

# AIRCRAFT OPERATIONS



Every year, here at East Midlands Airport we connect around 4.9 million passengers with around 100 destinations across Europe and North America. As the UK's number-one pure-freight airport, we also manage over 359,000 tonnes of cargo a year. We're the regional gateway to national and international markets. This helps us to attract major businesses, including DHL, Royal Mail, UPS and Amazon, which contributes to the development of the East Midlands region.

The airport provides jobs for around 10,000 people, and directly contributes over £300 million every year to the East Midlands economy. We have ambitious

plans for developing the airport, and the East Midlands region, in a responsible and sustainable way.

We aim to strengthen the role we play in the Midlands, driving growth through better connections, creating jobs, attracting investment, and helping people from across the East Midlands do business, visit friends and family and enjoy travel to their favourite destinations from their local airport.

The airport is open 24 hours a day, seven days a week, every day of the year, in order to support the increasing demand for both passenger and cargo flights to and from the airport. Being a busy airport, we have a duty to protect the environment. Protecting our local environment and

minimising our effect on local communities is a priority of ours.

We became the first UK airport to achieve international standard ISO14001, and we have maintained that accreditation since 2002. We are committed to identifying and controlling the effects we have on the environment, and meeting legal requirements and regulations, as well as meeting the challenging environmental targets we have set ourselves.

Operating a busy airport is challenging, and some effect on the local community and wider environment is inevitable. However, we continue to work hard to keep these effects to a minimum.

## HOW THE AIRPORT OPERATES

**The airport has a single runway, running from east to west. Aircraft movements comprise of commercial passenger flights, air freight and mail flights, plus training and general aviation flights.**

Most commercial passenger flights take place during the day. At night, flights are a mixture of passenger, freight and mail flights. The night-time freight flights contribute significantly to the airport being the UK's busiest airport for cargo carried

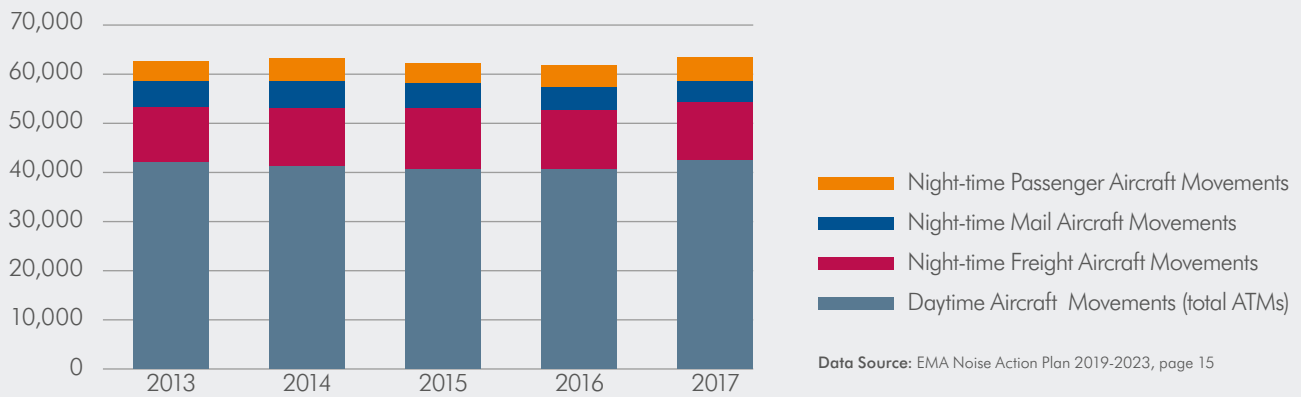
on dedicated cargo aircraft.

Our general policy on aircraft operations is to try to avoid flying over towns and cities when possible. This minimises the number of people whose property is flown over. Each aircraft is under the direction of our air traffic controllers, who provide instructions to the aircraft's pilot in 'real time'. We record, from radar, the track and altitude of each aircraft. This information is fed into the airport's Noise and Track Keeping System

(ANOMS) and frequently reported and inspected, to make sure that airlines follow our procedures and instructions.

All Air Traffic Control activities are carried out to the very highest standards. The potential effect of aircraft noise is a major consideration to Air Traffic Control, and all our air traffic controllers try to make sure aircraft operate as quietly as possible, as long as safety requirements are met.

