Manchester Airport Departure Routes Information Pack

NORTHERLY DEPARTURES IN EASTERLY OPERATIONS (ROUTE DESIG1S)

Flying over: Heald Green / Cheadle / Stockport / Bredbury / Hyde

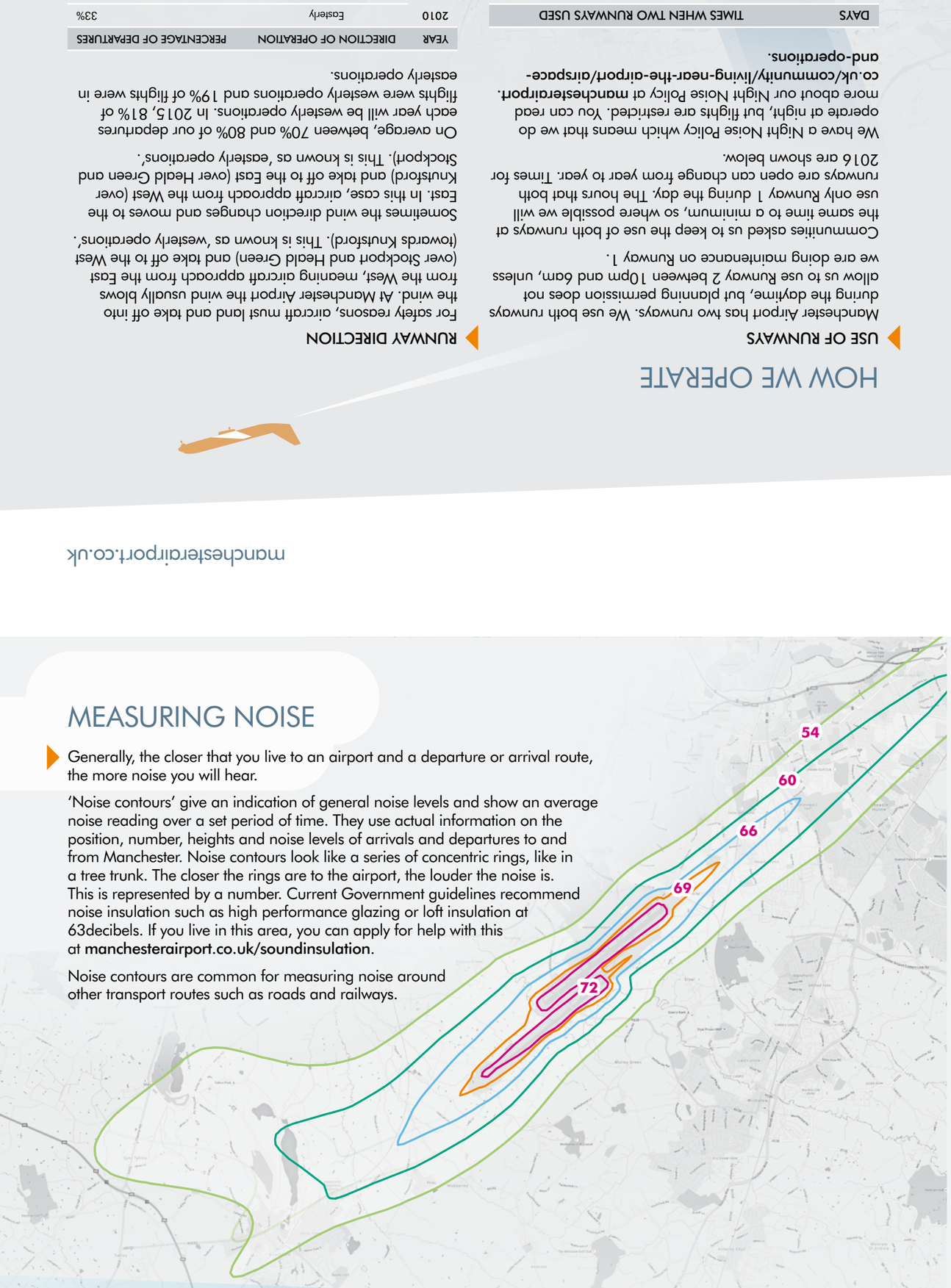
This document explains how we operate now and provides some information about the number of aircraft and passengers currently flying from Manchester Airport.

