

Noise Preferential Routing (NPR's)

1. History of the NPRs

The NPRs were introduced to Southampton Airport formally in 1993 following local planning agreements with Eastleigh Borough Council (under section **106 of the Town and Country Planning Act 1990**), tied in to the overall airport redevelopment planning process.

The RWY 20 departure NPR is taken from the DVOR navigation aid (due to be withdrawn in 2022/23) as a radial. It was designed specifically to draw aircraft along the route of the River Itchen which, at the time, was largely undeveloped. That of course has changed in the last 20 years with much waterfront development.

The northbound NPR was reviewed in 2003 as part of a noise study linked to the rapid expansion of FlyBe with Bae146 jets and the outcome of a local area noise report from Dr Ian Flindell, an industry recognised noise/vibration expert. The changes here related to the release point from the departure track so that aircraft wouldn't turn south of Colden Common.

There was a further review in 2007 with noise trials to see if a better rate of climb would offset some local noise impact. Following a wide scale consultation with local authorities, stakeholders, residents and councils these were implemented.

Southampton Airport at present does not have any Standard Instrument Departures (SID's). These are required by legislation from 2024 and are part of the current ongoing Airspace Change Procedure (ACP) to utilise satellite navigation technology. NPR's will be reviewed as part of this process.

These routings aim to divert aircraft away from the most densely populated areas where it is possible to do so. The airport ensures, as far as is reasonably practical, that aircraft using the airport adhere to the preferred routes.

There are however occasions when the noise preferred routes cannot be followed by aircraft:-

2. Exclusions from Noise Preferred Routes

The UK Civil Aviation Authority has a strict consultation process in place to ensure that all stakeholders are made aware of, and given an opportunity to feedback on any proposed permanent flight path changes. It is important to note that Southampton Airport will not permanently change any flight paths without following this process of consultation. However, there are conditions when noise preferred routes will not be flown on a temporary basis. These include:

a. Type of aircraft

These routes **only** apply to commercial aircraft above 5700kgs and to all jet aircraft. Smaller aircraft types, smaller propeller aircraft and helicopters will not follow these routes as this would result in significantly increased journey times and increased fuel usage.

b. Operational activity

Occasionally aircraft will be directed by NATS not to fly the Noise Preferred Route due to weather conditions, other air traffic in the area, or for aircraft performance reasons.

3. What are the actual routes?

The routes are published in the UK Aeronautical Information Publication (UKAIP) which is a Civil Aviation Authority document (CAP 032) which a department within NATS administer.

a. Aircraft Departing to the North (Runway 02)

Aircraft departing in a northerly direction are required to continue along the runway heading until reaching two and a half miles from the end of the runway. This avoids overflying the village of Bishopstoke to the north east, and densely populated areas of Eastleigh and Chandler's Ford to the North West. After this point aircraft will then route towards their next navigational waypoint.

b. Aircraft Departing to the South (Runway 20)

Aircraft taking off to the south will climb straight ahead to 500ft above mean sea level, and then turn right to follow a 217° heading. This heading will direct aircraft towards the path of the River Itchen and the track will be maintained until reaching Southampton Water or 2000ft above mean sea level, whichever is reached first. The exact point, at which aircraft reach 500ft and subsequently turn, will vary depending on many factors, such as engine type, aircraft weight and weather conditions.

4. How do we ensure aircraft follow the NPR's?

ATC take off clearance contains the phrase "After noise turn" etc)

Pilots should be aware of the relevant NPR as they should include their take off procedure as part of their flight planning process.

NPR deviations are collated and discussed at various safety forums. Airlines can be penalised for persistent non-adherence to the procedures.