## ANNUAL COMMERCIAL AIR TRAFFIC MOVEMENTS



For safety reasons, aircraft usually take off and land into the wind. As the wind at East Midlands Airport usually comes from the west, most aircraft arrive and take off in a westerly direction (facing to the west) on Runway 27. This reduces aircraft noise.

We have a policy of using Runway 27 for westerly operations – flights landing and taking off in a westerly direction – whenever it is safe to do so. However, if there is a significant wind from the east,

aircraft will arrive and take off in an easterly direction on Runway 09.

In 2020, 78% of aircraft movements were westerly operations. This can change from year to year.

## DEPARTING AIRCRAFT

To make sure as few people as possible are affected by aircraft noise, departing aircraft from East Midlands Airport follow ‘noise preferential routes’ (pictured here).

These routes (NPRs) direct aircraft away from built-up areas where possible, and contain aircraft within tightly defined flight areas until they reach an altitude (height) of at least 5,000 feet, in order to minimise noise. Aircraft should keep to the NPR until they have reached an altitude of 5,000 feet. Different aircraft will reach the required altitude at different points within the NPR, depending on their weight, type and performance, so some can leave the NPR earlier than others, as directed by Air Traffic Control.

When the aircraft leaves the NPR it joins the National Airway System and comes under the control of the National Air Traffic Services (NATS). Aircraft may need to leave the NPR before reaching the required altitude, for example to avoid poor weather or other aircraft, but this is rare and is only allowed for safety reasons.

Some aircraft, including small aircraft weighing less than 17,000 kg, training aircraft and aircraft that are not joining the National Airways System, do not have to fly within the NPR.

## NOISE PREFERENTIAL ROUTES



# HOW WE KEEP AIRCRAFT LEAVING THE AIRPORT ON TRACK

We regularly monitor and report on our 'track-keeping performance' – in other words the percentage of aircraft that fly 'on track' or within the NPR – and we publish these reports on our website.

As part of our newest Noise Action Plan commitments, we recently increased our track-keeping performance target from

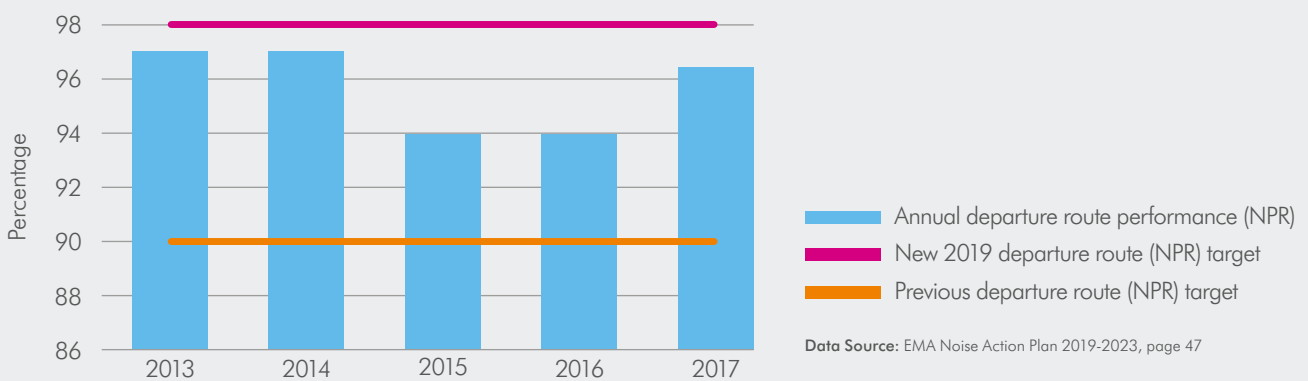
90% to 98%. We aim to achieve this target by 2023.

As part of our Noise Action Plan we aim to extend our system of fines to penalise airlines that persistently fail to meet the requirements of our departure flight paths.

We also use 'continuous-climb departures', which are designed to enable aircraft to keep climbing after take-off until

they reach their cruising altitude. The aim is to take the aircraft to a higher altitude, quicker. The extent to which this can be achieved (referred to as 'compliance') depends on the numbers and types of other aircraft in the area. At East Midlands airport we monitor and report compliance up to 10,000ft.