MEASURING NOISE

Generally, the closer that you live to an airport and a departure or arrival route, the more noise you will hear.

'Noise contours' give an indication of general noise levels and show an average noise reading over a set period of time. They use actual information on the position, number, heights and noise levels of arrivals and departures to and from Manchester. Noise contours look like a series of concentric rings, like in a tree trunk. The closer the rings are to the airport, the louder the noise is. This is represented by a number. Current Government guidelines recommend noise insulation such as high performance glazing or loft insulation at 63decibels. If you live in this area, you can apply for help with this at **manchesterairport.co.uk/soundinsulation**.

Noise contours are common for measuring noise around other transport routes such as roads and railways.



WANT TO KNOW MORE?

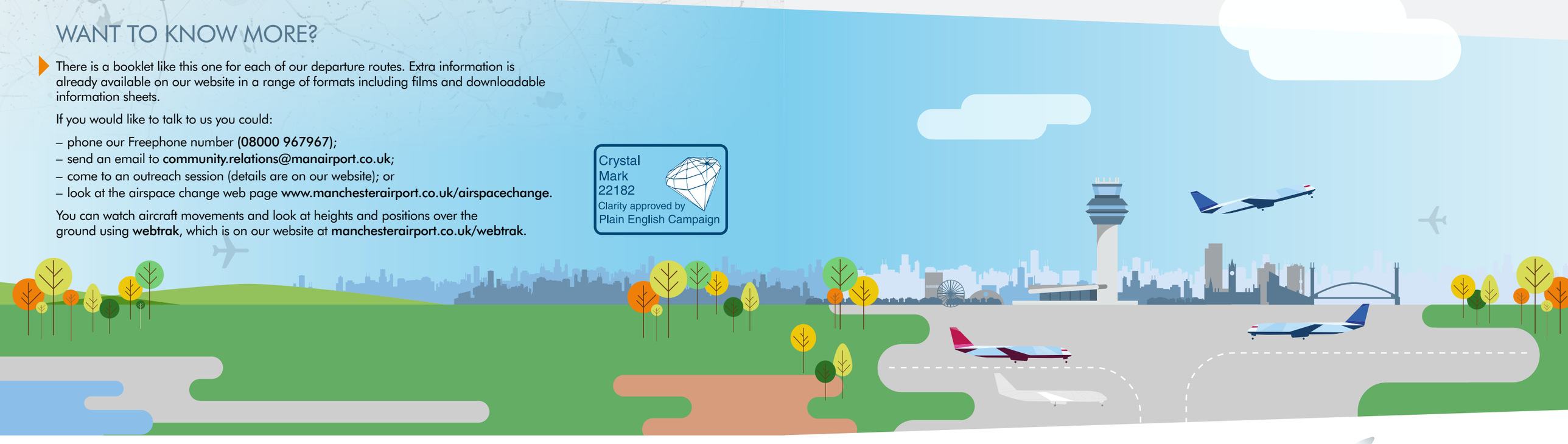
There is a booklet like this one for each of our departure routes. Extra information is already available on our website in a range of formats including films and downloadable information sheets.

If you would like to talk to us you could:

– phone our Freephone number **(08000 967967)**;
– send an email to **community.relations@manairport.co.uk**;
– come to an outreach session (details are on our website); or
– look at the airspace change web page **www.manchesterairport.co.uk/airspacechange**.

You can watch aircraft movements and look at heights and positions over the ground using **webtrak**, which is on our website at **manchesterairport.co.uk/webtrak**.

Crystal Mark 22182
Clarity approved by Plain English Campaign



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HOW WE OPERATE

USE OF RUNWAYS

Manchester Airport has two runways. We use both runways during the daytime, but planning permission does not allow us to use Runway 2 between 10pm and 6am, unless we are doing maintenance on Runway 1.

