The monthly payment for triggers is shown in 2011/12 prices and then is required to be adjusted to account for the difference in ONS CHAW Retail Price Index in April 2017 and April 2010 i.e. 270.6/222.8

- **Hold baggage screening standard 3 machines installed in Terminal 2**

Trigger date	= September 2018
Forecast Completion	= June 2019
Actual Delay	= 9 months
Months falling into 2017	= 3 months
Monthly Payment	= £426,000 in 2011/12 prices
Actual Payment	= £1,278,000 in 2011/12 prices
Inflation Index (RPI)	= 1.215
Actual Payment	= £1,552,770 in 2018 prices
Actual Passengers (000s)	= 80,102 in 2018
Impact on Yield	= £0.019 in 2018

K factor for 2018

Actual passengers	80,102
Actual airport charges revenue	1,735,000
Actual yield	21.660
Actual maximum allowable yield	22.005
Under/Over Recovery	<i>Under Recovery</i>

Total revenue from airport charges (passenger only flights) at Heathrow in	2018	Actual (£000s)	R_{t-2}	1,735,000
Passengers using Heathrow Airport in	2018	Actual (000s)	Q_{t-2}	80,102
Maximum allowable revenue yield at Heathrow in	2018	Actual (£)	M_{t-2}	22.005
Interest rate from weekly Treasury Bill Discount rate	2018	Actual %	I_{t-2}	0.667
Forecast Passengers using Heathrow in	2020	Forecast (000s)	Q_t	81,462
Correction amount	$K_t = ((R_{t-2} - (Q_{t-2} \times M_{t-2})) / Q_t \times (1 + I_{t-2} / 100))^2$		K_t	-0.344

Table 11

Tender Date	Maturity date	Size (£ mn)	Cover	Avg Yield (%)
04-May-18	06-Aug-18	500	4.72	0.385
11-May-18	13-Aug-18	500	3.78	0.373
18-May-18	20-Aug-18	1,000	2.26	0.383
25-May-18	28-Aug-18	1,000	1.95	0.428
01-Jun-18	03-Sep-18	1,500	2.59	0.437
08-Jun-18	10-Sep-18	1,000	3.23	0.468
15-Jun-18	17-Sep-18	1,000	2.84	0.471
22-Jun-18	24-Sep-18	1,500	1.59	0.546
29-Jun-18	01-Oct-18	1,500	3.15	0.587
06-Jul-18	08-Oct-18	1,500	2.76	0.605
13-Jul-18	15-Oct-18	2,000	1.96	0.648
20-Jul-18	22-Oct-18	2,000	3.44	0.651
27-Jul-18	29-Oct-18	2,000	1.98	0.668
03-Aug-18	05-Nov-18	2,000	2.17	0.702
10-Aug-18	12-Nov-18	2,000	2.29	0.722
17-Aug-18	19-Nov-18	2,000	2.20	0.725
24-Aug-18	26-Nov-18	2,000	2.12	0.734
31-Aug-18	03-Dec-18	2,000	2.32	0.728
07-Sep-18	10-Dec-18	2,000	1.74	0.742
14-Sep-18	17-Dec-18	2,000	2.14	0.741
21-Sep-18	24-Dec-18	1,500	2.58	0.747
28-Sep-18	31-Dec-18	1,000	2.65	0.752
05-Oct-18	07-Jan-19	2,000	3.49	0.684
12-Oct-18	14-Jan-19	3,000	2.27	0.686
19-Oct-18	21-Jan-19	3,000	1.76	0.694
26-Oct-18	28-Jan-19	3,000	1.97	0.697
02-Nov-18	04-Feb-19	1,000	3.50	0.679
09-Nov-18	11-Feb-19	1,000	3.39	0.678
16-Nov-18	18-Feb-19	1,000	3.61	0.651
23-Nov-18	25-Feb-19	1,000	3.35	0.661
30-Nov-18	04-Mar-19	1,000	3.58	0.649
07-Dec-18	11-Mar-19	1,500	2.49	0.646
14-Dec-18	18-Mar-19	1,500	2.38	0.643
21-Dec-18	25-Mar-19	1,500	1.29	0.696
04-Jan-19	08-Apr-19	2,000	1.91	0.710
11-Jan-19	15-Apr-19	2,000	1.43	0.744
18-Jan-19	23-Apr-19	2,000	2.87	0.753
25-Jan-19	29-Apr-19	2,000	2.48	0.755
01-Feb-19	07-May-19	2,000	2.56	0.751
08-Feb-19	13-May-19	1,500	2.56	0.744
15-Feb-19	20-May-19	1,500	2.28	0.744
22-Feb-19	28-May-19	1,500	3.63	0.739
01-Mar-19	03-Jun-19	2,000	2.53	0.743
08-Mar-19	10-Jun-19	2,000	2.22	0.747
15-Mar-19	17-Jun-19	2,000	1.73	0.763
22-Mar-19	24-Jun-19	1,500	3.15	0.758
29-Mar-19	01-Jul-19	1,000	4.41	0.749
05-Apr-19	08-Jul-19	1,500	3.04	0.754
12-Apr-19	15-Jul-19	1,500	2.93	0.753
18-Apr-19	22-Jul-19	1,000	4.50	0.748
26-Apr-19	29-Jul-19	1,000	4.49	0.742