## DEPARTURE ROUTE PERFORMANCE AGAINST TARGET



## ARRIVING AIRCRAFT

Unlike departures, arriving aircraft do not follow defined routes as it is essential for Air Traffic Control to keep aircraft appropriately spaced apart from each other. As they get closer, aircraft will be 'funnelled' towards the airport.

Aircraft will generally need to be in line with the runway, and at a height of around 3,000 feet, when they are six to 10 miles away from landing. At this point they link with the Instrument Landing System (ILS), a radio beam which guides them to a steady final approach. Most aircraft will use the ILS for their final approach to the runway, but pilots may sometimes need to guide the aircraft to the runway visually as well as using the ILS.

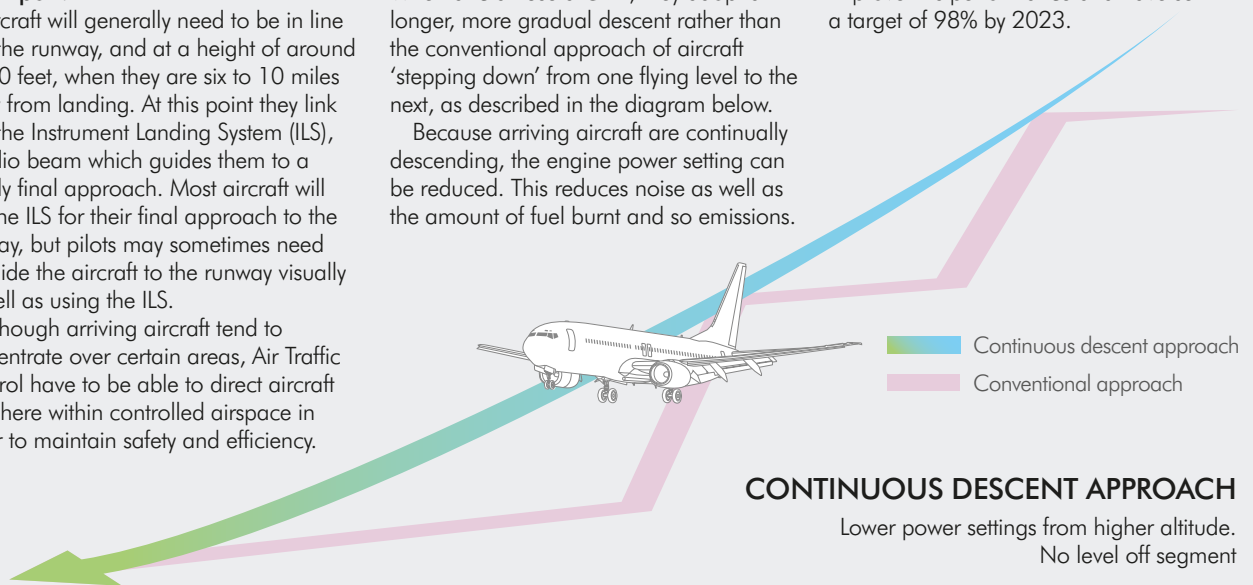
Although arriving aircraft tend to concentrate over certain areas, Air Traffic Control have to be able to direct aircraft anywhere within controlled airspace in order to maintain safety and efficiency.

We were one of the first European airports to promote the continuous descent approach (CDA). This approach is considered to be environmental best practice as it significantly reduces aircraft noise by keeping aircraft higher for longer. When aircraft use a CDA, they adopt a longer, more gradual descent rather than the conventional approach of aircraft 'stepping down' from one flying level to the next, as described in the diagram below.

