

# Airport Charges for Quieter Aircraft

GATCOM

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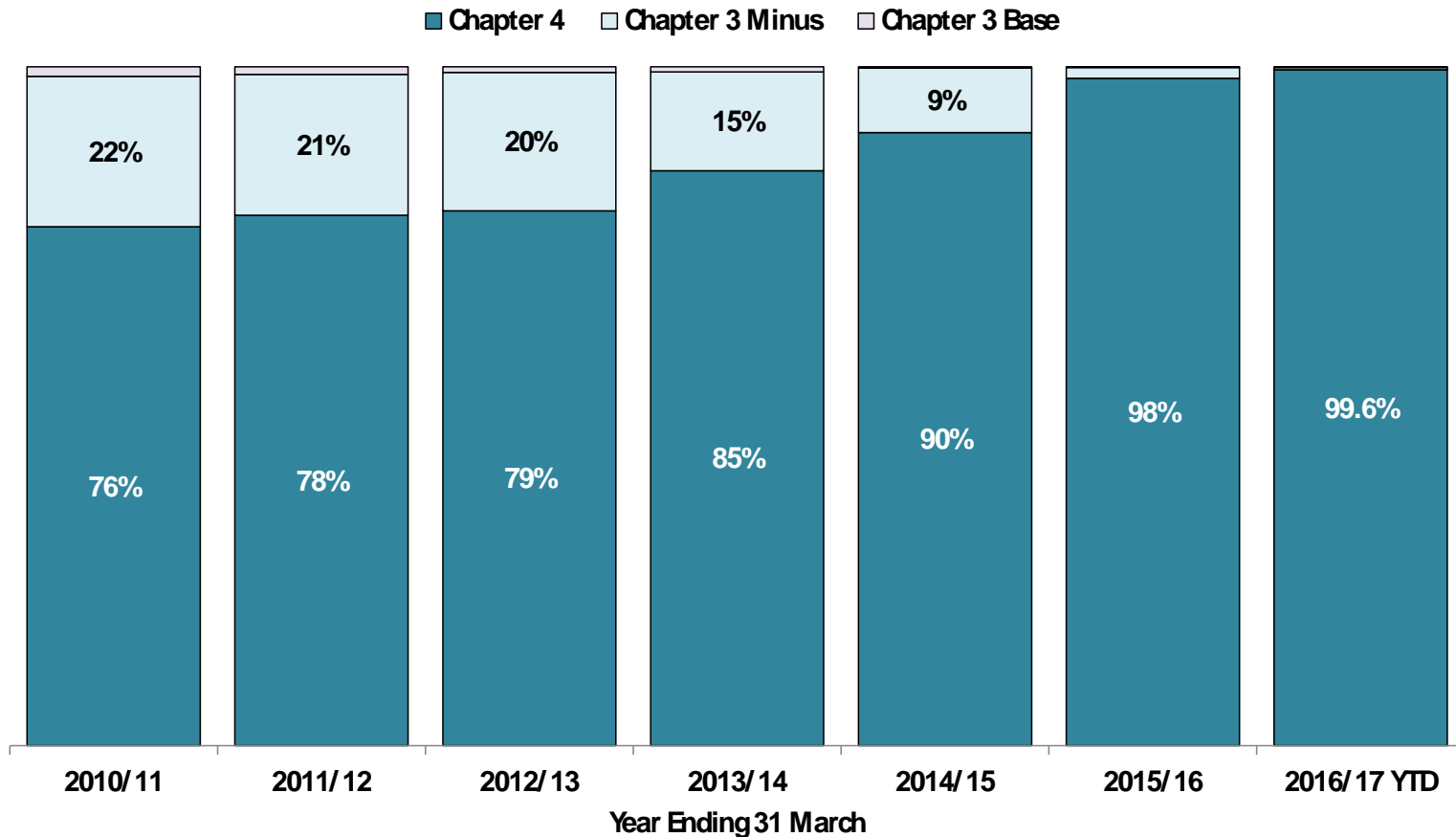
# Evolution of Aircraft by Noise Chapter



Proportion of aircraft compliant with Chapter 4 noise standard has increased from circa **75%** in 2010/11 to almost **100%** in 2016/17...

## Distribution of Movements by Aircraft Noise Category

Source: Gatwick Airport Limited



# New Noise Charge Framework from 1 April 2017



New noise charge framework to drive further improvement in aircraft operating at Gatwick, with new ICAO Chapter 14 noise standard adopted early and enhanced...

Charge Category	Indicative Distribution (2016/17 Fleet)	Sample Aircraft		Qualification Criteria: Cumulative Margin (CM) Relative to ICAO Chapter 3 Limits (EPNdB)
<b>Chapter 3 &amp; Below</b>	1%	B737-400		CM < 10
<b>Chapter 4</b>	40%	B737-800 & A320	B767 & B747-400	17 > CM >= 10
<b>Chapter 14 High</b>	40%	A320 & B757	A330	20 > CM >= 17
<b>Chapter 14 Base</b>	15%	A320 & B757	B777	23 > CM >= 20
<b>Chapter 14 Minus</b>	4%	A320neo & B737MAX	A380, A350 & B787	CM >= 23

## Notes

- 1) Primary qualification criteria is cumulative margin but other criteria apply; sub limits apply to margin at individual certification points (approach, flyover and lateral).
- 2) Classification of aircraft depends on a range of factors; same airframe can fall into different categories depending on engine type and maximum take-off weight (e.g. A320 series aircraft).