Application of the Regulatory Pricing Formula

- 9.19 The actual maximum allowable yield for 2018 is £22.005 compared to the actual yield recovered of £21.660 which results in an under recovery of £0.344 (taking into account interest rate). This under recovery is included in the K Factor for 2018 in setting airport charges in 2020, which raises the forecast maximum allowable yield.
- 9.20 The 2018 under recovery is largely driven by a greater movement towards quieter and cleaner aircraft than forecast.

Chapter 10 – Overview of charges

- 10.1 The 2020 yield of £23.560 increases by £0.647 compared to 2019, mainly as a result of RPI and the 2018 under-recovery as detailed in Chapter 9.

Passenger discounts

European and Non-European passenger charges

- 10.2 On 1 January 2017 Heathrow introduced a £5.00 passenger discount on European routes with a further £5.00 discount on UK routes, compared to the existing European passenger charge. This was supported through an increased emphasis on environmental charges and the introduction of a quieter noise chapter.
- 10.3 The passenger discount to European routes was increased to £10.00 on 1 January 2018. This was supported through an increased emphasis on environmental charges and a partial rebalancing through non-European departing passenger charges.
- 10.4 The decision to introduce a departing passenger charge discount for European destination passengers was taken to address an imbalance in the load factors of flights to European destinations when compared with flights to Non-European destinations, thereby making more efficient use of the scarce resource of Heathrow slots.
- 10.5 Since the introduction of the discounts in 2017, the European load factor increased by 3.05 percentage points, and an additional 1.4 million European passengers travelled through Heathrow compared with 2016.
- 10.6 However, the ICAO average load factor figure for 2018 was 81.9%⁹, which suggests that European load factors at Heathrow continue to be lower than average while Non-European load factors remain close to the global ICAO average, as shown in table 13.

Table 13¹⁰

Year	EU	Non-EU	Δ
2012	70.70%	80.10%	9.40%
2013	71.70%	80.60%	8.90%
2014	73.20%	79.70%	6.50%
2015	73.50%	79.30%	5.80%
2016	73.60%	78.10%	4.50%
2017	75.30%	80.60%	5.30%
2018	76.65%	81.27%	4.62%
Av	73.52%	79.95%	6.43%

- 10.7 It is reasonable to expect that a European destination total ticket price is more open to influence by small fluctuations to Heathrow's passenger charges when

⁹ <https://www.icao.int/Newsroom/Pages/Solid-passenger-traffic-growth-and-moderate-air-cargo-demand-in-2018.aspx>

¹⁰ Source Heathrow Database

compared with Non-European destinations where Heathrow's charges represent a significantly lower percentage in the total ticket price.

- 10.8 Heathrow proposes to continue with discounts to the European departing passenger charge to continue to address the European load factor imbalance.

UK Connectivity

- 10.9 From 1 January 2017 Heathrow introduced a departing passenger charge discount of a further £5.00 to the existing European Destination passenger departing to UK destinations (including nations and crown dependencies). Therefore, during 2019 departing passengers to UK destinations receive a total £15.00 discount (this is based on a £10.00 European departing passenger load factor discount and £5.00 UK connectivity discount).
- 10.10 This passenger discount was in direct response to the National Connectivity Task Force (NCTF). The NCTF identified the need to make routes to regional airports more attractive to airlines to support them whilst Heathrow remains capacity constrained.
- 10.11 Heathrow therefore proposes to maintain the £5.00 UK connectivity discount to the European Destination passenger charge.

