



contents

1. **Introduction**
2. **Background**
3. **Definitions and rationale behind the changes**
4. **The current arrival and departure routes**
5. **The proposed arrival and departure routes**
6. **The impact of the proposed changes – now**
7. **The impact of the proposed changes – in the future**
8. **Monitoring**
9. **Options**
10. **The consultation process**
11. **Contact details**

Response form

Plans

It should be noted that plans referenced C and D dated 26 February 2004 and sent out by NEMA in response to earlier questions are superseded

1. INTRODUCTION

- 1.1 In September 2002, Nottingham East Midlands Airport (NEMA) consulted widely on proposed changes to the way aircraft movements into and out of the airport are managed (referred to as airspace changes). The main focus was on planned changes to departure routes. It has since become clear that some consultees feel that more could have been done to explain the effects of the proposed changes for arriving aircraft. This document has been prepared to address that criticism and it should be regarded as a second phase of consultation, that will complete the overall consultation process. **All comments made previously in respect of the earlier consultation phase remain valid, and will be taken into account before any decisions are made.**
- 1.2 This document is the technical report that contains detailed information about the proposed changes to flight paths. It starts with the background to the proposal, followed by a detailed explanation of the changes to arrival and departure routes and holding areas. The environmental effects are then explained, along with details of measures to monitor aircraft movements in future. Finally, more detailed information about the consultation process is provided.

2. BACKGROUND

Airspace and Air Traffic Control in general

- 2.1. Within the UK, civil aviation is regulated by the Civil Aviation Authority (CAA). Air Traffic Control within the UK is managed by National Air Traffic Services (NATS), which coordinates and controls “en route” traffic passing to, from and across the UK and also manages the Air Traffic Control (ATC) facilities at many UK airports.
- 2.2 At NEMA the air traffic control service is operated by the airport company. NEMA’s air traffic control handles aircraft up to the point where they are handed over to or from NATS which directs aircraft to or from the national “airways” which are long distance routes at higher altitude.
- 2.3 Airspace, as a general concept, is the division of the sky above the UK into a three dimensional patchwork of areas. Thus an area of airspace will be defined by its north, south, east and west boundaries. However, it will also have a floor, for example 5,000 feet and a ceiling, for example 10,000 feet.
- 2.4 Within the UK some airspace is defined by the CAA as “Controlled Airspace”. Within Controlled Airspace operators of aircraft are required to maintain radio contact with the controlling air traffic control unit, and to follow their instructions.
- 2.5 All other Airspace is “uncontrolled”. Aircraft are only monitored by air traffic control and rely on their own observations and instruments to maintain a safe distance from other aircraft. Within “uncontrolled airspace” there is minimal control of aircraft height as the pilots are responsible for navigating their aircraft. Some aircraft currently flying in uncontrolled airspace will be travelling to or from NEMA, others will not.

Midlands Airspace

- 2.6 The Midlands is a very busy part of the UK’s airspace. Immediately to the south lies the large London area, with the large volumes of aircraft flying to and from Heathrow, Gatwick, Stansted and Luton. To the north lies another busy area, the Northern area, which handles airports such as Liverpool, Manchester, Leeds and Teesside.
- 2.7 Within the Midlands, the main airports are Birmingham, Nottingham East Midlands and Coventry, plus a number of smaller airfields handling general aviation.