Communities asked us to keep the use of both runways at the same time to a minimum, so where possible we will use only Runway 1 during the day. The hours that both runways are open can change from year to year. Times for 2016 are shown below.

We have a Night Noise Policy which means that we do operate at night, but flights are restricted. You can read more about our Night Noise Policy at **manchesterairport.co.uk/community/living-near-the-airport/airspace-and-operations**.

DAYS	TIMES WHEN TWO RUNWAYS USED
MONDAY TO FRIDAY	6.30am to 10.30am and 1pm to 8pm
SATURDAY	6.30am to 10.30am and 1pm to 4pm
SUNDAY	1pm to 5pm
ALL NIGHT TIMES	We only use Runway 1 at night (10pm to 6am) unless it is closed for maintenance.

RUNWAY DIRECTION

For safety reasons, aircraft must land and take off into the wind. At Manchester Airport the wind usually blows from the West, meaning aircraft approach from the East (over Stockport and Heald Green) and take off to the West (towards Knutsford). This is known as 'westerly operations'.

Sometimes the wind direction changes and moves to the East. In this case, aircraft approach from the West (over Knutsford) and take off to the East (over Heald Green and Stockport). This is known as 'easterly operations'.

On average, between 70% and 80% of our departures each year will be westerly operations. In 2015, 81% of flights were westerly operations and 19% of flights were in easterly operations.

YEAR	DIRECTION OF OPERATION	PERCENTAGE OF DEPARTURES
2010	Easterly	33%
	Westerly	67%
2011	Easterly	16%
	Westerly	84%
2012	Easterly	22%
	Westerly	78%
2013	Easterly	27%
	Westerly	73%
2014	Easterly	23%
	Westerly	77%
2015	Easterly	19%
	Westerly	81%

The wind direction may change several times in a day, so we may change our direction of operations to reflect this. The table above shows the percentage of movements in each direction over the last six years.

LANDING PATHS

ABOUT YOUR AIRPORT

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Manchester Airport officially opened on 25 June 1938 and is today owned by the 10 Councils of Greater Manchester and Industry Funds Management (IFM), with four airports in the group.

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– 6103 volunteer hours in the community in 2015.
– Working with 9850 children in 2015.
– Community Trust Fund supporting community groups with over £3million in grants since 1997.

