

Sydney Airport 16R Threshold Reconstruction

BACKGROUND

The following information has been shared by the Sydney Airport authorities for the information of the global pilot community concerning the reconstruction of the threshold of runway 16R. Member Associations are encouraged to review and share this information.

INCLUDED HERE

SYD update – 4 pages – 16R Threshold Reconstruction Project

Project Overview:

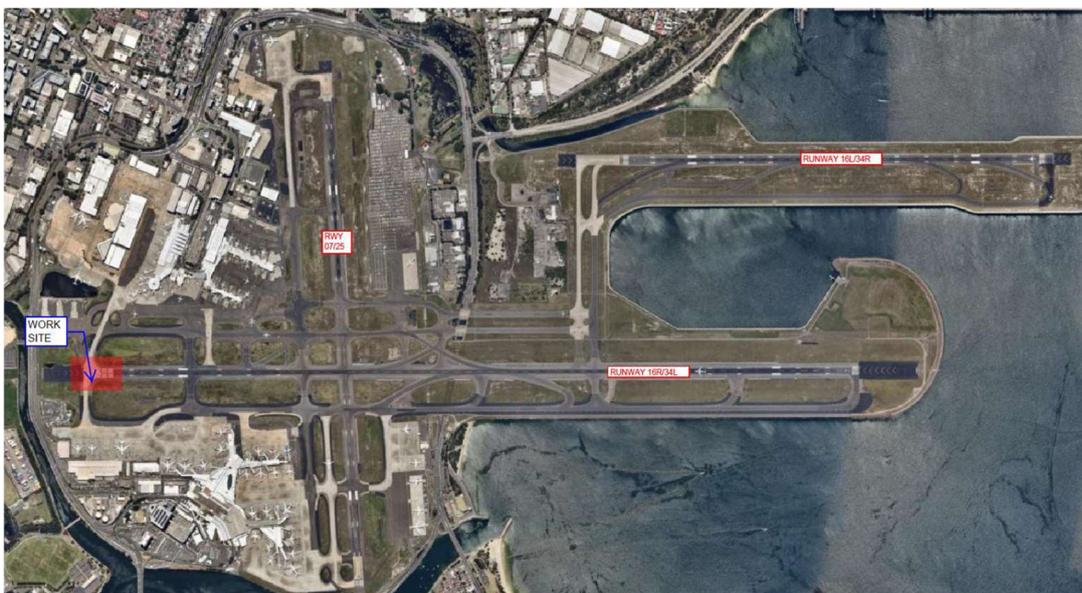
Work has begun to reconstruct the 9,200 square metre concrete threshold at the northern end of the main north-south runway. The existing concrete threshold was constructed in 1968 and now needs to be replaced to maintain runway safety. Work will take place 24 hours a day and the project is expected to take around four months to complete (subject to weather). The work is scheduled to be completed by end November 2021.



Credit: Antoun

Why now?

- Runway 16R threshold slabs were constructed over 50 years ago
- The Airfield Concrete Pavement practice for this infrastructure allows for a 40-year design life. The threshold slabs have performed well but are past their expected design life.
- Over the past decades, aircraft weights and traffic frequencies have incrementally increased. As a result, continual slab failures have occurred within the Runway 16R threshold area and required constant repair.
- This pavement posed an increased safety risk to aircraft operations due to the risk of increased FOD. Prior to this project, individual slab repairs were undertaken under a highly constrained curfew environment. However, this was reactive and did not resolve the FOD issue.
- Given reduced air traffic during the COVID19 pandemic, SYD has shortened Runway 16R to allow the threshold slabs to be reconstructed





Project benefits:

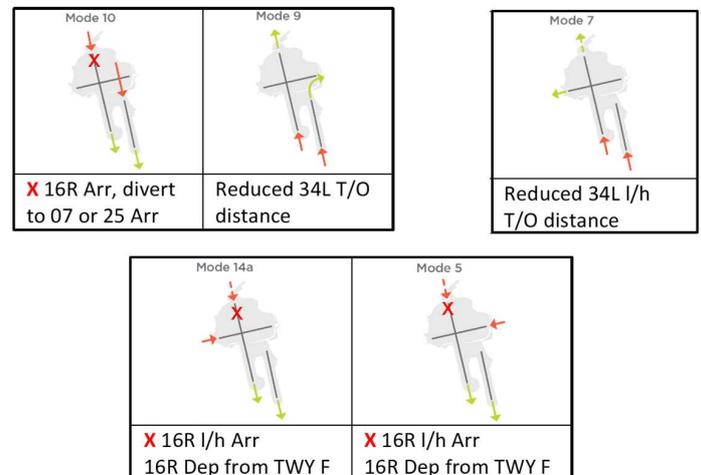
- ✓ New concrete pavement will significantly reduce the aircraft safety risk caused by FOD from cracked and distressed pavement for decades to come.
- ✓ A shortening of the runway and a 24 hour per day closure of the existing threshold will allow for traditional concrete pavement construction, improving the quality and workmanship of the finished pavement works.
- ✓ The construction program takes advantage of the downturn in air traffic activities caused by the Covid-19 pandemic and would not have been possible under normal pre-covid conditions.

