



The Introduction Of 24 hour Runway Stop bars at Heathrow

Runway Safety Seminar - Lisbon

18 October 2018

Ian Witter Head of Airside Safety & Assurance

Heathrow
Making every journey better

EAPPRI Edition 3 – Recommendation

“Safety studies have demonstrated that the use of H24 stop bars can be an effective RI prevention barrier.

Therefore, Aerodrome Operator should, with ANSPs, consider the implementation of H24 stop bars at all runway holding points”

Runway Safety Seminar

Background

NATS are Heathrow's contracted Tower services provider.

NATS operate the system but the AGL belongs to the airport.

In darkness/LVP - Heathrow has operated “Follow the Greens” for many years.

Switchable routes of taxiway green centreline lights control aircraft on the ground with red bars defining the end of the clearance.

In daylight – no AGL.

Most holding points have Stop bars at both the Cat I and Cat III holding point, in addition to

- paint markings,
- illuminated signage,
- enhanced taxiway markings,
- 09L/27R Runway Ahead markings,
- wig wag lights





Runway Safety Seminar

Darkness falls – AGL turned on

Routes for aircraft and their location at that time are “primed” into the system so ensure seamless activation.

Previously 2 modes

- Daylight – AGL off
- Primed
- AGL on (darkness and LVP)

Now 3 modes

- Daylight – AGL off but Stop bars on
- Primed
- AGL on.

Runway Safety Seminar

Control panel Human Factors considerations

Make the new mode look the same as FTG or make it very different.

NATS chose to make the appearance the same to avoid the risk of confusion.

Runway Stop bars are on in daylight

NATS suppress the Stop bar when an aircraft/vehicle is cleared to enter the runway.

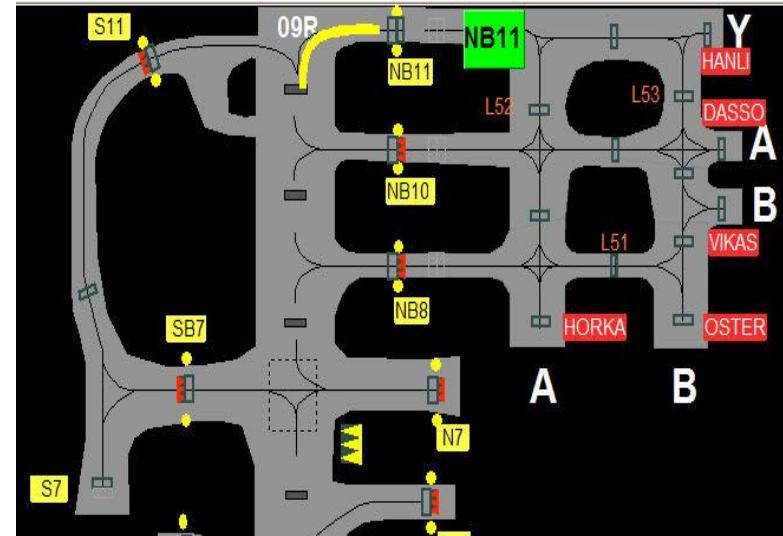
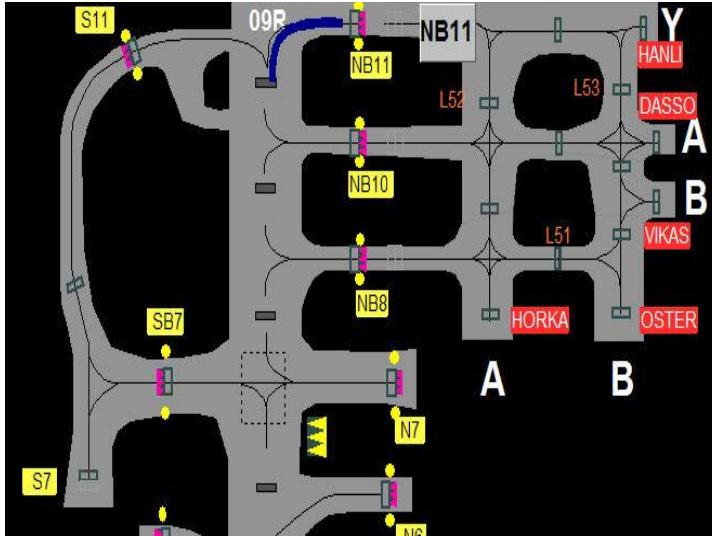
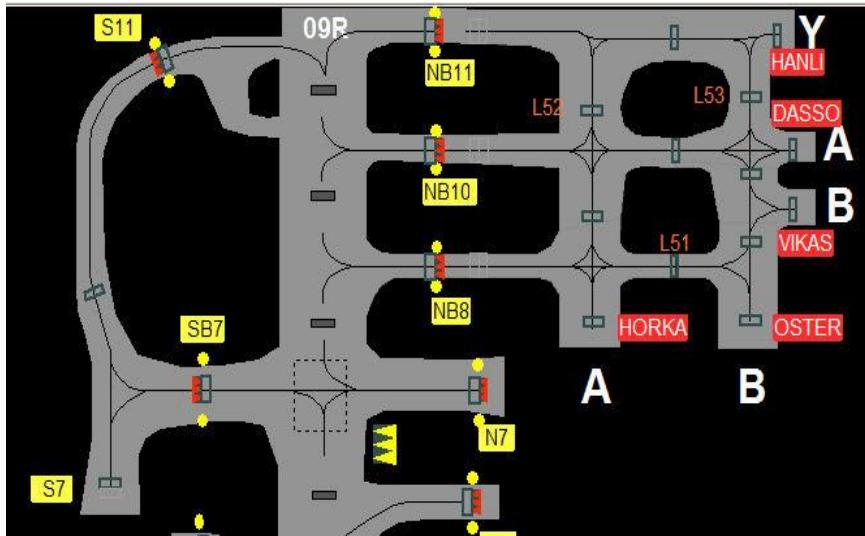
Stop bar is unidirectional facing away from the runway.

