

# Pilot briefing - Runway markings and lights on Avinor aerodromes

## 1 Subject

Markings and lights on runways.

## 2 Purpose

This Pilot brief serves to ensure that pilots operating on Avinor aerodromes are aware of the design of markings and lights on the ends of the runways.

## 3 Background

The introduction of EASA legislation to the aerodrome design has imposed changes in the design of threshold and runway end lights, and markings on runway turn pads.

### 3.1 Runway threshold lights

On a runway 45 m wide, the threshold wingbar lights will be replaced with two groups of threshold lights across the runway, each group consisting of 7 lights. At some of these runways, where drifting snow or frequent contamination of runway surface might cover flush threshold lights, the wingbars will remain operative. The latter described in fig 1.

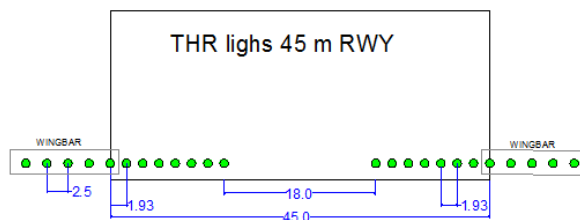


Fig 1, Threshold lights including wingbars, 45 m wide runway.

On a 30 m wide runway, 9 threshold lights will be added to the wingbar lights, across the runway, see fig 2.

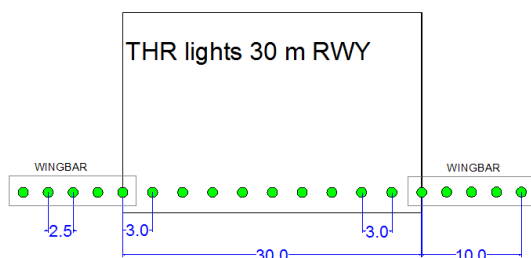


Fig 2, Threshold and wing bar lights, 30 m wide runway

The changes described above will be implemented during the following years, in connection with other construction or surface work on the runways.

### 3.2 Runway end lights

Runway end wingbar lights will be replaced with two groups of runway end lights on runway.

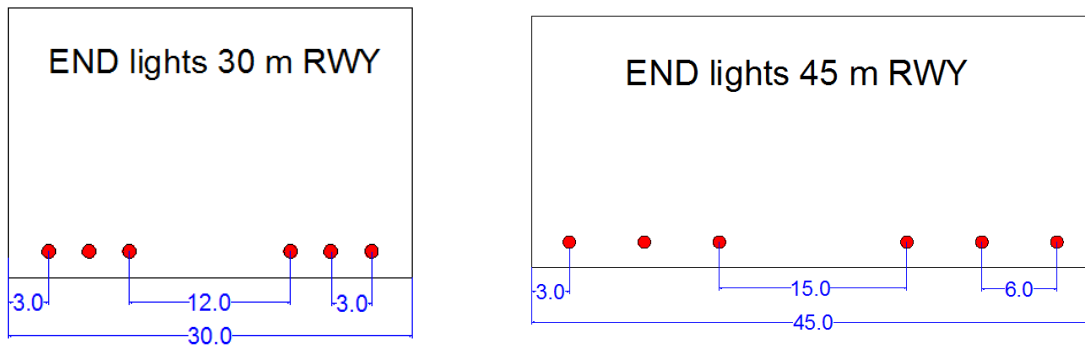


Fig 3, Runway end lights

The changes described above will be implemented during the following years, in connection with other construction or surface work on the runways.

There are one exemption, Vardø airport (ENSS).

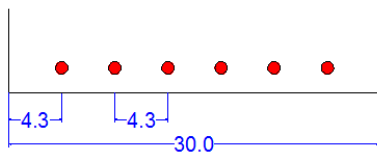


Fig 4, Runway end lights at Vardø airport (ENSS)

### 3.3 Runway and turn pad edge marking

The turn pad edge and the end of runway surface is marked with double yellow lines. Runway edge is marked with a wide white line. Normally the white runway side stripe continues from the threshold or runway end until the end of surface. This indicates that TORA, ASDA and TODA starts at the end of surface.

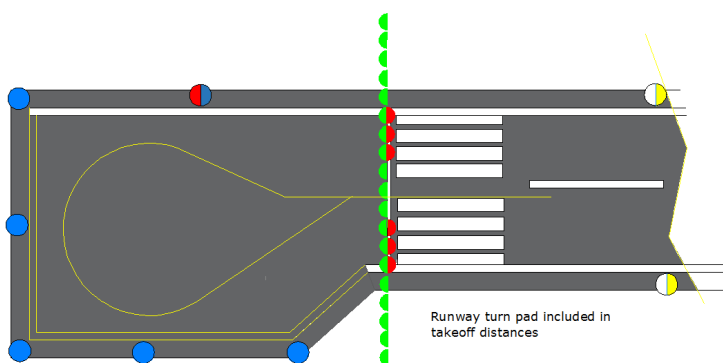


Fig 5, runway and turn pad edge markings, turn pad included in takeoff distances

On some runways the start point of TORA, ASDA and TODA is not located at the end of surface. The edge of runway prior to the start point is indicated with double yellow lines.