# Aircraft Orders



Gatwick airlines have substantial orders for new short haul aircraft (A320neo and B737MAX) which will deliver a step change in noise performance...

Airline	Aircraft Family	Orders & Options	Delivery Schedule
easyJet	A320neo	<u>Firm Orders</u> : 130 <u>Options</u> : 100	2017 – 2022
IAG	A320neo	<u>Firm Orders</u> : 47(VY) / 35(BA) / 20(IB) <u>Options</u> : 100+ (All Airlines)	From 2018
Norwegian	A320neo	<u>Firm Orders</u> : 100	From 2016
	B737MAX	<u>Firm Orders</u> : 100	From 2017
TUI Group	B737MAX	<u>Firm Orders</u> : 60 <u>Options</u> : 90	January 2018 to March 2023
Monarch	B737MAX	<u>Firm Orders</u> : 30 <u>Options</u> : 15	From Q2 2018
Ryanair	B737MAX	<u>Firm Orders</u> : 100 <u>Options</u> : 100	2019 – 2024

## Notes

- **A320neo** is already in service and is compliant with **ICAO Chapter 14** noise standard (Source: EASA).
- **B737MAX** is not yet in service but is expected to be compliant with **ICAO Chapter 14** noise standard (Source: CFM International, engine manufacturer).

# Separate Noise and Demand Charges



In line with CAA's good practice, existing movement charge has been separated into two components; a noise charge and a demand charge...

GAL Noise Chapter	Noise Charges	
<b>Revenue Proportion</b>	<p style="text-align: center;"><u>Noise</u>: <b>9%</b> of Movement Charges   <u>(NOx Emissions)</u>: <b>9%</b> of Movement Charges)</p>	
<b>Applicability</b>	<p style="text-align: center;"><u>Summer</u>: All times. <u>Winter</u>: Night.</p>	
<b>Charge Categories</b>	Chapter 3	<b>5.00x</b>
	Chapter 4	<b>2.50x</b>
	Chapter 14 High	<b>1.50x</b>
	Chapter 14 Base	<b>1.25x</b>
	Chapter 14 Minus	<b>1.00x</b>
<b>Night Premium</b>	<p><b>11.5 times</b> day rate in 2017/18, as required to account for <b>50%</b> of Noise Charge Revenue</p>	
<b>A320 Noise Modification (FOPP)</b>	<p style="text-align: center;"><b>Applicable from 1 January 2018 regardless of season &amp; time of day:</b>  <u>Day</u>: Equal to 10x Chapter 3 Day Charge  <u>Night</u>: Equal to Chapter 3 Night Charge</p>	

# New Charge Structure – Indicative Tariff



Category	Indicative Tariff	
<b>Demand Charges</b>		
Peak	£890	
Base	£593	
Off-peak	£198	
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<b>Noise Charges</b>	<u>Day</u> 06:00 – 23:29 LT	<u>Night</u> 23:30 – 05:59 LT
A320 – Not Modified (From 01-Jan-18)	£752	£855
Chapter 3 & Below	£75	£855
Chapter 4	£38	£427
Chapter 14 High	£23	£256
Chapter 14 Base	£19	£214
Chapter 14 Minus	£15	£171

- As currently, demand charges apply in **summer season (Apr – Oct) only**.
  - Incentivise fuller aircraft in day.
  - No possible increase in volume of night flights.
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- Noise charges will apply **year round**.
  - Strong pricing signal to incentivise acceleration of **A320 FOPP** modification; noise charges materially higher at all times.
  - Significant incentive (in absolute terms and relative to competitors) to operate quietest aircraft, particularly at **Night**.
  - Subject to Airport Charges Regulation, potential for further refinements over time

# A320 FOPP Modification



Strong financial and competitive incentive under new charging structure to deploy different aircraft at Gatwick, or to modify existing fleet...

Metric	Home Based Aircraft	Away Based Aircraft
No. of Rotations per Day	<b>Three</b> rotations per day. (Six movements)	<b>One</b> rotation per day. (Two movements)
Incremental Noise Charge per Day	<b>£3,900</b>	<b>£1,400</b>
Payback Period	<u>Cost per Aircraft = £50,000</u> ~ <b>13</b> days of operation.	<u>Cost per Aircraft = £50,000</u> ~ <b>36</b> days of operation.

## Notes:

Cost estimates based on scope of work provided by Airbus and indicative cost guidance received from airline customers. Modification requires installation of 4 air flow deflectors per aircraft and requires approximately 10 man hours of installation work.

Questions ?