New H24 only needed at the Cat 1 bars

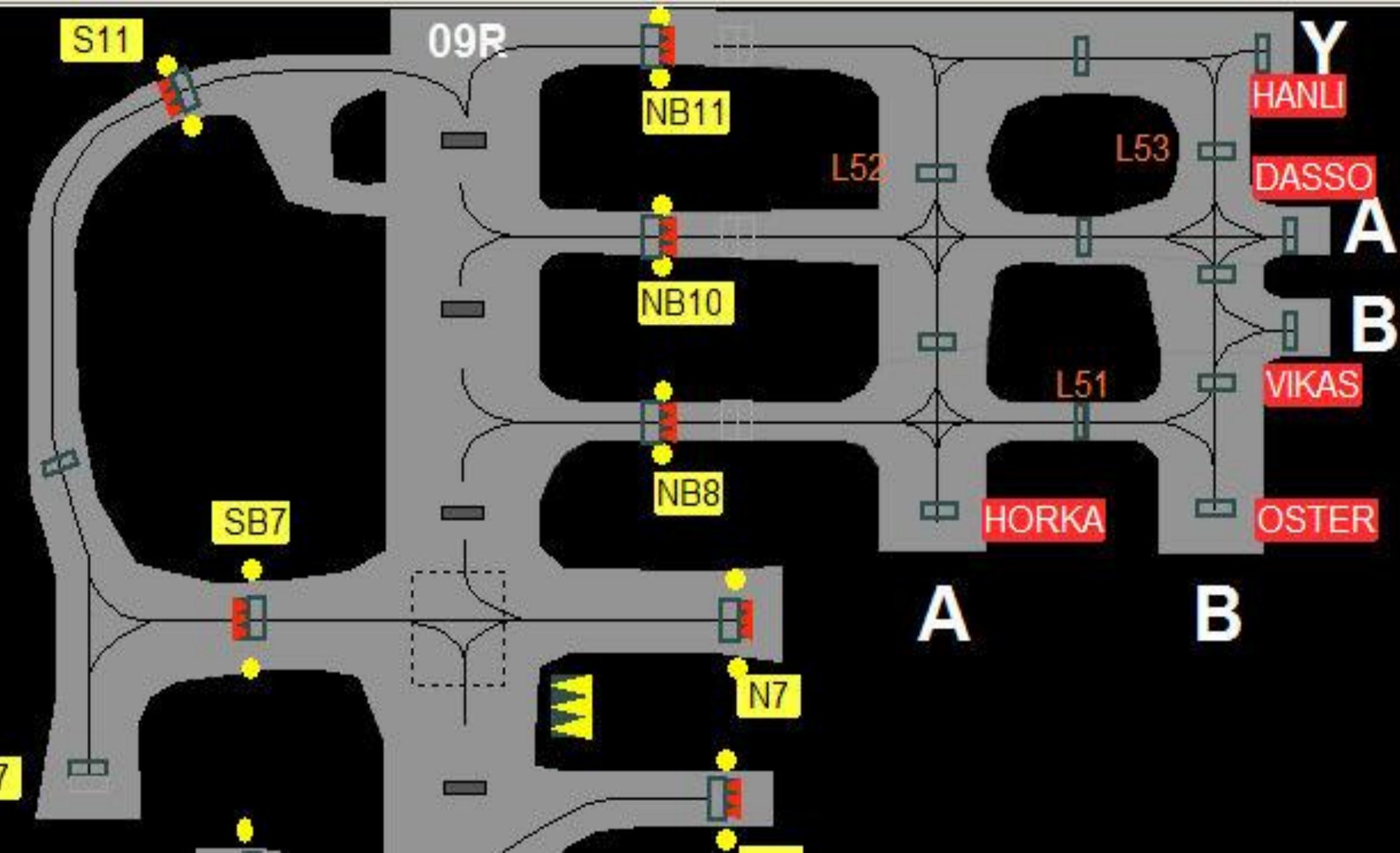
In Cat III conditions the stop bars are used anyway.