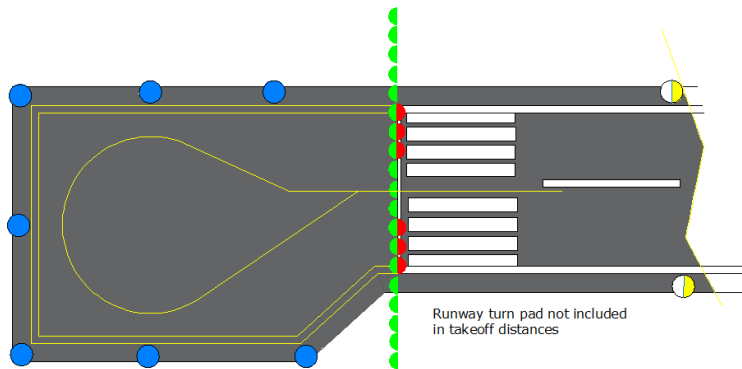


Fig 6, runway and turn pad edge markings, turn pad not included in takeoff distances

#### 4 Examples of markings and lights

Different layouts are illustrated below.

Fig 7, runway turn pad extension to one side only. The turn pad is included in TORA, ASDA and TODA. Threshold is displaced and collocated with opposite runway end.

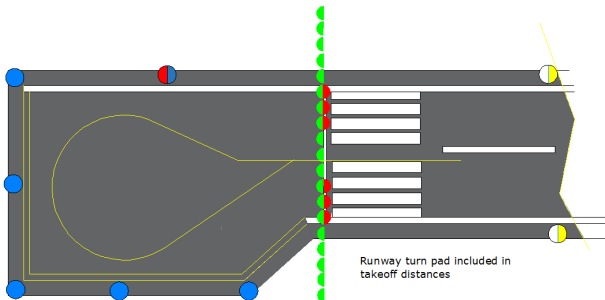


Fig 7, Runway turn pad extension to one side

Fig 8, runway turn pad extension to both sides. The turn pad is included in TORA, ASDA and TODA. Threshold is displaced and located closer to the end of surface than the opposite runway end.

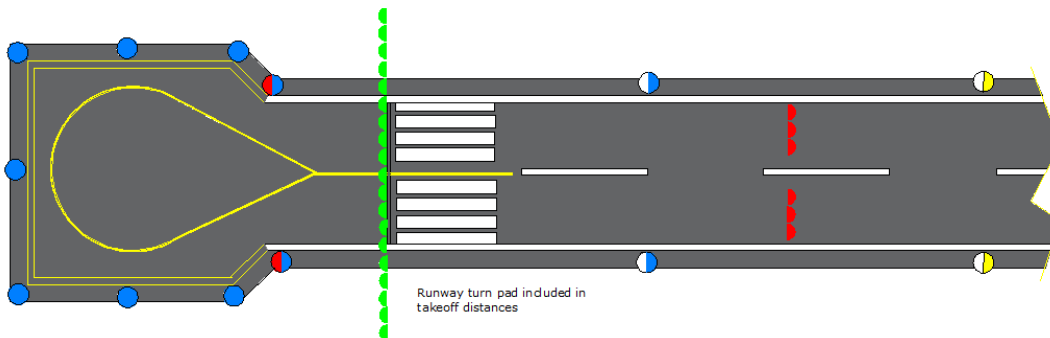


Fig 8, Runway turn pad extension to both sides

Fig 9, Runway turn pad extension to one side. The turn pad is included in TORA, ASDA and TODA. Runway end is located at the end of surface and the threshold is displaced.