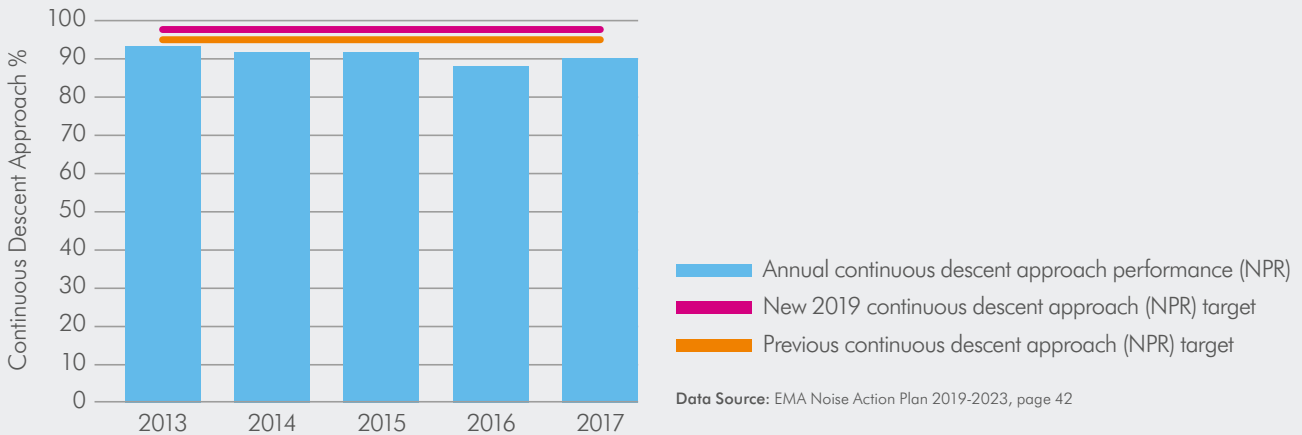
Because arriving aircraft are continually descending, the engine power setting can be reduced. This reduces noise as well as the amount of fuel burnt and so emissions.

This technique has been shown to reduce noise on the ground by up to five decibels.

Currently, around 90% of aircraft arriving at the airport achieve a controlled descent approach. In our most recent Noise Action Plan we have committed to improve this performance and have set a target of 98% by 2023.



## CONTINUOUS DESCENT APPROACH PERFORMANCE AGAINST TARGET



## TRAINING FLIGHTS

**All pilots must achieve and maintain very high levels of competence. To do this they need to practise taking off and landing. To maximise their training time, pilots fly on 'training circuits' of short distances and repeat the take-off and landing procedures.**

Training aircrew is an essential requirement for any airline. A lot of training is now carried out using flight simulators, but some flying is usually necessary to meet Civil Aviation Authority (CAA) standards. Unfortunately, training aircraft cannot follow NPRs. This is because NPRs direct aircraft away from the airport and towards their final destination.

Training aircraft, however, must stay within the controlled airspace of East Midlands Airport, and the pilots often need to be able to see the runway.

Training activities may cause disturbances, so only airlines that have regular commercial flights to and from the airport are allowed to have training flights at our airport. To further reduce the potential disturbance, training flights can only take place on weekdays (Monday to Friday), except bank holidays, and only between 8am and 9pm. We also vary the size and direction of training circuits as much as possible, so they do not unfairly affect only a certain community.

There is no schedule for training flights as they take place when both crew and aircraft are available, often at short notice.

We have worked with airlines to agree training circuits that avoid flying over local villages wherever possible. However, many training flights are within a short radius of the airport. The ability to avoid flying over local villages can also be affected by weather conditions and other air traffic.

We have set up an improved noise-monitoring system for training flights. We will continue to monitor and report on training flights and consider how these can be better managed in future.

## MILITARY AIRCRAFT AND AIR AMBULANCE

**Military aircraft occasionally use the airport and our Instrument Landing System (ILS) for training. This is so that military aircrew are familiar with procedures at the airport and our local**

**area. Training also prepares airport staff for occasions when military aircraft might need to use the airport. However, military training is rare.**

The air ambulance is also based at our airport, and this has priority over all other flights when necessary.

## LOW-FLYING AIRCRAFT

**Judging the height of aircraft by sight is very tricky, particularly at night. Larger aircraft can look much lower than smaller aircraft, even if they are at the same height, and lots of factors**

**affect the way we perceive aircraft noise. Just because one aircraft is noisier than others doesn't mean that it's lower.**

If you are concerned about low-

flying aircraft, check WebTrak on our website, or email [community@eastmidlandsairport.com](mailto:community@eastmidlandsairport.com) and the Flight Evaluation Unit will investigate this for you.

All the information in this fact sheet was correct in July 2021. This information can change at any time without notice.