

Replacement of Instrument Landing System (ILS) – 27L September 2015

We are replacing Heathrow's landing systems – known as the Instrument Landing Systems (ILS). The ILS is used by aircraft landing at Heathrow. There are four ILS systems at Heathrow – one at either end of each runway.

Although we're planning to minimise the impact on our operations and local communities as much as possible, depending on the wind conditions, there may be periods when aircraft land out of the usual alternation pattern.

What is an ILS?

Aircraft follow a radio beam known as the Instrument Landing System (ILS) when landing into Heathrow. There is one beam aligned with the centreline of each runway end to ensure planes approach in a straight line. It is a safety critical system that ensures the safe and efficient arrival of landing aircraft.

Why is it being replaced?

The existing ILS is approaching its end of life – the last time they were replaced was approximately 15 years ago.

What does the work involve?

To minimise the time where there is no ILS in operation for a particular runway end, the new ILS will be built behind the existing ILS. Then we will turn off the old ILS system, turn on and 'commission' the new ILS so that it is safe to use.

Why does it need to be done now?

The work needs to be carried out during the summer months when weather is most favourable (e.g. less chance of fog and strong winds) so that the least amount of impact is caused to the operation.

How many and when are they being replaced?

In total 4 systems are being replaced – one for each runway end:

- Westerly operations – northern runway (27R) **[COMPLETED in August 2015]**
- Westerly operations – southern runway (27L) **[Work to begin September 2015]**
- Easterly operations – northern runway (09L) **[To be completed in 2016]**
- Easterly operations – southern runway (09R) **[To be completed in 2016]**

When will the next systems be replaced?

The replacement of the easterlies runways (09L and 09R) are due to be completed next year.

Wind direction

The direction planes fly at Heathrow depends on the direction of the wind. Planes must take off and land into the wind for safety reasons.

'Westerly operations' – this is when aircraft arrive from the east (over London) and take off towards the west (over Berkshire/Surrey). Westerly operations occur for around 70% of the year.

'Easterly operations' – this is when aircraft arrive from the west (over Berkshire) and depart towards London. Easterly operations occur for around 30% of the year.

How long will the replacement take?

The work is planned to begin on Sunday 6th September 2015 and if all goes to plan we expect to be within the scheduled runway alternation pattern on Saturday 12th September at 3pm.

Could this take longer than planned?

Every effort will be made to ensure that we can complete this in the timescale given. However, poor weather or unforeseen circumstances could impact on this.

Will aircraft be able to use 27L at all during this period?

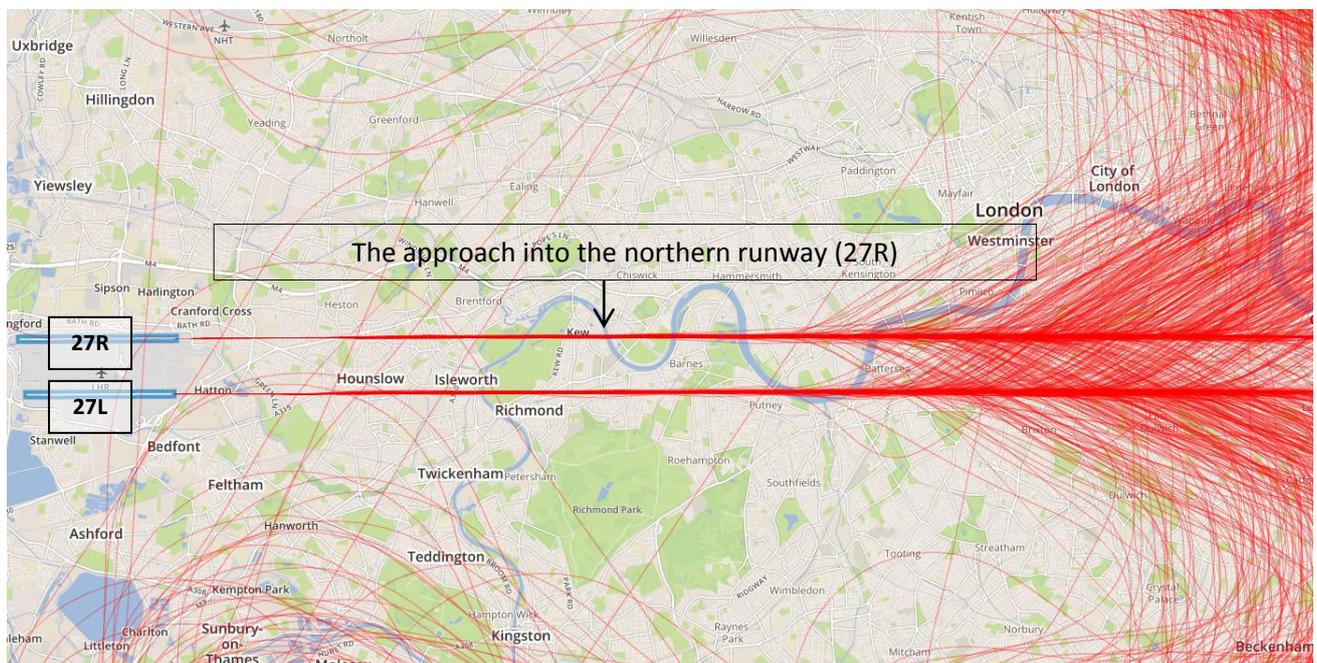
The ILS system being replaced will be out of use for the whole of this period, although other navigational systems can be used for arrivals. However, not all aircraft are equipped with these alternate systems as the ILS is the predominant navigational aid for arriving aircraft at Heathrow.