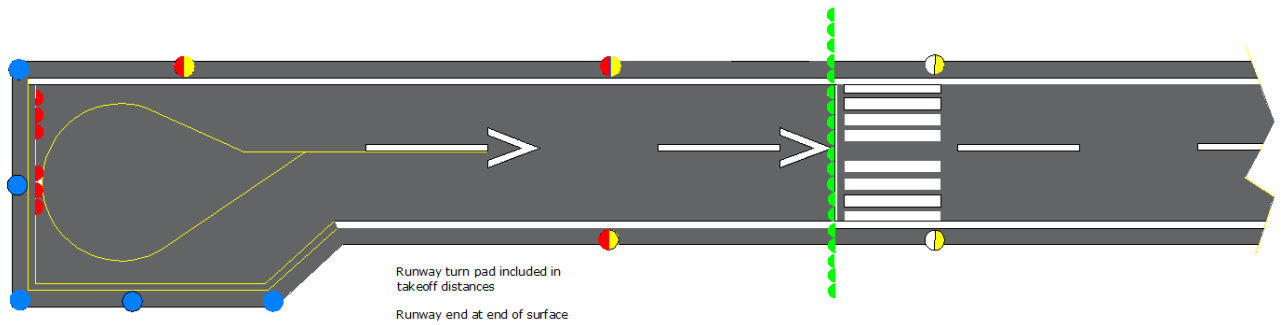


Fig 9, Runway turn pad extension to one side

Fig 10, Entrance or vacation of runway via taxiway located at the end of surface. Start of TORA, ASDA and TODA at the end of surface. Threshold is displaced. Opposite runway end closer to surface end than the threshold.

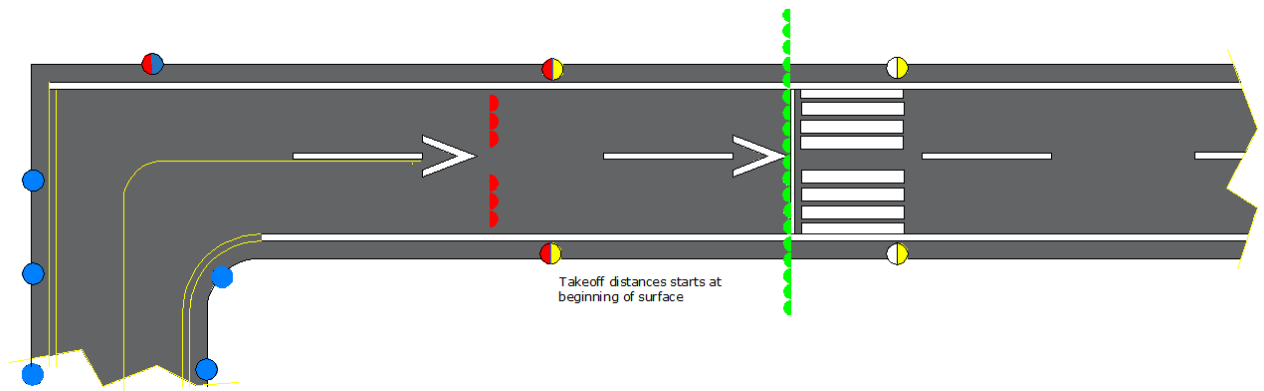


Fig 10, Taxiway at the surface end

Fig 11, Runway turn pad extension to one side only. The turn pad is not included in TORA, ASDA and TODA. Threshold is displaced and collocated with opposite runway end.

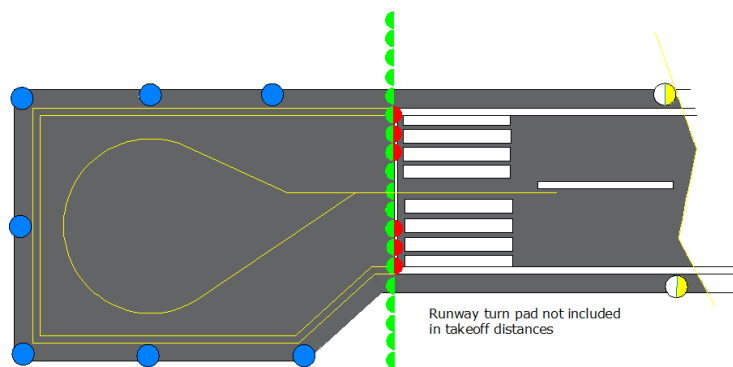
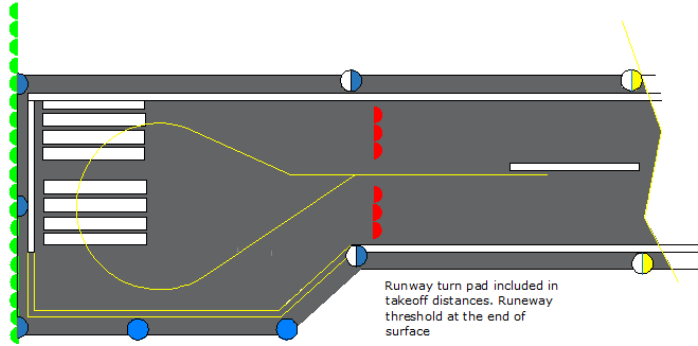


Fig 11, Runway turn pad not included in takeoff distances

Fig 12, Runway turn pad extension to one side only. The turn pad is included in TORA, ASDA and TODA. Threshold is not displaced. The opposite runway end located some distance from the end of surface.



*Fig 12, Threshold at the surface end*