- 2.8 Overall, UK airspace is getting busier, with over two million aircraft movements in 2003 and 172,000 in the Midlands. In this document a movement is defined as a flight from one airport to another, not a return trip.
- 2.9 The Midlands' air space contains four main types of traffic:
- (a) aircraft passing over the UK on long distance flights such as Europe to North America. These aircraft are generally at very high levels e.g. 25,000 feet or more.
 - (b) aircraft destined for, or coming from, UK airports in the adjacent regions e.g. traffic heading south for the London airports or departing north from London. Similarly, there are southbound aircraft departing from Manchester or northbound aircraft heading for Manchester. These use a major airway, passing over the Midlands at heights above 10,500 feet.
 - (c) aircraft arriving or departing from the Midlands' airports. Principally Birmingham or NEMA, but, increasingly also Coventry.
 - (d) general aviation, private and military traffic, generally passing through the area or using one of the smaller or private airfields.
- 2.10 The proposed changes to Controlled Airspace at NEMA (described in detail in Sections 3 to 5) are likely to be part of a wider national programme of airspace changes designed to enable UK airspace to handle increasing demand whilst maintaining existing safety levels.
- 2.11 The requirement for changes in the Midlands is driven principally by increasing demand during the daytime peak periods. At NEMA the main issue relates to daytime traffic to and from the airport interacting with other traffic to and from other Midlands and Northern airports. All of this traffic currently passes in opposite directions through a relatively narrow point near Hinckley in Leicestershire. At night, when there is less air traffic at other airports, airspace congestion is not an issue.
- 2.12. NEMA has an area of Controlled Airspace which has remained essentially unchanged for a number of years during which period levels of air traffic, both at NEMA and in adjoining areas, have increased considerably.
- 2.13 As part of the wider programme of change described above, it is proposed to alter the controlled airspace serving NEMA. This will enable changes to be made to:
- (a) departure routes;
 - (b) arrival routes; and
 - (c) holding areas or "stacks".
- Further details of these changes, and the environmental effects, are set out in Sections 3 and 6 below.
- 2.14 This consultation relates only to the changes to NEMA's airspace. Changes to airspace in other parts of the Midlands will be subject to their own, separate consultation processes, if they proceed.

3. DEFINITIONS AND RATIONALE BEHIND THE CHANGES

- 3.1 The proposed changes have been designed with three key principles in mind. These are to:
- (a) ensure safe separation and management of air traffic;
 - (b) minimise the environmental impact of air traffic, by reference to the number of people impacted and the height of aircraft over them; and
 - (c) improve the efficiency of the air traffic control system so that it can cope safely with the growth in traffic.

- 3.2 This approach is consistent with the guidance given by Government to the Civil Aviation Authority, which is ultimately responsible for approving any change.

It should be noted that any change to Controlled Airspace does not in itself give consent for NEMA to build more capacity. This is a separate approval process controlled by the usual Town and Country Planning system.

Extension of Controlled Airspace

- 3.3 In order for these changes to happen, it is necessary to change the current procedures for both arriving and departing aircraft. It is also necessary to increase the area of “controlled airspace”. The new areas are parts of Nottinghamshire (including Nottingham) and parts of east and south Leicestershire (including Leicester). These areas are currently in “uncontrolled airspace” where neither NEMA nor NATS control the route or height of aircraft. The boundaries of the existing and proposed airspace are shown in pink and blue respectively on Plan A.

Departure Routes

- 3.4 Departing aircraft are contained within tightly defined corridors up to a certain height (the release altitude), generally 3,000 or 5,000 feet. This is for environmental reasons as the routes are designed to keep to a minimum the number of people overflown. These departure routes are often referred to as noise preferred routes (NPR) and compliance with these routes is now typically 98%.

Once the aircraft climbs to the “release altitude” it may leave the noise preferred route and join the national route network en route to its destination. The point at which an aircraft reaches the release altitude is governed by the aircraft type, its weight, performance and the length of the flight. This means that at any given point under a noise preferred route, aircraft will be seen at very different heights. The existing and proposed departure routes are shown on Plan B.

Arrivals

- 3.5 Unlike departures, arriving aircraft do not follow defined routes until they are close to the airport. Depending on their origin, aircraft will approach the airport via the national route network from all directions. They are then “funnelled” towards the airport and start to concentrate once they are about 20 to 30 miles from the airport. The air traffic control unit at the arriving airport will then take over and will direct the aircraft to join the final approach path. Aircraft will generally need to be in line with the runway some 7 miles from touchdown at a height of around 2,000 feet. At this point they link with the Instrument Landing System (ILS) which guides them to a gradual and steady final approach. Plans C, D, E and F show where arriving aircraft would tend to concentrate both currently (Plans C and D) and as proposed (Plans E and F).

- 3.6 It should be noted that although the plans show areas where arriving aircraft are likely to concentrate, air traffic control have to retain the ability to direct aircraft anywhere within controlled airspace in order to maintain safe and efficient operation of the airspace.

Continuous descent approaches

- 3.7 Following work at Heathrow, a new technique has been developed for arriving aircraft. It is designed to reduce noise levels by adopting a longer and more gradual and steady descent rather than the aircraft “stepping down” from one flying level to the next. Each of these “steps” involves changing the engine and wing settings, which also change the noise level.

The new technique – known as “continuous descent approach” (CDA) – has been shown to reduce noise on the ground by up to 5 decibels. At present, the airspace serving NEMA is not able to fully accommodate the CDA technique. The proposed changes will, by increasing the amount of

airspace available at NEMA, allow CDA to be used for most aircraft. This will make them higher and less noisy in areas flown over before they join the Instrument Landing System.