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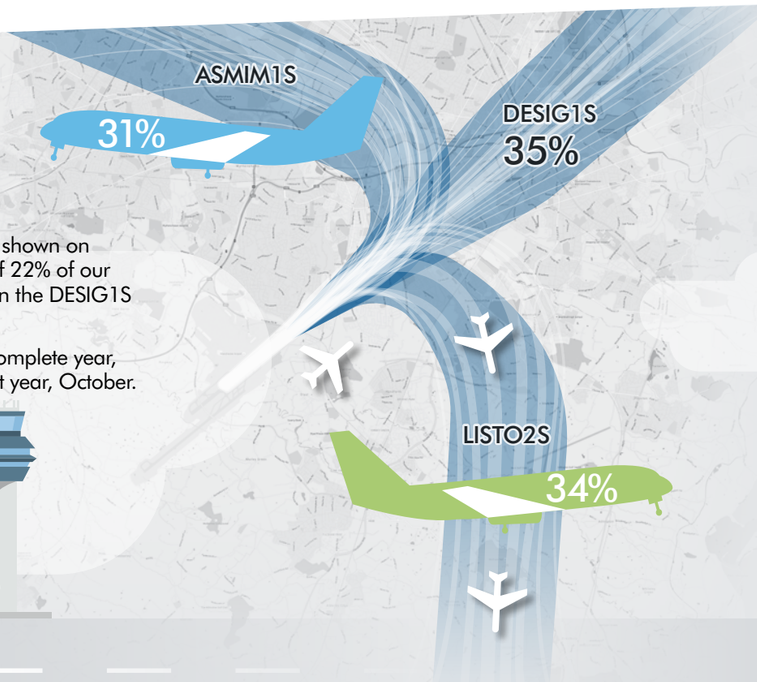
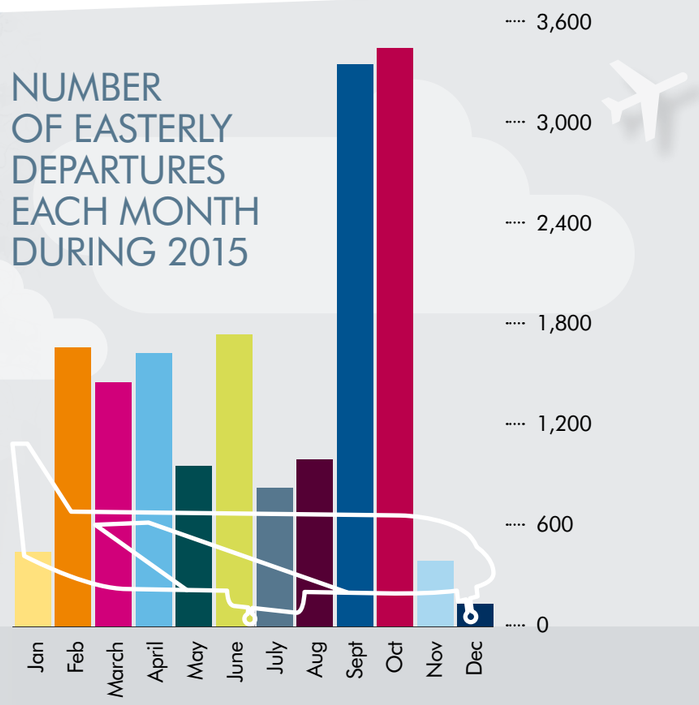
ROUTES DEPARTING TO THE EAST

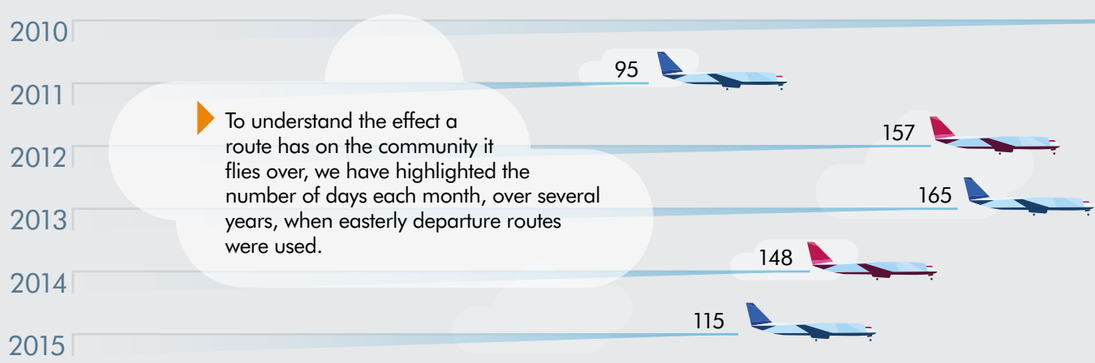
- There are three routes with easterly departures shown on this diagram. These are used for an average of 22% of our flights. In 2015 there were 6,026 departures on the DESIG1S route – 35% of all easterly departures.
- Our information is based on the most recent complete year, which was 2015, and our busiest month in that year, October.
- The following graphics focus on the DESIG!S route travelling to Northern Europe and the Far East.



NUMBER OF EASTERLY DEPARTURES EACH MONTH DURING 2015



NUMBER OF DAYS EASTERLY DEPARTURES USED BY YEAR



To understand the effect a route has on the community it flies over, we have highlighted the number of days each month, over several years, when easterly departure routes were used.

TOTAL NUMBER OF DAYS EASTERLY OPERATIONS WERE USED BETWEEN 2010 AND 2015

874

October was our busiest month in 2015 with the runway used for

1,156

departures using the DESIG1S route.

The direction of landing and taking off depends on the wind direction.