Transfer and Transit passenger charges

- 10.12 Heathrow currently has in place a discount applied to departing passenger charges for passengers transferring or transiting through the airport. This discount is split by IATA summer and winter seasons at 10% and 50% respectively. This discount was introduced to encourage such passengers to travel through Heathrow to support the hub and help drive passenger volumes through the winter season where the majority of empty seats are flown. The key to any hub is to have a good mix of transfer and origin and destination passengers to feed the entire network.
- 10.13 The following table sets out a summary of the level of transfer/transit passengers at Heathrow:

Table 14¹¹

Period	Total Passengers	Transfer passengers	Transfer passengers %
2012	69,985k	19,199k	27.4%
2013	72,333k	19,479k	26.9%
2014	73,375k	19,966k	27.2%
2015	74,959k	19,754k	26.4%
2016	75,676k	19,500k	25.8%
2017	78,040k	19,588k	25.1%
2018	80,102k	19,895k	24.8%

¹¹ Data source ADB Heathrow Airport Ltd

10.14 It can be noted from the above table that Heathrow's absolute level of transfer passengers has remained consistent over the last six years. However, the proportion of transfer passengers to total passenger numbers has declined from 27.4% in 2012 to 24.8% for 2018.

10.15 Therefore, Heathrow proposes to continue with transfer discounts for 2020. These discounts will follow the proposed seasonality as set out below.

Seasonal Passenger Charge

10.16 In 2019, Heathrow introduced seasonality into the transfer passenger charge to address the period where the majority of empty seats across the year were held. This seasonality followed the IATA summer and winter seasons.

10.17 Recognising the feedback of airlines and examining the trends at Heathrow, Heathrow proposes to introduce more defined seasonality that more closely follows load factor trend seen across the year and introduce it across all passenger charges, in order to be most effective at stimulating higher load factors and meeting the objective of making more efficient use of scarce capacity at Heathrow. This includes the introduction of a third shoulder season band.

10.18 The proposed seasonality for the passenger charges is defined in the table below.

Table 15

Passenger Charge Seasonality		
From	To	Season
01-Jan	08-Feb	Low
09-Feb	22-Feb	Shoulder
23-Feb	08-Mar	Low
09-Mar	06-Apr	Shoulder
07-Apr	18-May	Low
19-May	15-Jun	Shoulder
16-Jun	24-Aug	High
25-Aug	12-Oct	Shoulder
13-Oct	26-Oct	High
27-Oct	09-Nov	Shoulder
10-Nov	14-Dec	Low
15-Dec	31-Dec	High

10.19 The average load factor at Heathrow in 2018 by season based on the proposed seasonality above, was as follows:

Table 16¹²

	Load Factor %
Low	74%
Shoulder	79%
High	85%

¹² Data source ADB Heathrow Airport Ltd

10.20 Heathrow proposes to introduce seasonality as per table X to all passenger charges (O&D, transfer, transit and all destinations) for 2020.

Growth Incentive Scheme

- 10.21 Building on the success of the Heathrow Winter Air Transport Movement Incentive Scheme, feedback gained through an informal engagement session with the airline community and Airport Charges Consultation in 2018, Heathrow launched its first passenger growth incentive scheme within the structure of airport charges in 2019.
- 10.22 The airport is permitted to operate up to 480,000 ATMs per year and, in 2018, its runways operated at 99% of this limit. Heathrow is near full capacity for air transport movements.
- 10.23 Within this capacity constraint, the key driver for passenger growth is to increase the number of passengers on each plane, in other words, by maximising the average load factor. There remain 20.8 million empty seats flying through Heathrow between August 2018 to July 2019.
- 10.24 The incentive scheme operates with a £10 incentive rebate per incremental departing passenger above prior year actual passenger volumes. In order for an airline to receive the rebate, Heathrow's total passenger numbers must also increase year on year.
- 10.25 A growth incentive scheme in the structure of charges allows airlines to target incentive payments to the routes and distribution channels which have the most impact based on their insight into, and experience of, consumer behaviour.
- 10.26 Heathrow proposes to continue to include an allowance for the growth incentive scheme within in the structure of charges for 2020. The allowance built into 2020 Airport Charges is £8million which represents a capped growth incentive reward equivalent to an additional 0.8 million departing passengers.
- 10.27 In the event that the total growth incentive reward would exceed £8 million, the reward will be paid proportionally to all qualifying Airlines.
- 10.28 It is proposed that the £8m million allowance is recovered through departing passenger charges and any over/under recovery would be adjusted through the correction factor in 2022.
- 10.29 Full proposed terms for the passenger growth incentive scheme are laid out in the Conditions of Use Draft Consultation Proposal for 2020.

Environmental Charges

10.30 In 2017, Heathrow introduced a new structure of environmental charges, recognising the implementation of the Chapter 14 noise classification and incentivising airlines to bring their cleanest and quietest aircraft to Heathrow.

10.31 These charges have been successful in increasing the proportion of clean and quiet aircraft which arrive at Heathrow, as laid out in the table below.