Holding areas

- 3.8 At very busy times, aircraft sometimes have to be held in a holding area prior to making a final approach. In these holding areas, or “stacks”, the aircraft fly a gradually descending oval shaped circuit until they are able to join the final approach. Presently there are two stacks at NEMA, one to the east, near East Leake, and one to the west, near Melbourne.

4. DEPARTURE ROUTES

- 4.1 This section deals with departing aircraft. A general introduction is followed by a description of the current position. The proposed changes are then described. These proposals are exactly the same as were detailed in the earlier consultation document issued in September 2002.
- 4.2 Aircraft normally take off and land into the wind. Thus the routes taken by aircraft landing at or taking off from the airport will vary according to the wind direction. In this document “westerly departures” refers to aircraft taking off to the west and into the wind. Similarly, easterly departures are when aircraft take off to the east. The wind direction varies on a frequent but often irregular basis. Typically over a year however, approximately 70% of operations at NEMA are in westerly conditions, i.e. with aircraft taking off or landing into a westerly wind.

Current westerly departures

- 4.3 The routes flown by westerly departing aircraft (c. 70% of all departures) would be wholly unaffected by this proposal and, to avoid confusion, are not shown on the plans.

Current easterly departures

- 4.4 The current easterly departure routes are shown on Plan B. At present, aircraft with destinations to the north fly the route marked TRENT 1. These aircraft fly straight ahead before undertaking a wide turn around Ratcliffe on Soar power station. They then fly over the area of Long Eaton before turning northwards and flying over the eastern fringes of Derby. The current easterly departure route for aircraft with destinations to the south is known as DAVENTRY 1. This runs to the east of Loughborough, over Barrow upon Soar, Quorn and Woodhouse Eaves, turning southwest through the gap between Loughborough and Leicester.

Future easterly departures

- 4.5 The current route for aircraft with destinations to the north (TRENT 1) would be moved east and be renamed TRENT 2 (see Plan B). This will move aircraft away from the built up areas of Derby.
- 4.6 A new route would also be introduced for some aircraft with destinations to the north (e.g. Scotland, Scandinavia and Germany). This new route would be used during the day only. At night, all north bound traffic will use the TRENT 2 route. The new route is shown as POLE on Plan B. This new route diverges from the existing route in the area of Long Eaton. Thus aircraft will be further east than at present such that they fly over the western fringes of Nottingham.
- 4.7 The combined effect is to spread the existing day time traffic between two routes (TRENT 2 and POLE), rather than concentrate it on the current TRENT 1 route.

For aircraft heading south, a new route (DAVENTRY 2) would be created. Due to operational constraints, this would be used only for a small proportion of easterly departures which would track south east over east Leicestershire. DAVENTRY 1 would remain in use.

5. ARRIVAL ROUTES

- 5.1 As described in Section 3 above, arriving aircraft do not follow defined routings in the same way as departing aircraft. They are, however, generally seen in broad swathes, gradually funnelling down as they approach the final approach path. Arriving aircraft are also affected by wind direction. Aircraft have to land into the prevailing wind. “Westerly arrivals” refers to aircraft landing at the airport from the east; while “Easterly arrivals” refers to aircraft landing from the west.

Westerly arrivals

- 5.2 Currently those aircraft that approach from the south fly west of Leicester, flying between the city and Loughborough, before making a final turn towards the airport in readiness to land as shown on Plan C. The changes for these aircraft are shown on Plan E. In future, aircraft that arrive from the south would instead fly east of Leicester. They would continue to track north until making a final turn westwards in readiness to land. This will result in fewer arriving aircraft overflying villages such as Woodhouse Eaves, Quorn and Barrow upon Soar (north west of Leicester) but increase the number of arriving aircraft flying over villages such as Kings Norton, Houghton on the Hill and Thrussington (east of Leicester). Details about the number and height of aircraft, noise levels and numbers of people affected are contained in Section 6.
- 5.3 Those aircraft that approach from the north currently fly over Derby. They continue to fly east, clear of Nottingham, before making a wide final turn in readiness to land as shown on Plan C. In the new proposal aircraft would tend to concentrate to the west of Derby rather than north and west as at present and, although aircraft would no longer fly over the southern half of Derby, some flights over the southern fringes of Nottingham would be likely to occur as shown on Plan E.