During October there were…

142

departures during the morning peak hours of 6am to 8am

compared to just…

27

during the night period from 11pm to 6am.

The maximum number of departures on a single day in October was just…

114

POSITION OF AIRCRAFT ALONG ROUTE DESIG1S

Currently aircraft navigate using navigational equipment on the ground close to and around our runways. A series of instructions will navigate the aircraft along the whole route (for example, to fly straight ahead for a set distance and then turn at a particular point to a compass bearing of…).

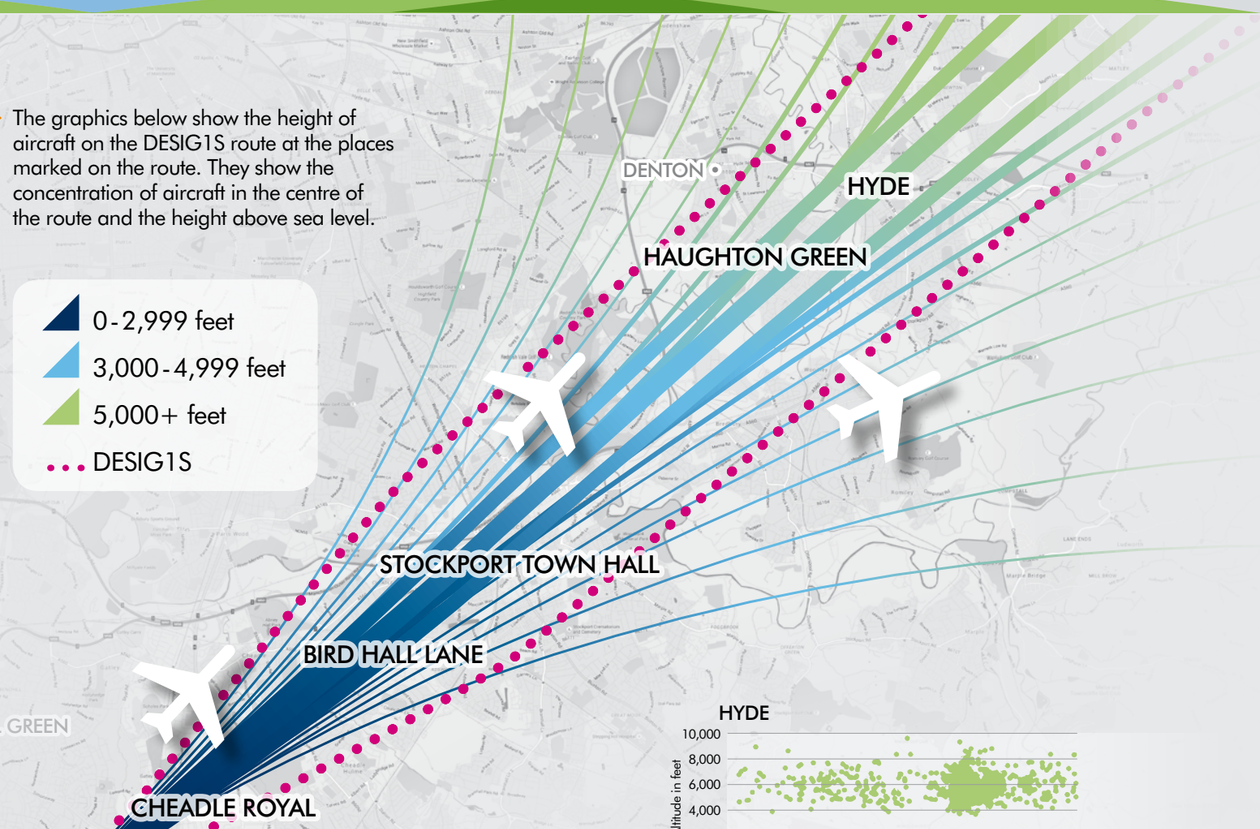
The accuracy with which an aircraft navigates depends on the following.