Table 17¹³

% Mix	2016	2017	2018	2019 YTD	2020 Forecast
Chapter 3	0.1%	0.1%	0.1%	0.1%	0%
Chapter 4 High	12.8%	11.2%	8.8%	8.8%	5.0%
Chapter 4 Base	27.6%	28.6%	28.6%	28.6%	21.4%
Chapter 14 High	8.8%	8.6%	7.6%	7.6%	8.1%
Chapter 14 Base	35.9%	35.4%	34.0%	31.1%	31.4%
Chapter 14 Low	14.8%	16.2%	21.0%	25.7%	34.1%

10.32 Heathrow proposes to continue the emphasis on environmental performance by it acting as the balancing factor to recover the shortfall in revenues from the passenger discounts in order to encourage the use of quieter and cleaner aircraft.

10.33 Heathrow currently has a 2.5x multiplier on noise charges in place for any arriving/landing movements that are unscheduled or non-dispensed during the Night Quota Period (as defined in the 2019 Heathrow Conditions of Use).

10.34 Through charging for noise on landing, this acts as a disincentive to arriving movements in the Night Quota Period. However, in Q2 2019, there were 134% more unscheduled, undispensed departing movements in the Night Quota Period than that of arriving movements.

10.35 In line with Heathrow's commitment to make community around Heathrow 'A Great Place to Live' as part of Heathrow 2.0 and CAA recommendations in the document Environmental charging – review of impact of noise and NOx landing charges: update 2017 - CAP 1576, Heathrow is proposing to charge for noise on landing and departure and apply a Night Quota Period multiplier to movements within that period. The proposed movement charge will be calculated by splitting the landing charge and applying to all movements.

¹³ Data source Heathrow Database

- 10.36 Heathrow proposes to increase the Night Quota Period multiplier to 5x the normal noise charge to maintain the level of disincentive to arrive or depart within this period.
- 10.37 Heathrow seeks feedback through consultation on the following options for category of movements to be charged the Night Quota Period multiplier:
- all movements between 2330 and 0600 (Runway)
 - all unscheduled movements between 2330 and 0600 (Runway)
 - unscheduled and undispensed movements only between 2330 and 0600 (Runway).

Future Airport Charges

- 10.38 On 25 June 2018, Parliament unambiguously backed Heathrow's expansion by voting in favour of the Airports National Policy Statement (NPS). The Secretary of State for Transport subsequently designated the NPS the following day, clearing the way for Heathrow to submit a Development Consent Order (DCO) application for the project.
- 10.39 The NPS has laid out commitments that Heathrow must achieve in order to meet the requirements of the DCO. Future airport charges will need to recognise those commitments at the right time. This will include, but is not limited to:
- the incentivisation of the use of bio-fuels and electric aircraft;
 - working with airlines to phase out ageing fleet types such as 747 and older 767 aircraft using Heathrow;
 - revisiting the noise chapter differentials in environmental charges;
 - meeting the night curfew requirements; and
 - incentivising the efficient use of cargo and airport infrastructure, e.g. stands, to create capacity for airlines to grow.
- 10.40 Heathrow will consult with all stakeholders when considering these future changes.
- 10.41 Airlines have requested a longer-term perspective on Heathrow's tariffs, enabling them to better plan and respond. Therefore the 2020 consultation will also consult in principle on proposals for the 2021 structure of tariffs. We also intend to respond to this request through our H7 initial business plan, by giving a longer term (beyond 5 years) view of the potential price path.
- 10.42 In 2021 Heathrow proposes to move to a sustainable growth model of pricing to incentivise the behaviours set out in 10.38, ensuring airlines are encouraged to bring the cleanest, quietest and largest aircraft of type to Heathrow and operate efficiently and sustainably.
- 10.43 The structure would replace aircraft movement charges, NOx and parking charges with a single charge per movement. The structure of passenger charges would be unchanged, including the minimum departure charge.
- 10.44 All movements would attract a basic flat movement charge. The charge would be increased by a certain amount based on the airline / aircraft's performance across

several factors. The lowest multiplier to the charge would result from the best performance on each specific factor.

- 10.45 Heathrow is considering the most effective factors to deploy in such a model including: aircraft noise chapter, NOx emissions, ground time (in lieu of parking), aircraft age, seats per movement (versus the maximum for type). Heathrow seeks airline feedback on the principle of the sustainable growth charging model and the move away from a solely noise chapter-based approach to landing fees. Feedback is also sought on the weight that should be afforded to each factor.