Easterly arrivals

- 5.4 Currently, those aircraft that approach from the south pass to the west of Leicester then fly east of Measham and over, or west of, Ashby-de-la-Zouch before making a final turn towards the airport close to or east of Burton upon Trent as shown on Plan D. The proposed changes are shown on Plan F. In future, these aircraft would fly east of Leicester flying over villages east of the city. They would then turn westwards once past the city, flying south of Loughborough, and over the north of Coalville before making a wide turn over Ashby and Swadlincote in readiness to land. This would reduce the number of aircraft over villages such as Earl Shilton, Desford and Ibstock (west of Leicester) but increase the number of arriving aircraft flying over villages such as Houghton on the Hill, Queniborough and Sileby (east and north of Leicester).
- 5.5 Those aircraft that approach from the north currently fly in a very wide swathe, crossing the City of Derby and settlements south and west of the city, before lining up for their final approach over Melbourne. These routings are shown on Plan D. In future, these aircraft would stay north of Derby for longer, flying further east than at present, before turning back westwards over Derby and then turning east once again to line up to land, as shown on Plan F.

Aircraft holds

- 5.6 On some occasions, aircraft are required to hold prior to landing. This usually occurs when the visibility is reduced due to poor weather or when operational difficulties occur. The aircraft flies an oval shaped ‘holding pattern’ as described in Section 3 above. Typically, aircraft are currently held at an altitude of 4,000 feet, with a minimum altitude of 3,000 feet. On leaving the holding area, the aircraft will be directed onto the final approach path as normal. In 2003 the airport held aircraft for a total of approximately 17 hours. As traffic levels grow and under the current Controlled Airspace arrangements, the amount of holding is expected to increase ultimately as a response to congestion.

Currently, if required to hold, westerly approaching aircraft are held in the vicinity of the village of East Leake and easterly arriving aircraft are held in the vicinity of the village of Melbourne. The current holding areas are shown on Plan G.

- 5.7 The proposed changes involve moving both holding areas further away from the airport. Aircraft approaching from the north would hold at a new holding area, to be called 'ROKUP', located north east of Derby. Aircraft approaching from the south would use a new holding area called 'PIGOT', located south east of Leicester. The new holding areas are shown on Plan G. Because the new holding areas are further from the airport, aircraft will be higher and would typically be at 8,000 feet or above.

6. THE IMPACT OF THE PROPOSED CHANGES – NOW

Departures

- 6.1. As described in Section 4.1 the majority of aircraft (c. 70%) depart to the west. As such they are wholly unaffected by the proposed changes which will affect the remaining 30% of departures. Of these, approximately 65% head south at present, the remainder heading north. Departure routes are shown on Plan B.
- 6.2 Those aircraft that depart to the east and turn south for destinations towards mainland Europe would also remain largely unchanged. However the introduction of the new route (DAVENTRY 2) would allow a small number of aircraft to fly this new routing which tracks south east over rural Leicestershire. This route is subject to a number of operational constraints and this, coupled with the prevailing wind, means it is likely to be used by just 2% of the airport's departures. This would be around 5 departures on the nights when it is in use. It is estimated that aircraft that fly this route would fly over 75% fewer people than those that use the current (DAVENTRY 1) routing. Villages that would not be overflown on those occasions when the new DAVENTRY 2 route was in use would include Quorn, Barrow upon Soar and Woodhouse Eaves.
- 6.3 Those aircraft that depart to the east and then turn north for destinations including Scotland and Scandinavia would either fly an amended version of the current routing (TRENT 2) or a wholly new route (POLE). The amended routing (TRENT 2) avoids Derby, flying east of the city instead. This route would reduce the population overflown by 21% compared to the current routing (TRENT 1).
- 6.4 Approximately half of the aircraft that depart to the east and then turn north would fly a new route (POLE) and therefore aircraft would fly over areas to the west of Nottingham for the first time. As with other easterly departure routes this routing would be used for only about 30% of the time. When used it is likely that it would accommodate around 18 departures each day. It is likely that the aircraft in question would be at an altitude of between 4,000 and 7,000 feet. At this altitude typical aircraft noise of around 62 to 68 decibels would be expected. Whilst it is clearly difficult to compare noise from differing sources this level of noise may be set in context by noting that a typical car at 30 miles per hour passing at a distance of 15m will record a noise level of 64 decibels and at 7.5m 70 decibels. In order to minimise the potential for disturbance, this new route would only be used during the daytime.