What does this mean for local communities?

When Heathrow is on westerly operations, aircraft will use 27R as the main arrivals runway. This means that during these periods we will have to land on the runway we are not scheduled to land on. This is sometimes referred to as 'de-alternation' or landing 'out of alternation'.

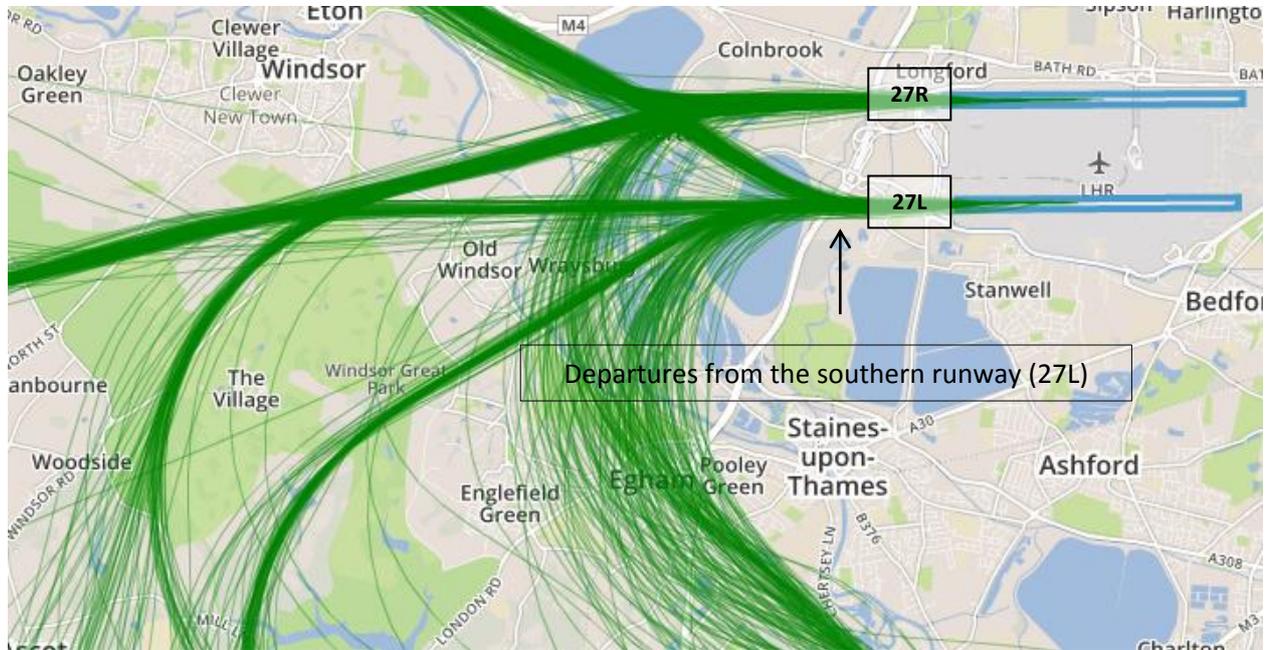
What areas will be affected?

Communities located under the final approach into the northern runway on westerly operations (27R). The map below illustrates this.



Will this affect departing aircraft?

When Heathrow is on westerly operations, aircraft will be using 27R as the main arrivals runway, this means that the main runway for departing aircraft will be 27L until the work is complete. As the departure routes from both 27L and 27R merge soon after take-off, this is only likely to impact local communities closest to the end of the southern runway (27L) as illustrated below.



Who have you told about this?

In April this year we briefed the Heathrow Airport Consultative Committee (HACC), we have also written to affected councils and MPs.