Chapter 11 – Calculating airport charges tariffs for 2020

- 11.1 The following steps have been applied to calculate the individual tariffs for 2020, as follows:
- 11.2 The 2020 maximum allowable yield is £23.560. This is a £0.647 increase from 2019 maximum allowable yield of £22.913. The increase of £0.647 is recovered through the all charges in the same percentage split as per 2019;

Pax charges

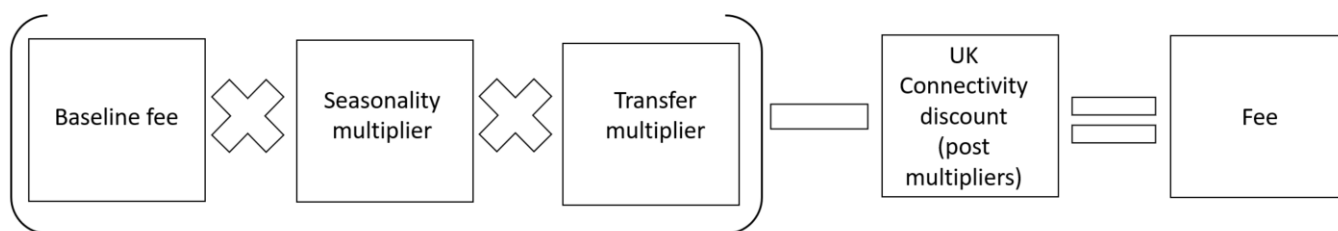
- 11.3 The 2020 maximum allowable yield uses a passenger forecast of 81.4 million;
- 11.4 New seasonality charges across all passengers (Origin & Destination (O&D) and Transfer & Transit) are proposed for 2020. In 2019 there were 9 passenger charges categories, where passenger volumes were disaggregated into Summer and Winter seasonality for Transfer & Transit and a single charge for Origin & Destination passengers which were then split by market (UK, EEA & RoW).
- 11.5 In 2020 we have an additional 9 new categories proposed, where both Transfer & Transit and O&D passenger volumes are disaggregated into High, Shoulder and Low season volumes. These are then further categorised into the relevant market; UK, EEA and ROW (See pax charge table). Different multipliers are applied (proposed percentages in brackets) to High (100%), Shoulder (86%) & Low (72%) tariffs, as well as multipliers for O&D (100%) and Transfer & Transit (75%)

Pax charge table		High Tariff	Shoulder Tariff	Low Tariff
O&D	UK	X	X	X
O&D	EEA	X	X	X
O&D	RoW	X	X	X
Transfer	UK	X	X	X
Transfer	EEA	X	X	X
Transfer	RoW	X	X	X

- 11.6 The departure charge shall be calculated with reference to the set baseline charge then apportioned out based on seasonality, transfer and UK connectivity discount. There will be two individual baseline charges one for RoW and one for UK/EEA. The first step is to set the baseline charges which are determined by

the departing passenger revenue required, this total revenue is then split into market shares where RoW is allocated 75% and UK/EEA is allocated 25%.

- 11.7 For UK and EEA Origin & Destination the baseline calculation is calculated in four separate steps;
- 11.8 Step 1 the baseline charge has a seasonality multiplier applied 100% for high tariff, 86% for shoulder tariff and 72% for the low tariff.
- 11.9 Step 2 applies a transfer multiplier to the baseline charge, 100% for O&D passengers and 75% for transfer passengers.
- 11.10 Step 3 is only applicable to the UK and Channel Islands market, where a UK connectivity discount of £5.00 exists. The UK connectivity discount has the appropriate transfer and seasonality multipliers applied as defined above to determine the final connectivity discount for the fare. This means that a high O&D passenger receives the full £5.00 discount whereas transfer passengers or those in a lower season receive a proportion of the £5.00 discount.
- 11.11 The final step is to deduct the calculated applicable UK connectivity discount from the value calculated from steps 1 and 2.
- 11.12 For RoW Origin & Destination the baseline calculation is calculated in two separate steps;
- 11.13 Step 1 the baseline charge has a seasonality multiplier applied 100% for high tariff, 86% for shoulder tariff and 72% for the low tariff.
- 11.14 Step 2 applies a transfer multiplier to the baseline charge, 100% for O&D passengers and 75% for transfer passengers.



- 11.15 No change to remote stand rebate held at £4.00 per passenger;
- 11.16 No change to growth incentive rebate of £8 million added to the departing passenger charge;

Movement

- 11.17 Landing changes are proposed to be split into a noise per movement charge where airlines will incur a movement charge for both take-off and landing. The charge impact for this application is approximately half of the previous singular landing charge which has been evenly split between the two;
- 11.18 The movement charge shall be calculated with reference to the set baseline charge then apportioned out based on the multiplier. The first step is to set the baseline charge which is determined by the environmental and noise revenue required. This baseline is then apportioned out based on a multiplier to the individual noise chapters, this multiplier is structured by weightings which are measured to incentivise the cleanest, quietest fleet i.e. cleaner and quieter aircraft results in a lower multiplier therefore a lower movement charge. This focus on the cleanest and quietest fleet has resulted in price uplift in the Chapter 4 High aircraft to further incentivise positive environmental choices. The actual charge will be calculated by multiplying the baseline charge against the multiplier;
- 11.19 No change to continued balancing of environmental charges so that 80% of the total environmental charge is recovered through noise charges and 20% of the total environmental charge is recovered through NOx charges.