Table 1 shows the change in population overflown by departing aircraft using the existing (E) and proposed (P) routes.

Table 1 –

Departure route change	up to 3,000 feet	3,000-5,000 feet
TRENT 1 (E) to POLE (P)	-19%	0.70%
DAVENTRY 1 (E) to DAVENTRY 2 (P)	31%	-76%
TRENT 1 (E) to TRENT 2 (P)	N/C	-21%

Arrivals

Continuous descent approaches

- 6.5 Currently airspace in the Midlands is congested, particularly at peak times. One of the consequences of this congestion is that arriving aircraft are commonly instructed to descend to relatively low altitudes at considerable distance from the airport. This is necessary to enable departing aircraft to fly safely above them. As a result, the arriving aircraft, operating at relatively low altitudes, create greater noise impact. The Airspace Change proposals have been designed to enable aircraft to be safely separated laterally (i.e. to pass side by side) and therefore the altitude of arriving aircraft can be increased dramatically. NEMA estimates that this general increase in altitude would reduce by over 90% the number of people overflown by arriving aircraft at 3,000 feet or below.

Arriving aircraft would then also be able to descend steadily and progressively into the airport using minimal engine power. This technique, explained in Section 3, is known as continuous descent approach and in trials at Heathrow Airport this technique has been shown to reduce noise impact by up to 5 decibels.

Westerly arrivals

- 6.6 As described in Section 4.2 it is usual for aircraft to operate in a westerly direction due to the direction of the prevailing wind. As described in Section 6.5 the proposed changes to airspace have been designed to enable arriving aircraft to approach using continuous descent approach techniques and therefore they would be higher and quieter than at present.

The changes in areas overflown would be greatest to the south with arriving aircraft flying over less populated areas east of Leicester rather than west of the city as at present. As can be seen from Plan E, whilst flying over areas east of Leicester arriving aircraft would typically be at altitudes in excess of 6,000 feet.

At this level, arriving aircraft would typically be expected to produce noise levels in the range 61 to 66 decibels. Whilst it is clearly difficult to compare noise from differing sources this level of noise may be set in context by noting that a typical car at 30 miles per hour passing at a distance of 15m will record a noise level of 64 decibels and at 30m 58 decibels.

Aircraft approaching from the north would continue to fly over Derby however they would do so at significantly greater altitudes. It can be seen by comparing Plan E (proposed) with Plan C (current) that the typical increase in altitude would be from 3,000 feet to 6,000 feet. In practice this increase in altitude would be expected to result in a decrease in noise from these aircraft operations of around 8 decibels.

As can be seen from Table 2 below, in addition to aircraft being higher and quieter, the population over flown by aircraft would be reduced. This effect would be particularly pronounced for aircraft at lower altitudes where the impact of aircraft noise is greatest.

Easterly arrivals

- 6.7 As described in Section 4.2 the airport operates in an easterly direction only when subject to an easterly wind, typically 30% of the time. As described in Section 6.5 the proposed changes to airspace have been designed to enable arriving aircraft to approach using continuous descent approach techniques and therefore they would generally be higher and quieter than at present.

The changes in areas overflown would be greatest to the south with arriving aircraft flying over areas east of Leicester rather than west of the city as at present. As is the case with westerly

arrivals, whilst flying over areas east of Leicester, arriving aircraft would typically be at altitudes in excess of 6,000 feet, resulting in noise levels in the range 61 to 66 decibels.

As can be seen from Table 2 below the population overflown by arriving aircraft at altitudes of 3,000 feet or below, when the impact of aircraft noise is greatest with a range of noise at ground level for an aircraft being from 66 to 74 decibels at ground level would be reduced dramatically. However when approaching from the north arriving aircraft would fly a much wider swathe than at present taking in Derby, typically at altitudes of around 6,000 feet. This can be seen on Plan F. At this level arriving aircraft would typically be expected to produce noise levels in the range 61 to 66 decibels. Whilst it is clearly difficult to compare noise from differing sources this level of noise may once again be set in context by noting that a typical car at 30 miles per hour passing at a distance of 15m will record a noise level of 64 decibels.