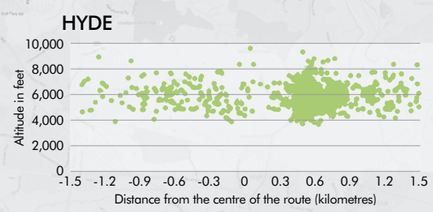
- The size of the aircraft
- What technology the aircraft has on board
- The weight of the aircraft
- Weather conditions
- How the pilot interprets instructions.

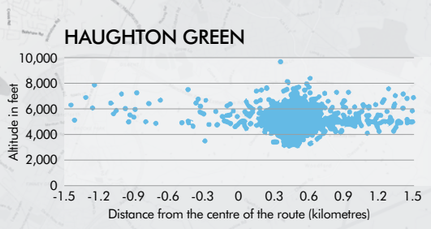
The map opposite shows the general position and spread of flights using the DESIG1S route in October 2015.

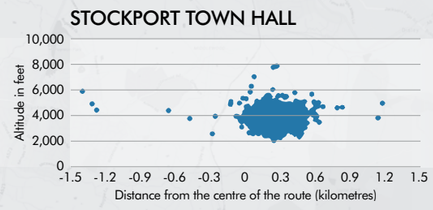
At the beginning of the departure, the aircraft is **dark blue**. As it becomes higher above the ground, the colour changes to **light blue** (3,000 feet) and finally to **green** at 5,000 feet, which is the highest point at which the aircraft must stay on the route.

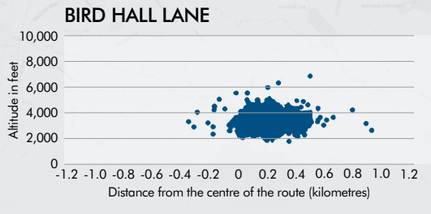
The graphics below show the height of aircraft on the DESIG1S route at the places marked on the route. They show the concentration of aircraft in the centre of the route and the height above sea level.

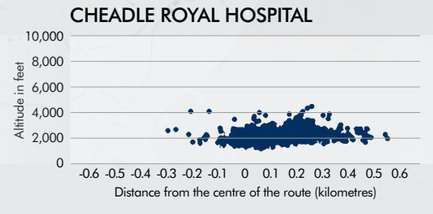












WILL THINGS CHANGE IN THE FUTURE?

AIRCRAFT

Over time, airlines will buy new aircraft. The improved engines are quieter and more efficient. The new sleeker plane is able to climb quicker and with less friction, significantly reducing noise and emissions. All of this is beneficial to communities that the aircraft fly over.

Aircraft currently using the DESIG1S route range from small 10-seat aircraft up to the larger 600-seat aircraft. The most common is the 100- to 200- seat aircraft, which accounts for 61% of all flights.

It is likely there will be changes in the future due to:

- a national policy, led by the CAA, to reorganise airspace for improved efficiency and maintaining safety;
- satellite navigation replacing navigational aids on the ground, enabling aircraft to fly more accurately following the centre line of the departure route on each departure; and
- improved technology on board new aircraft, offering the opportunity for greater efficiency and reduced noise.

AIRSPACE

A review of upper airspace (above 24,500 feet) is taking place. This will reposition some of the main airways over the UK to increase efficiency and improve the customer experience with less time in hold, more timely arrivals and departures and reduced emissions. This review process will also enable us to create the best possible design to make sure we can achieve Manchester Airport's potential by securing further routes to destinations around the world. This will create more jobs and boost the region's economy.

The changes relate to three levels of airspace.

- High level – over 7,000 feet where aircraft are travelling to or from their final destination
- Arrival – below 7,000 feet heading to the final destination airport
- Departure – between 0 and 7,000 feet leaving the airport to join the high level routes

ARRIVALS

Aircraft currently approach the airport they are landing at and wait for an instruction to land. Ideally, the approach is a continuous descent to land as this is fuel efficient and quiet.

If aircraft need to wait, they go into a 'holding pattern' away from the airfield. As a part of this project, NATS will examine if this is the best way to control aircraft approaching the airfield and before they land.