Parking

- 11.20 No change to overall proportion of the parking charge. However, during 2019 there was a volume decrease in chargeable parking periods (15 minutes) due to quicker turnarounds on stand within the initial free period. Therefore, to compensate for this, there is a slightly increased charge in 2020;

Chapter 12 – Forecast Revenue for 2020

	Traffic Volume Units	Traffic Volume	Proposed Charge	Forecast Revenue
Landing Charge				
Noise Charge				
<u>Peak</u>				
Chapter 3	[Landings]	0	£5,770.24	£0
Chapter 4 High	[Landings]	11,734	£1,978.37	£23,213,481
Chapter 4 Base	[Landings]	50,684	£1,483.78	£75,203,906
Chapter 14 High	[Landings]	19,281	£1,154.05	£22,251,238
Chapter 14 Base	[Landings]	74,305	£824.32	£61,251,098
Chapter 14 Low	[Landings]	80,614	£494.59	£39,871,056
Total	[Landings]	236,618		£221,790,779
<u>Peak</u>				
Chapter 3	[Departures]	0	£5,770.24	£0
Chapter 4 High	[Departures]	11,734	£1,978.37	£23,213,481
Chapter 4 Base	[Departures]	50,684	£1,483.78	£75,203,906
Chapter 14 High	[Departures]	19,281	£1,154.05	£22,251,238
Chapter 14 Base	[Departures]	74,305	£824.32	£61,251,098
Chapter 14 Low	[Departures]	80,614	£494.59	£39,871,056
Total	[Departures]	236,618		£221,790,779
<u>Super Night Peak</u>				
Chapter 3	[Landings]	0	£28,851.20	£0
Chapter 4 High	[Landings]	0	£9,891.85	£0
Chapter 4 Base	[Landings]	0	£7,418.90	£0
Chapter 14 High	[Landings]	0	£5,770.25	£0
Chapter 14 Base	[Landings]	0	£4,121.60	£0
Chapter 14 Low	[Landings]	0	£2,472.95	£0
Total	[Landings]	0		£0
<u>Super Night Peak</u>				
Chapter 3	[Departures]	0	£28,851.20	£0
Chapter 4 High	[Departures]	0	£9,891.85	£0
Chapter 4 Base	[Departures]	0	£7,418.90	£0
Chapter 14 High	[Departures]	0	£5,770.25	£0
Chapter 14 Base	[Departures]	0	£4,121.60	£0
Chapter 14 Low	[Departures]	0	£2,472.95	£0
Total	[Departures]	0		£0
Emissions Charge				
Total kg Nox rating	[kg]	6,586,369	£16.84	£110,914,454
Average kg Nox per landing	[kg]	27.8		£110,914,454
Total Landing Revenue	(a)			£554,496,012

Departing Passenger Charge				
Departing OD Passenger Charge - High				
European charge with dual discount	[Dep Pax]	489,595	£17.72	£8,675,628
European charge with single discount	[Dep Pax]	4,158,264	£22.72	£94,475,752
Other	[Dep Pax]	5,670,303	£54.79	£310,675,891
Total	[Dep Pax]	10,318,162		£413,827,271
Departing OD Passenger Charge - Medium				
European charge with dual discount	[Dep Pax]	550,116	£15.24	£8,383,764
European charge with single discount	[Dep Pax]	4,456,556	£19.54	£87,081,113
Other	[Dep Pax]	5,777,116	£47.12	£272,217,728
Total	[Dep Pax]	10,783,789		£367,682,605
Departing OD Passenger Charge - Low				
European charge with dual discount	[Dep Pax]	499,950	£12.76	£6,379,358
European charge with single discount	[Dep Pax]	4,026,762	£16.36	£65,877,828
Other	[Dep Pax]	5,457,907	£39.45	£215,314,443
Total	[Dep Pax]	9,984,619		£287,571,629
Departing Transfer Passenger Charge - High				
European charge with dual discount	[Dep Pax]	322,392	£13.29	£4,284,591
European charge with single discount	[Dep Pax]	880,992	£17.04	£15,012,095
Other	[Dep Pax]	1,612,876	£41.09	£66,273,074
Total	[Dep Pax]	2,816,260		£85,569,760
Departing Transfer Passenger Charge - Medium				
European charge with dual discount	[Dep Pax]	379,062	£11.43	£4,332,680
European charge with single discount	[Dep Pax]	1,102,250	£14.66	£16,158,978
Other	[Dep Pax]	1,807,606	£35.34	£63,880,807
Total	[Dep Pax]	3,288,918		£84,372,465
Departing Transfer Passenger Charge - Low				
European charge with dual discount	[Dep Pax]	341,834	£9.57	£3,271,353
European charge with single discount	[Dep Pax]	1,021,887	£12.27	£12,538,557
Other	[Dep Pax]	1,721,024	£29.59	£50,925,087
Total	[Dep Pax]	3,084,745		£66,734,997
Remote Stand Rebate				
Remote Stand Rebate	[Dep Pax + Arr Pax]	4,400,000	-£4.00	-£17,600,000
Passenger Growth; Incentive Rebate		800,000	-£10.00	-£8,000,000
Total Departing Passenger Charge Revenue	(b)	40,276,492		£1,280,158,727