Table 2 – Change in population overflown by arriving aircraft

Direction	< 3,000 feet	< 5,000 feet
Westerly arrivals	-92%	-77%
Easterly arrivals	-85%	13%

Aircraft Holding

- 6.8 The effect of the proposed changes would be to move the aircraft holding stacks and to double the altitude of the holding aircraft from the current 4,000 feet typical (3,000 feet minimum) to a minimum altitude of 8,000 feet. As described in Section 5.6 aircraft are required to hold infrequently, albeit that there may be an increase in future if the airspace changes do not proceed.

Context

- 6.9 To put the potential impacts into context, the effect of noise impact on people is normally measured by the L_{Aeq} contour. Government guidelines suggest that “the onset of annoyance” from aircraft noise during the day equates to the 57 dB L_{Aeq} contour. This is the “average” contour built up from the number of individual noise events, normally measured over a 16 hour day. This is shown for 2003 as Plan H and is restricted to the area relatively close to the airport, well within existing controlled airspace.
- 6.10 At night the 55 dB L_{Aeq} 8 hour contour is considered to represent the point below which the impact of aircraft noise on sleep disturbance is not discernible. The 2003 contour shown on Plan I is very similar to the 57 dB L_{Aeq} 16 hour day contour and once again extends broadly from Sutton Bonington in the east to Donington Park to the west, with the majority of affected dwellings being in the villages of Kegworth and Castle Donington.
- 6.11 Comparisons of noise levels with everyday sounds are fraught with difficulty. However as a guide only, comparisons are often made with a “typical car” travelling at 30 mph at varying distances from the receptor. The typical maximum noise levels produced are:
- | | |
|--------------------------|-------------------------|
| At 7.5m distance 70dB(A) | At 15m distance 64dB(A) |
| At 30m distance 58dB(A) | At 50m distance 54dB(A) |

Aircraft numbers – current

- 6.12 Table 3 shows the average number of arriving aircraft per day per route and Table 4 the number of departing aircraft both as at 2003 using current routes. As described earlier, aircraft flight paths are affected by the wind direction with roughly 70% of operations taking place with aircraft taking off or landing into a westerly wind. The average number of aircraft in the tables reflects the average

number of flights per day over a year to even out the effect of changes in wind direction. On any individual day there could be no aircraft at all in certain areas, or more than the average. As can be seen from the plans some areas are overflowed by both easterly and westerly operations.

Table 3 – Arrivals

Route	average number whole day 2003
Westerly (from south)	35
Westerly (from north)	19
Easterly (from south)	15
Easterly (from north)	8
Total	77

Table 4 – Departures (average whole day)

Route	2003 (current routes)
27 South	35
27 North	19
Trent 1	8
Trent 2	
Pole	
Daventry 1	15
Daventry 2	
Total	77

7. THE IMPACT OF THE PROPOSED CHANGES – IN THE FUTURE

- 7.1 In Section 6.12 and Tables 3 and 4 the numbers of aircraft using existing arrival and departure routes are set out for 2003. We have been asked how much this might grow over the next few years and what our forecasts for the next 5 years predict.
- 7.2 NEMA is operated as a commercial enterprise and seeks to grow its business. How rapidly that grows is difficult to predict due to a combination of factors including competition from other airports and the impact of wider changes in the economy on sales by the passenger airlines and air freight companies.
- 7.3 In addition the number of aircraft that can operate from or to NEMA will be constrained by existing facilities, be that passenger or freight handling facilities and NEMA will need to seek planning consent(s) for further development. NEMA recognises that such consent(s) cannot be taken for granted.
- 7.4 If it is assumed, that in the next few years NEMA was able to increase levels of passenger and freight movements by 50%, a figure which in very broad terms may be taken as an upper band estimate, before being constrained by the need for planning consent, this could produce an extra 38 or 39 arrivals and departures per day compared to 2003. However these do not all impact upon the same area and growth such as this would produce the following pattern in Tables 5 and 6.

Please note both tables provide illustrative averages only. They assume aircraft operations occur uniformly throughout the year. Due to wind direction some days will be zero and when a route is in use the daily figure will be higher.

Table 5 – Arrivals (whole day average)

Route	assumed 50% increase – proposed routes
Westerly (from south)	53
Westerly (from north)	28
Easterly (from south)	23
Easterly (from north)	12
Total	116

Table 6 – Departures (whole day average)

Route	assumed 50% increase – proposed routes
27 South	52
27 North	29
Trent 1	
Trent 2	4
Pole	7
Daventry 1	22
Daventry 2	2
Total	116

- 7.5 Growth in air traffic is unlikely to significantly change the distribution of aircraft between routings and therefore growth would occur equally across all routings with the exception of the DAVENTRY 2 departure route (see Plan B). As described in Section 4, use of this route is constrained due to operational reasons and therefore the number of aircraft using this routing is unlikely to grow significantly.

