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The noise mitigation plan at Brussels International Airport (EBBR) is centred on a "dispersion plan" that seeks to spread (or disperse) the noise of departing traffic in a number of directions, the idea being that the noise impact on a given area is reduced. From an operational/safety point of view the problem is that the use of runways is varied according to the time of day and day of the week rather than the actual weather conditions prevailing at the time. This problem has been aggravated in recent years since the plan has- due to political pressures from local noise action groups, court rulings etc. - been subject to a good deal of change. Standing alone these frequent changes would have created an unstable and less safe system. It is the opinion of the Belgian Cockpit Association (BeCA) that together with the operational element the plan is unsafe. Furthermore, the BeCA believes that the operational aspects of an airport are defined by international regulations and rules and therefore, should not be subject to short term political whim.

The situation...

Brussels has two parallel runways 25L/07R and 25R/07L and this pair act as the airport's primary pair. Runway 25L is fully equipped to ILS Cat III, while 25R has a Cat I ILS but is due to be upgraded to Cat III in the near future. Runway 07L and 07R are not equipped for ILS and due to local restrictions are not used for landing operations. Brussels also has a shorter runway 02/20 which is ILS equipped at both ends. Runway 02/20 crosses 25L/07R and 25R/07L.

Current regulations call for runway 02/20 to be used in combination with runway 25 during certain periods of the week, but this can lead to tailwind takeoffs on a shorter runway that crosses two other runways, at least one of which will be active for landings.

Changes disregard PANS/OPS

Until 2003 the restrictions limiting the use of runways 25L&R allowed crosswind components to 15kts and a tailwind component to 8 kts not



Current regulations call for runway 02/20 to be used for night operations this can lead to downwind takeoffs on a shorter runway that crosses two other runways, at least one of which will be active for landings. Airport Diagram © Jeppesen Sandersen Inc. **Not to be used for navigation**

including gusts. However in June 2003 changes were made to the limits increasing the crosswind limit to 25kts and the tailwind to 10kts (gusts included), a move which totally disregards ICAO rules. Happily, at that time the BeCA were able to convince the Belgian authorities that these increases were unsafe and unacceptable. Within seven months however the airport increased the limits via NOTAM back to the unacceptable 25/10kt limits. A month later they were reduced again, this time to 15/10kts. Another month and another change, this time to 15/08kts, but for night departures runway 02/20 is designated the preferential runway. Then, a mere two weeks pass before another change is made to the limits. This time the 25/07 pair change to15/05kts and a 15/0kts limit is introduced for 02/20. One month and two days elapse until 27 May 2004 when yet another change is made to the airports limits. The changes this time centre on 02/20 with 15/5kts limit for night operations while the more stringent 15/0kts remains for daytime departures. Clearly, this signifies a move in support of the use of 02/20 for night departures. In March of this year, the airport again increased the allowable limits for its where established as 15/5kts for landings day and night, while the take off limits for day operations are 15/0kts and 15/5kts at night.

It is evident that at Brussels the definition of a runway preferential system is at variance with that described in PAN/OPS Doc 8168. In fact all runways at EBBR can be considered as a "preferential runway" depending on the time of day and period of the week. The ICAO definition of a preferential runway system is meant to provide limitations during which you can continue to use the airport's most preferential runway; it is not aimed at developing (wind) limits for all runways. ICAO clearly states that when the wind components exceed the values of the noise PRS then noise abatement shall not be the determining factor for selecting the runway in use. In this case the most suitable runway should be selected (ICAO PANS-ATM Doc. 4444). This principle is not being applied at Brussels airport.

Safety is the issue

From an operational point of view there is little risk in landing or departing with some tailwind component. Most aircraft are capable of doing so and



approaches. Indeed at some airports due to topographical or other considerations there is no option but to carry out this type of landing or take off. The problem is when there is another safer option available and pilots are forced to use a runway with a significant tail or cross wind components solely to satisfy noise abatement procedures.

The BeCA has always stressed that runway 02/20 should be used as a secondary runway and as such should not be seen as a preferential runway for noise abatement purposes. The association points out the runway was designed to be used in strong northerly and southerly winds and given its shorter length should never be used with a tailwind. Additionally, BeCA argues that the use of intersecting runways by definition increases the likelihood of a runway incursion, and adopting this procedure for noise abatement is unacceptable.

A solution proposed

The BeCA argues that a safer and more effective noise dispersion plan would be to install a precision landing system on runway 07L. This would not only reduce the number of tailwind operations but also the number of simultaneous intersecting runway operations. Wind criteria should be lowered to comply with ICAO values, which should actually increase the dispersion of noise.

In the meantime, the BeCA wishes to warn pilots operating into EBBR that they may be forced to use operationally less desirable runways to satisfy noise abatement procedures. Additionally, thanks to frequent politically inspired changes to the runway noise dispersal plan, planning based on even recent approach plate and airport diagrams may be difficult.



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