Non-Terminal Pax Flights (GA, Troops etc)		
Non-Terminal Pax Flights		
Landing Revenue	(d)	£3,381,198
Departing Passenger Revenue	(e)	£7,805,411
Parking Revenue	(f)	£446,037
Total Non-Terminal Pax Flights Revenue		£11,632,646

Chapter 13 – Proposed Airport Charges Tariffs effective 1 January 2020

Proposed Airport Charges Tariffs effective 1 January 2020

	Proposed 2020 £ GBP	Final 2019 £ GBP
Charges on Landing		
Peak - Landings		
Chapter 3	£5,770.24	£10,603.85
Chapter 4 High	£1,978.37	£3,029.67
Chapter 4 Base	£1,483.78	£2,726.70
Chapter 14 High	£1,154.05	£2,120.77
Chapter 14 Base	£824.32	£1,514.84
Chapter 14 Low	£494.59	£908.90
Peak - Departures		
Chapter 3	£5,770.24	
Chapter 4 High	£1,978.37	
Chapter 4 Base	£1,483.78	
Chapter 14 High	£1,154.05	
Chapter 14 Base	£824.32	
Chapter 14 Low	£494.59	
Super Night Peak - Landings		
Chapter 3	£28,851.20	£26,509.63
Chapter 4 High	£9,891.85	£7,574.18
Chapter 4 Base	£7,418.90	£6,816.75
Chapter 14 High	£5,770.25	£5,301.93
Chapter 14 Base	£4,121.60	£3,787.10
Chapter 14 Low	£2,472.95	£2,272.25
Super Night Peak - Departures		
Chapter 3	£144,256.00	
Chapter 4 High	£49,459.25	
Chapter 4 Base	£37,094.50	
Chapter 14 High	£28,851.25	
Chapter 14 Base	£20,608.00	
Chapter 14 Low	£12,364.75	
Emissions charge	£16.84	£16.38

Charges on Departing Passengers		
Origin and Destination - High		
European charge with dual discount <i>(with EU load factor and UK connectivity discount)</i>	£17.72	£14.84
European charge with single discount <i>(with EU load factor discount)</i>	£22.72	£19.84
Other	£54.79	£46.02
Origin and Destination - Medium		
European charge with dual discount <i>(with EU load factor and UK connectivity discount)</i>	£15.24	£14.84
European charge with single discount <i>(with EU load factor discount)</i>	£19.54	£19.84
Other	£47.12	£46.02
Origin and Destination - Low		
European charge with dual discount <i>(with EU load factor and UK connectivity discount)</i>	£12.76	£14.84
European charge with single discount <i>(with EU load factor discount)</i>	£16.36	£19.84
Other	£39.45	£46.02
Transfer and Transit - High		
European charge with dual discount <i>(with EU load factor and UK connectivity discount)</i>	£13.29	£13.42
European charge with single discount <i>(with EU load factor discount)</i>	£17.04	£17.94
Other	£41.09	£41.61
Transfer and Transit - Medium		
European charge with dual discount <i>(with EU load factor and UK connectivity discount)</i>	£11.43	£13.42
European charge with single discount <i>(with EU load factor discount)</i>	£14.66	£17.94
Other	£35.34	£41.61
Transfer and Transit - Low		
European charge with dual discount <i>(with EU load factor and UK connectivity discount)</i>	£9.57	£7.42
European charge with single discount <i>(with EU load factor discount)</i>	£12.27	£9.92
Other	£29.59	£23.01
Remote Stand Rebate	-£4.00	-£4.00
Minimum charge - UK destinations	£783.31	£761.40
Minimum charge - Other destinations	£1,417.74	£1,378.08
Charges on aircraft parking		
Narrow bodied	£25.47	£24.73
Wide bodied	£61.13	£59.35

Chapter 14 - Financial and Traffic Information

Traffic statistics and charging parameters

- 14.1 The actual traffic statistics from 2008/09 to 2017 are set out to provide more detailed data on those elements of the traffic mix at Heathrow airport which affect the airport charges yield per passenger.