8. MONITORING OF IMPACTS

- 8.1 NEMA already operates a sophisticated noise and track monitoring system. This records automatically, the height, position and altitude of all aircraft arriving at or departing from the airport. This data is used for a number of purposes. It enables NEMA to investigate and respond to complaints. It also allows trends to be monitored and for regular data to be provided locally about the impact of aircraft on specific communities.
- 8.2 This system does not currently record tracks east of Leicester within the proposed new airspace and it has not therefore been possible to provide details of tracks of aircraft flying in this area currently. However, a software upgrade is planned to take place in November, so that this information will become available in future.
- 8.3 Following comments from local representatives, NEMA has agreed to carry out, and substantially to fund, monitoring of noise in areas affected by the proposed changes. This has been agreed with a number of local authorities and the results will be shared openly with them. This will enable data to be collected showing both the current “background” noise climate and, subject to the proposed airspace changes ultimately being approved, the effect of the changes themselves. If the changes are approved, the data collection should help to optimise operation of the new aircraft routings as part of an ongoing process to minimise the impact in the short and longer term.

9. OPTIONS

- 9.1 This consultation is in respect of the proposed airspace changes and the consequent changes to arrival and departure routes set out at Sections 3 to 5. This is referred to as “The Change Option”.
- 9.2 If the proposed changes are not approved by the CAA, controlled airspace would remain as it is now. This is described as the “Original Airspace Option”.
- 9.3 The impact of the Change Option has been described at Sections 6 and 7. This section describes the impact of the Original Airspace Option if the change is not approved.

Congestion

- 9.4 The airspace changes that have been proposed are designed to improve the efficiency with which the air traffic control system in the Midlands area operates. They were generated in response to increasing demand during the daytime peak periods. If the proposed changes were not implemented, the system would continue to operate less efficiently and the current levels of congestion would, over time, increase, especially for daytime passenger flights. Clearly there is and will always remain an overriding need to ensure the safe operation of aircraft and safety will continue to be of paramount importance. In these circumstances the system will respond to congestion by increasing delays so as to maintain safety levels. It is also likely that the effect of this increased congestion would impact upon other regional airports including those airports at Birmingham, Coventry and Manchester as well as in the London area.

Other traffic

The areas of uncontrolled airspace are currently used by a variety of aircraft. Commercial aircraft use the uncontrolled airspace when travelling to or from NEMA and other airports such as

Birmingham, Coventry and in the future Finningley. The level of activity by this type of operation could be expected to grow broadly in line with increasing traffic levels at these airports.

Uncontrolled airspace is also used by light aircraft and military aircraft. These in particular may fly beneath the floor of NEMA's proposed extension to controlled airspace and could continue to do so in the future, whether or not the extension is approved.

Holding

- 9.5 An increase in congestion would also have other, less obvious, consequential effects. These would include the need for substantially greater use of aircraft holding. It would become increasingly common for arriving aircraft to be held in a hold or 'stack' awaiting the opportunity to land. Without the changes, the current holding areas at 4,000 feet in the vicinity of the villages of Melbourne and East Leake would remain and be used more frequently. Because of the proximity of these holding areas to NEMA, it would not then be possible to take advantage of the doubling in altitude of holding aircraft offered by the proposed changes.

Continuous descent approaches

- 9.6 Section 6.5 describes the use of the continuous descent technique by approaching aircraft. This technique offers the potential for significant reduction in noise from arriving aircraft and is accepted as being best practice. Because of the lack of sufficient controlled airspace to enable lateral separation of aircraft, arriving aircraft would have to descend earlier to pass beneath departing aircraft and the consistent use of the continuous descent technique would be impossible without the changes that are proposed. Indeed the increasing congestion that would arise would mean that the use of this technique would become much less common over time.

Population impact

- 9.7 The effect of the proposed changes is described in Section 6. It is important to note that typically the proposals have the effect of reducing the number of people overflown by both departing and arriving aircraft. The proposals also have the effect of making arriving aircraft higher and quieter. These are environmental improvements that accord with the guidance of the Civil Aviation Authority, but they would not be possible without the implementation of the proposed changes.

