RNAV Update December 2016



Overview

This document provides an update on RNAV implementation and clarification on the following subjects:

- 1) Update regarding the RNAV technical issue and the proposed solution.
- 2) Update on the Post Implementation Review
- 3) Explanation of the options to target reductions in noise disturbance for our local communities.
- 4) Frequently Asked Questions

RNAV solution and approval

Currently 85% of aircraft using the westerly Match/Detling route are flying the RNAV procedure; the remaining 15% are using the conventional procedure. Shortly after implementation we identified some track keeping issues with a small number of aircraft types which resulted in some aircraft turning over Hemel Hempstead instead of before it and others cutting the corner of the route and flying directly over Flamstead. Until we could understand the full issue at hand the Flight Operations team stopped these operators from using the RNAV route and they reverted to the conventional route until the technical issues have been resolved.

In collaboration with the operators, and the aircraft manufacturers we found a possible solution to the issue but before we could implement it, it needed to be designed and tested in a flight simulator, and then submitted to the CAA for validation. The solution has been tested to ensure that it will work for all operators and not have any negative effect on those already using the RNAV procedure. This proposal was submitted to the CAA in July 2016 we received notification of approval in October 2016 and the amended procedure will be implemented in February 2017.

Post Implementation Review

The Post-Implementation Review usually begins 6 months after implementation; however, as there were only 85% of aircraft using the route at this point, the review was delayed. The Flight Operations team have now found a solution for the technical issues which will be implemented in February 2017, it is likely that the Post-Implementation Review will begin in August 2017.

The Civil Aviation Authority will assess the outcomes against the objectives specified in the Formal Airspace Change Proposal document; this can be downloaded from the CAA's website <u>here.</u>

The PIR is not a consultation process and there will not be an opportunity to provide feedback in the same way.

Future Options to Reduce Noise Disturbance

Short Term Options – Increasing Altitude of Aircraft (12 months)

Aircraft currently departing on the 26 Match/Detling route, have a number of constraints regarding altitude, LLA are exploring the opportunities to remove these constraints when safe and possible to do so.

The first altitude constraint is in the Redbourn area which limits the aircraft from climbing due to another departure route that sits 1000ft above it known as 'Buzzard' which is used during easterly operations from Heathrow but also during westerly operations from Northolt. A diagram has been provided below which shows this interaction, the red arrow shows how the Buzzard route interacts with the26 Match/Detling route shown in shaded blue.



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The majority of the time, Heathrow and Luton are both operating in a westerly direction and therefore this interaction does not exist. However, there are occasions when Heathrow are operating in an easterly direction and Luton is operating in a westerly direction which is the reason for this altitude restriction. LLA is investigating if this limit can be removed when both

airports are operating in a westerly direction. This will allow aircraft to climb to 5,000ft initally when reaching Redbourn.

Further, investigations have shown that 50-60% of aircraft on the westerly Match/Detling route are cleared for continuous climb to 10,000ft. However all aircraft have different climb rates, which causes the differences in altitude further along the route. There are numerous factors that impact the rate of climb including other departure routes in the area and LLA will be working with the operators to develop and encourage a best practice..

Medium-term Option - Required Navigational Performance (RNP)

London Luton Airport are still exploring options for the RNP route design, the location of this needs to be carefully considered and we are exploring the options of RNP in conjunction with increasing the altitude of aircraft. Investigations with NATS are ongoing to understand what steps need to be taken in order to achieve this.

Communities will be involved with all Required Navigational Performance trials and consultations, as feedback from the communities is crucial.

Long-term Option – London Airspace Management Programme (LAMP)

The London air space is a particularly busy area, and requires modernisation. The current air space has not changed in the last 50 years despite the increase in movements from all airports. It is critical that the industry and Government now work together to deliver modernisation. A campaign has been set up, known as 'The Sky's the Limit campaign' and is calling on the Government to prioritise its work on airspace and noise, and support industry efforts to do so. London Luton Airport strongly supports this campaign.

More information and videos regarding The Sky's the Limit campaign are available on their website which can be accessed <u>here.</u>

Frequently Asked Questions

Q - Who was overflown before the change?

A - The tracks were previously dispersed over large areas of St Albans, Harpenden, Redbourn and Hemel Hempstead these have now been concentrated between the populated areas; reducing the number of people directly overflown in both locations, although LLA appreciates that people not 'directly overflown' may still be disturbed by aircraft noise.

Q - Why is Wizz Air always the lowest and noisiest?

A – Wizz Air account for on average 43% of all movements using the Match/Detling route, which is why you may see them more frequently, compared to other operators. Following investigation of the noise produced, this is no louder than an EasyJet or Ryanair aircraft. Their specific altitude is also no different from the average altitude of aircraft on this route.

Q – Why do all of the flights on this route go south and then east over towns and cities - why can they not be routed north and then east over rural Bedfordshire?

A – This was proposed by NATS in 2008 as part of the TC North Airspace change process. These changes would have increased the number of people affected by noise by 110%. The arrivals and departure flight paths were also 30nm and 50nm longer respectively than they are now which would have created more noise and emissions for a longer period of time. The consultation received enough response to warrant delaying the program so as to encompass the changes in a much wider program.

Q – Why is it that Bedfordshire gets all the gain and Hertfordshire gets all the pain?

A – Flight paths both in and out of the airport do affect residents of Bedfordshire and in places at much lower altitudes than Hertfordshire.

The recent Oxford Economics report concluded that the airport supports almost 2000 jobs in Hertfordshire and delivered a GDP contribution of £88 million to the county. More passengers from the county use LLA than any other London Airport. Residents of St Albans District are Hertfordshire's most frequent flyers from LLA with 310,130 passenger journeys last year. That's the equivalent of every St Albans resident flying from the airport twice during 2015. 86% (266,386) were leisure journeys.

North Hertfordshire residents and Dacorum residents were the next biggest user group from Herts with 220,951 and 216,571 passenger journeys from those areas respectively.

Q. Have you recently monitored noise in my area?

A. We have been monitoring noise along the 26 Match/Detling route since implementation, we have done this through the scheduling of our mobile noise monitor in certain locations for monthly periods, or we have undertaken handheld noise monitoring in with residents for a few hours during the peak times of the day.

Recently we have undertaken noise monitoring in Sandridge and the results from this monitoring are shown in the table below.

When one aircraft passes over the noise monitor, this is registered as a single event. The number of events is recorded in the table below. The higher the number of events, the more accurate the result is.

When we measure the noise from an aircraft we use the LasMax, which is the maximum noise level recorded during one event. This tells us the maximum noise produced from an aircraft but does not take into account the duration of the event.

The SEL (Sound Exposure Level) takes into account the duration of a single noise event and the noise experienced. This is the total noise energy produced from a single event.

	2014 - Conventional			2016 - RNAV			
Aircraft Type	Average Log SEL	Average LasMax	Number of Events	Average Log SEL	Average LasMax	Number of Events	Log SEL difference
A306	78.1	65.5	8	77.9	65.5	7	↓ 0.2dB
A319	76	64.1	24	77.5	64.3	60	↑ 1.5dB
A320	75.8	63.6	127	77.2	63.9	289	↑ 1.4dB
A321	76.4	64.7	19	77.3	63.9	19	↑ 0.9dB
B734	77.4	65.5	18	B738 Results below are for conventional not RNAV			
B738	75.8	64.1	36	77.5	64.4	52	↑ 1.7dB

Please note, these results are very technical in nature, and therefore if you do require further information to interpret the results, please contact the Flight Operations team (<u>noise@ltn.aero</u>), who are more than happy to help.