Regulatory accounting information

- 14.2 Heathrow is a privately-owned company and a summary of its regulatory accounts are presented for the 12 month period to 31 December 2018. These accounts compare the airport's financial performance for the year ended 31 December 2017 to the CAA forecast for revenues and operating costs underpinning the Q6 price cap.
- 14.3 The regulatory accounts include revenue and cost comparisons, and calculations of the Regulated Asset Base.
- 14.4 The full regulatory accounts and annual reports are available from <http://www.heathrow.com/company/investor-centre/regulation/regulatory-accounts>.

Heathrow Airport				
2018 Regulatory Performance				
£m (nominal)				
	2018 Actual	2018 Settlement	Variance	Variance %
Total Passengers (000's)	80,102	74,200	5,902	8%
Revenue				
Airport Charges	1,745	1,681	64	4%
Other Revenue	1,207	1,138	69	6%
Total Revenue	2,952	2,819	133	5%
Expenditure				
Staff	432	363	-69	19%
Maintenance and Equipment	183	177	-6	3%
Rent and Rates	141	174	33	-19%
Utilities	90	121	31	-26%
Other expenditure	285	287	2	-1%
Operating costs before adjustments	1,131	1,122	-9	1%
Add back service quality rebates	1	-	1	N/A
Operating costs	1,130	1,122	-8	1%
Assumed ordinary depreciation	802	802	0	0%
Total Expenditure	1,932	1,924	-8	0%
Regulatory operating profit	1,020	895	125	14%
Capital expenditure	783	634	149	24%
Opening RAB	15,786	16,011	-225	
Closing RAB	16,202	16,275	-73	
Average RAB	15,994	16,143	-149	
Return on average RAB	6.38%	5.54%	0.84%	
Note: Negative indicates adverse				

Passenger only flights – actual and forecast

	Actual												Forecast
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014 Apr - Dec	2014 Jan - Dec	2015 Jan - Dec	2016 Jan - Dec	2017 Jan - Dec	2018 Jan - Dec	2019 Jan - Dec
Arriving Passengers	33,055,283	33,167,916	33,282,772	35,092,421	35,305,114	36,597,073	28,931,264	37,099,981	38,007,791	38,366,587	39,412,880	40,462,508	40,900,906
Departing passengers													
Origin and destination													
Europe	14,688,784	14,661,948	14,743,673	11,716,309	11,661,207	12,079,601	9,626,253	12,265,144	12,624,009	12,741,755	13,174,509	13,668,591	13,889,500
Other	18,185,232	18,302,809	18,084,452	14,213,133	13,699,869	14,069,905	11,034,173	14,113,855	14,531,642	14,903,829	15,695,509	16,105,068	16,793,466
Transfer passengers													
Europe	Transfer passengers not separately identified			3,856,432	4,028,131	4,081,838	3,307,956	4,220,781	4,299,434	4,274,123	4,346,998	4,306,358	4,028,647
Other				5,172,212	5,579,652	5,585,627	4,439,514	5,675,064	5,496,182	5,389,922	5,358,837	5,559,489	5,185,645
Transit passengers													
Europe	1,859	2,834	1,623	646	1,462	1,293	699	1,103	349	3,757	1,258	2,617	1,371
Other	160,859	119,384	96,303	47,738	47,004	34,106	25,337	32,467	30,625	35,273	24,126	21,686	1,457
Departing passengers	33,036,734	33,086,975	32,926,051	35,006,470	35,017,325	35,852,370	28,433,932	36,308,414	36,982,241	37,348,659	38,601,237	39,663,809	39,900,086
Total terminal passengers	66,092,017	66,254,891	66,208,823	70,098,891	70,322,439	72,449,443	57,365,196	73,408,395	74,990,032	75,715,246	78,014,117	80,126,317	80,800,992
PATMs	467,130	453,780	453,938	473,761	464,686	467,779	356,773	468,359	469,671	470,764	471,082	472,744	474,202
UK (departing - origin and destination)	Transfer passengers not separately identified			1,363,803	1,370,661	1,508,293	1,212,869	1,558,413	1,480,713	1,340,789	1,367,353	1,345,333	1,439,471
UK (departing - transfers)				949,214	975,181	1,031,366	840,890	1,067,349	1,089,749	986,012	1,058,093	1,079,454	1,033,912
UK (departing - total)	2,741,311	2,573,120	2,460,251	2,313,017	2,345,842	2,539,659	2,053,759	2,625,762	2,570,462	2,326,801	2,425,446	2,424,787	2,473,383