Credit: Antoun

Changed operations:

- Runway 16R is not available for landing
- Runway 16R is available for take-off from between taxiway Foxtrot and Golf depending on aircraft type.
- Runway 34L is available for take offs and landings with reduced declared distances
- Runway 34 ILS CAT II will be made available when actual or forecast weather conditions require, or at other times when work is not being undertaken.
- Runway 16L/34R remains available
 - For the duration of the works Runway 16L will be available for B773/B748/A350/MD11 arrivals subject to TWY route restrictions. These aircraft will be required to vacate at TWY T6.
 - Runway 16L Taxiway availability and instruction will be provided by ATC either with or prior to landing clearance.
 - Aircraft unable to use 16L for operational reasons may request Runway 25 or Runway 07.
 - Taxiway availability and instruction will be provided by ATC either with or prior to landing clearance.
 - Taxiway availability and instruction will be provided by ATC either with or prior to landing clearance
- A displaced landing threshold for Runway 16R was carefully considered but deemed not acceptable from an operational, safety and timing perspective. Available operating modes are shown below.

Operational modes available:



Note: Other modes still available include Single RWY 07/25; SODPROPS ; Curfew

16R operations and phraseology

- Information will be provided on the ATIS and specific ATC Phraseology will be used, where required. Full details are given below and in AIC H92/21.
- Runway 16R arrivals are not allowed
- Runway 16R end moved to a location just north of Foxtrot
- Departures from Golf (entry from Twy Foxtrot and taxi forward to Golf allowed)
- Declared Distances
 - Tora 2849m as per ERSA (originally 4052m)
 - LDA not available
- Physical modifications during construction
 - Runway end lights relocated to be just north of Foxtrot (inc. AGL & MAGS adjustment)
 - Threshold and touchdown markings removed
 - Unserviceability markings for the closed section of runway 16R north of Foxtrot
 - Rwy 16R ILS and HIAL are turned off
 - Gable markers relocated to suit shortened runway

Runway 16R operations will be reinstated at the end of works iperiod. Runway 16R ILS will need to be flight checked prior to reinstatement.



ATIS/ATC phraseology scenarios:

Departure from GOLF-Aircraft enters at TWY F and taxi forward to GOLF

ATC: “[Callsign] at Foxtrot, Enter RWY 16R, Taxi Forward and hold abeam Golf for departure.”

Departure from GOLF-Aircraft enters at TWY GOLF

Given the proximity of Golf to RWY 07/25, when provided a ‘line-up and wait’ clearance, aircraft should take additional care to ensure they are positioning short of runway 07/25. NOTE: There is no ICAO compliant holding point on Runway 16R, short of 07/25

ATC: “[Callsign] at Golf, RWY 16R Line up and wait”

If required to hold short of 07/25 in line-up due to traffic, the following RT should be expected:

Example “RWY 16R, Line up and wait, hold short RWY 25, traffic landing/departing on the crossing runway.”

ALERT: Do not apply take-off thrust until abeam GOLF

Departure from Foxtrot-Available for small jets and turboprops

If lining up to wait ATC: “[Callsign] at Foxtrot, Rwy 16R line up and wait”

If departing ATC: “[Callsign] at Foxtrot, Runway 16R cleared for take-off.”

34L operations and phraseology

- Arrivals and departures allowed
- Declared distances
 - TORA 3000m
 - LDA 3500m (approximately)
- 34L CAT1 GLS available
- Non GLS equipped aircraft to use RNAV or other GNSS approach
- PRM not available
- 34L localiser operation
 - Turned off during construction work
 - Is turned on every fortnight when there are no works to meet CAT2 Certification requirements
 - To be turned on during low vis operations to facilitate CATII approaches
- Low Vis operations
 - When Low Vis is forecast on 16/16 TAF (or later TAFS) the evening before then works will be cancelled and ILS CATII made available
 - Cease construction works and clear the site
 - Turn on 34L LLZ to maintain CATII operations during low vis

ATIS/ATC phraseology

- 34L reduced length information will be included in the ATIS and Clearance delivery

