



HEATHROW SLIGHTLY STEEPER APPROACH
TRIAL

Summary Presentation

v1.0 June 2016



www.traxinternational.co.uk

Overview

Objective

To better understand how a 3.2° glideslope will impact Heathrow's operation

Success Criteria

A safe trial enabling sufficient data gathering with no adverse impact on the daily operation

Reason

Heathrow Noise Blueprint

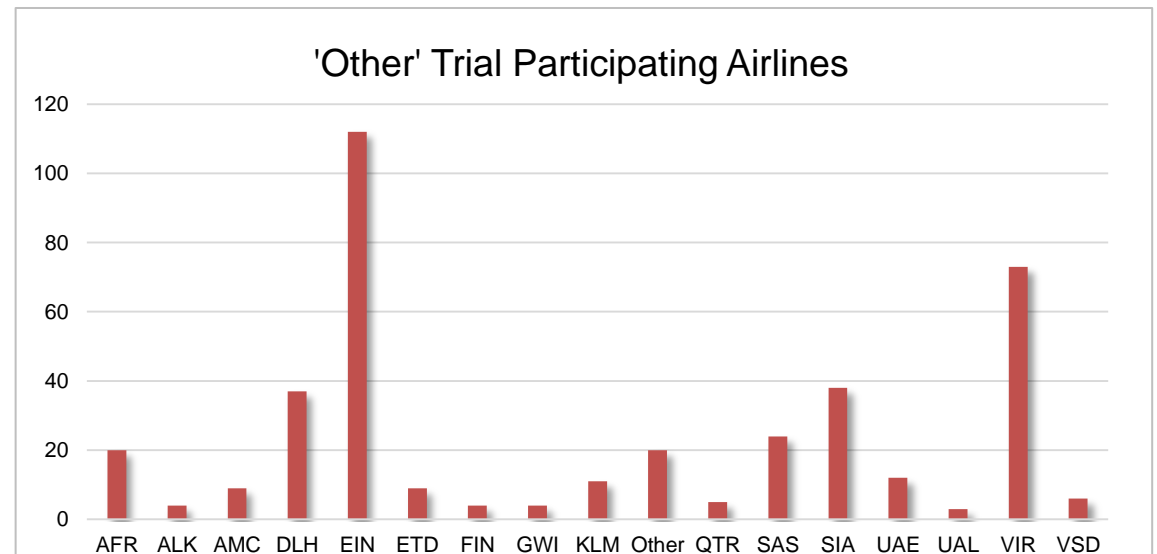
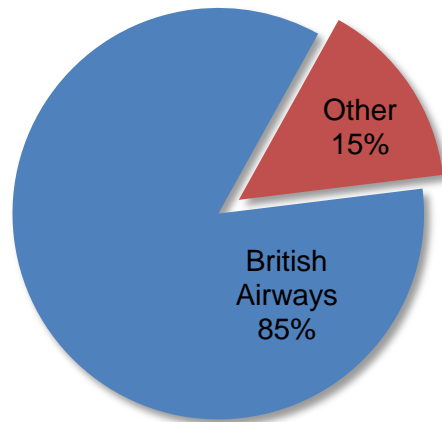
Timelines

September 2015 to March 2016.

Data set

c.2500 3.2° RNAV approaches compared with c.115,000 3° ILS approaches. 3.2° RNAV Approaches were elective and only available in CAT I conditions

Airline Participation



Objectives – what was assessed?

Impact of a 3.2° APC on:

Continuous Descent APC

Time Based Spacing

Runway Occupancy Time

Go-arounds

Speed adherence

Final APC joining point

Landing Gear Deployment

Landing Rate

Height on Final APC

Community

Airline

ATC

Environment

How data was captured

Heathrow Airport's Noise and Operations Management System

NATS Terminal Control

NATS Business Information

Heathrow Airport ATC

NATS Business Information

Heathrow Airport's Noise and Operations Management System

British Airways Flight Data Recorders

NATS Terminal Control

Heathrow Airport's Noise and Operations Management System

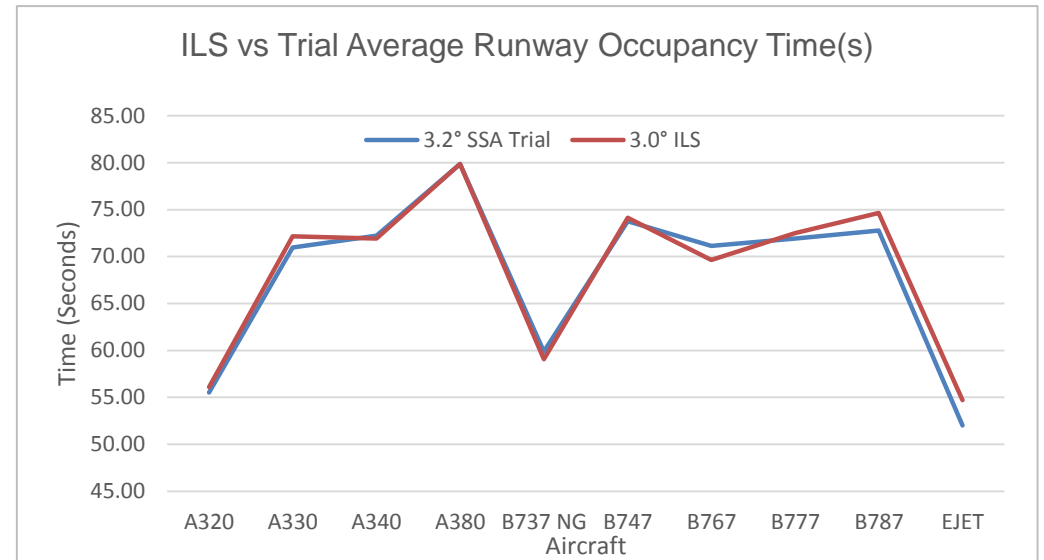
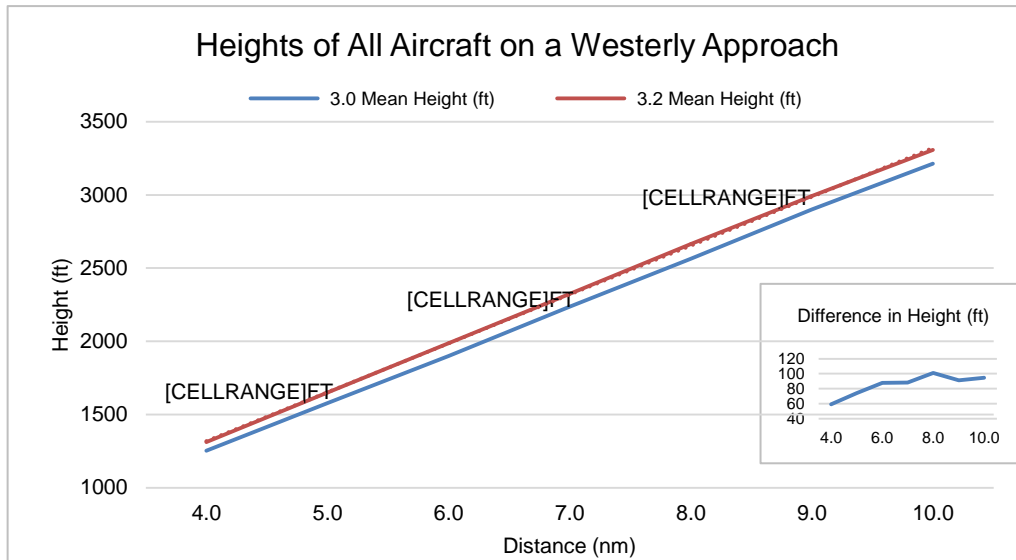
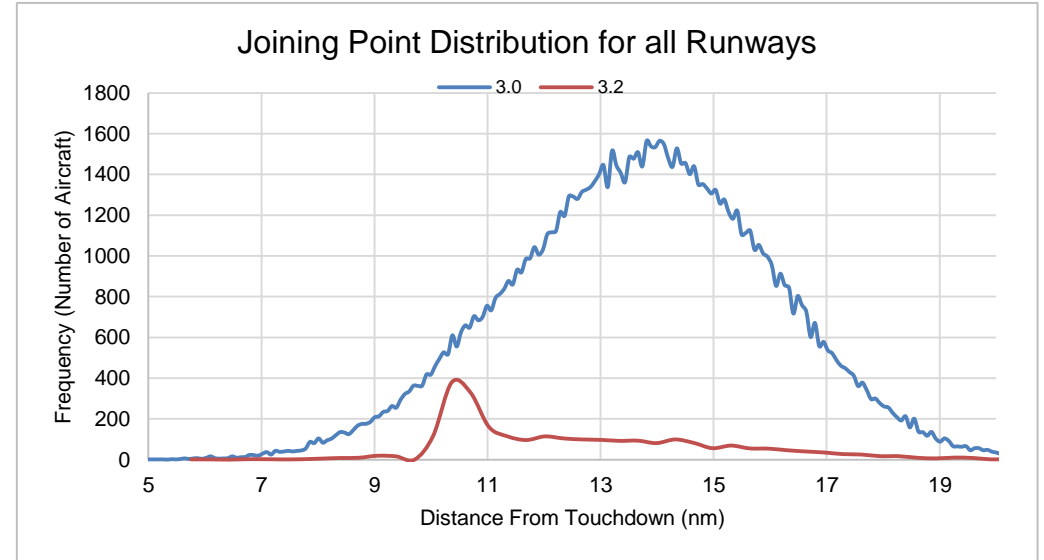
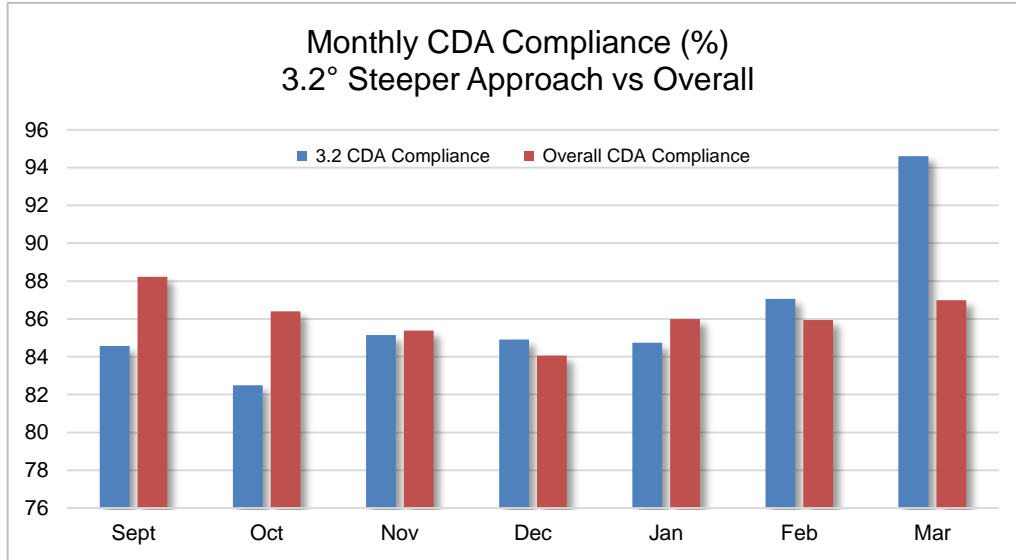
Heathrow Airport Community Relations

British Airways, Virgin Atlantic, Lufthansa (and Airbus)

NATS Terminal Control and NATS Heathrow Airport (and Eurocontrol)

3 additional Remote Noise Monitoring Terminals

Data Collection - Examples



Objectives – How did we do?

Objective	Status	Outcome
CDA		3.2° compliance of 85.7% versus 85.9% overall compliance
TBS		No detrimental impact
RoT		No detrimental impact
Go-around		No detrimental impact (3 out of 351 were on a 3.2° approach)
Speed		Slightly better speed adherence on final approach
Joining point		1.27nm closer to threshold (due to RNAV, not the approach angle)
Landing Gear		Med jets: Same but higher / Heavies: Later similar height
Landing Rate		No impact
Height		Low temperature reduced height benefit but as expected
Community		29 out of 50,274 comments, queries and complaints related to trial
Airline		No issues with 3.2° approach angle
ATC		No detrimental impact due to 3.2° approach
Environment		Min: +0.1dBA / Average: -0.5dBA / Max: -1.4dBA (SEL)

Noise Modelling: We also took the opportunity to model the potential impacts of 3.2° approaches

Next Steps

- Report the findings to Heathrow's Airspace Governance and Community Groups
- Engage CAA to understand what can be done in the short, medium and long term