Equally, NEMA recognise that maintaining the status quo will avoid some communities being overflown for the first time and it understands the concerns being felt in those areas. The current routes have been established for many years and it has become an accepted pattern of operation with which people have become familiar.

10. THE CONSULTATION PROCESS

Background

- 10.1 This consultation represents the completion of a consultation process which began in 2002.
- 10.2 The original consultation, carried out by NEMA from September 2002 to July 2003 was followed by a formal consultation exercise carried out by the CAA. In July 2004, the Director of Airspace Policy (DAP) at the CAA approved the proposed changes to NEMA's Controlled Airspace and began the implementation process.
- 10.3 In August 2004 it became clear that in the earlier consultation process, Oadby and Wigston Borough Council should have been consulted because of the change to arrival routes. Given this error, and a continuing perception in certain areas that more could have been done to inform people of the likely changes, particularly in respect of arriving aircraft, NEMA took the

unprecedented step of requesting the CAA to stop implementation of the proposed changes to enable further consultation to take place.

- 10.4 This request was acceded to by the DAP and implementation of the proposed changes, originally scheduled for November 2004, has stopped.

This Consultation

- 10.5 This Consultation represents the completion of the earlier process.

The Consultation process runs for a period of 12 weeks from 18th October 2004 and ends on 10th January 2005. Copies of the consultation documents (this report with enclosed plans) will be available for inspection at NEMA at the Administration Building (Building 34) from 09.00 to 17.00 Monday to Friday and, subject to their agreement, at the offices of District and County Councils within the consultation area.

- 10.6 This Consultation seeks views on the proposed changes to Controlled Airspace and the consequent changes to aircraft routings. A large number of District, County, City and Parish Councils have been consulted, together with the airport's Independent Consultative Committee. Comments from other groups and local residents are welcomed.
- 10.7 All comments received will be considered by the airport and where possible any adverse impacts will be mitigated and the airport's proposals amended accordingly. In any event, all comments received will be collated and passed to the CAA.

What The Consultation is not

- 10.8 There has been much debate about aviation growth generally and the future growth of NEMA in particular. It is essential to make clear that a number of future developments will themselves be subject to their own consultation exercises and to the usual planning procedures. This consultation is not, for example, a consultation into the expansion of NEMA generally. This was dealt with by Government prior to its publication of the Air Transport White Paper in December 2003. However, the impacts of possible growth pursuant to existing planning consents are described briefly in Section 7.
- 10.9 Although the White Paper acknowledges and indeed encourages future growth at NEMA, the various infrastructure changes necessary to facilitate this growth will have to be the subject of detailed proposals with the associated environmental study and consultation at the appropriate time.
- 10.10 Nor does this consultation deal with any other changes which may be brought forward in the future by other airports, or by the CAA, for changes to other parts of the Midlands' airspace.
- 10.11 Finally, this consultation does not deal with the Master Plan, which NEMA together with all other significant UK airports are expected to produce, as described in the December 2003 Air Transport White Paper. A public consultation in respect of this is anticipated in 2005.

11. CONTACT DETAILS

11.1 All responses to the Consultation should be addressed to:

The Airspace Consultation Co-ordinator
East Midlands International Airport Limited
Building 34
Nottingham East Midlands Airport
Castle Donington
Derby DE74 2SA

Email address: airspaceconsultation@nottinghamema.com

To arrive no later than noon on 10th January 2005

11.2 A brochure providing brief details of the proposed changes in a less technical form than this document is being prepared and copies can be provided on request. Information will also be available on the airport's website www.nottinghamema.com.

Requests for brochures or further information should be sent to the Airspace Consultation Co-ordinator at the above address, faxed to **01332 850393**, emailed to **airspaceconsultation@nottinghamema.com** or by telephoning **0845 108 8541**.

Response form

A pro forma response form is attached to this document for the convenience of any consultees who wish to use it.

**NOTTINGHAM EAST MIDLANDS AIRPORT
PROPOSED CHANGES TO CONTROLLED AIRSPACE
PHASE 2 – CONSULTATION PROCESS**

RESPONSE FORM

please complete in BLOCK CAPITALS

1. **Name** _____

representing _____
(if appropriate)

2. **Address** _____

Post Code _____

Contact telephone number _____

Email address _____

3. I/we support I/we do not support

the proposed changes to Controlled Airspace (please tick as appropriate)

4. **Additional comments** (if any) _____

Date _____