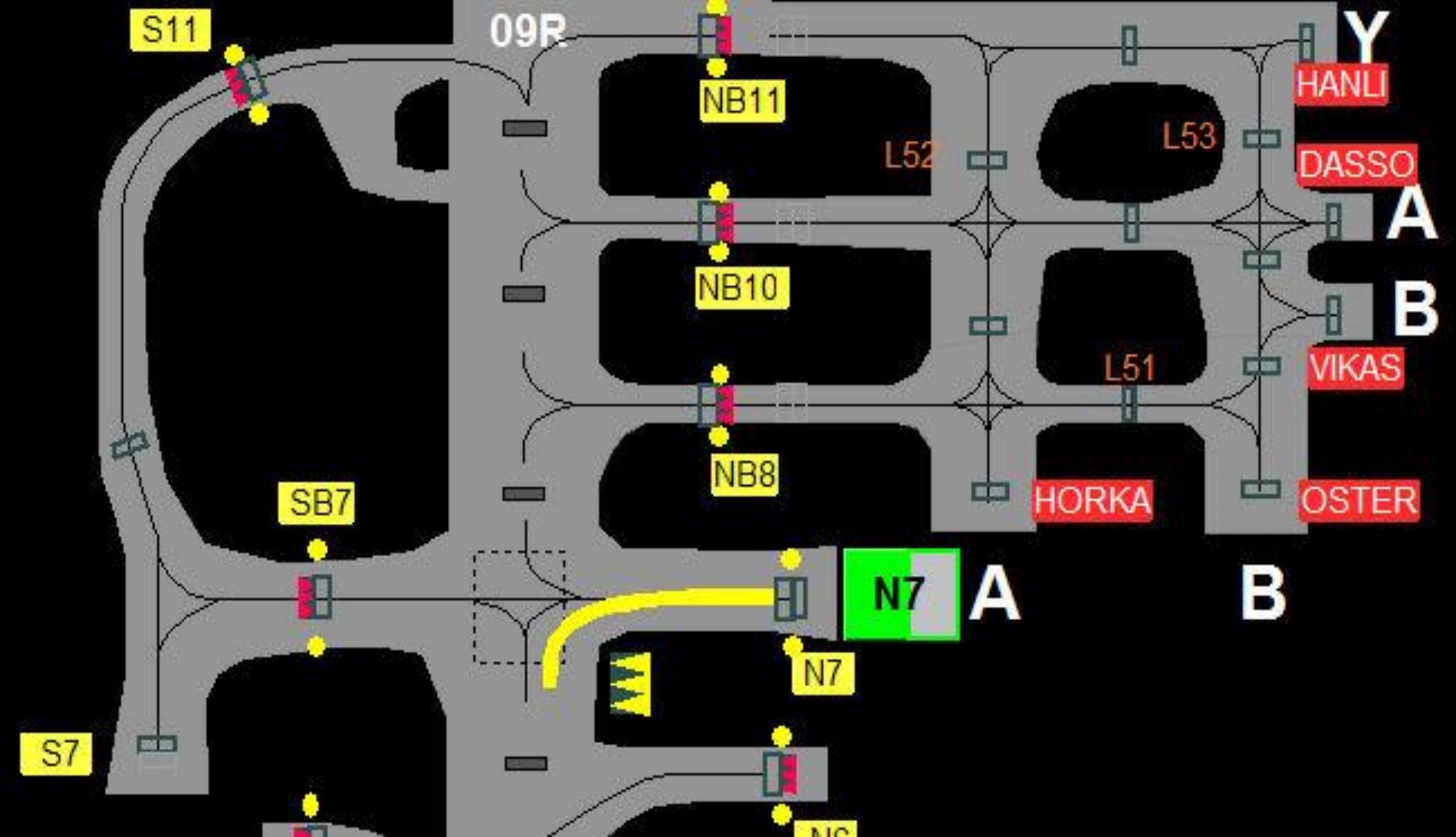
AIP changed and NOTAM issued.

Awareness raised with airlines in meetings



- All RGB's illuminated to protect against unauthorised entry to the runway.
- Route primed on Lighting panel (as per AGL ON procedure) RGB remains illuminated at this point.
- RGB suppressed, verbal clearance given to access runway at NB11 (AGL lead on lights not illuminated on airfield, graphic on panel only to enhance controller awareness).







Conclusion

At the start a number of aircraft were cleared to enter the runway and moved before the bar was dropped, crossing the illuminated stop bar.

These Runway Safety Events occurred at the start – no Runway Incursions to date.

3 month and 6 month reviews planned.

Heathrow
Making every journey better