



Airline Operator Information Brief

MELBOURNE AIRPORT

Airline Operator Information Brief

Start date: November 2022

End date: February 2024

Duration: 2 years

Primary Contact: aviationservices@melair.com.au

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Background

Melbourne Airport's primary runway 16/34 is 3,657m in length and is the only runway with sufficient length for many long-haul and wide body cargo movements. The runway threshold ends are concrete whilst the middle portion (around 2,500m length) is asphalt. The asphalt portion of the runway received an overlay in 2011 which had a design life of around 10 to 12 years.

The Annual Technical Inspection (ATI) reports for the airfield since 2019 have consistently indicated that the asphalt portion of Runway 16/34 as being in 'poor to fair' condition. This condition requires an essential maintenance program as aspects of the runway surface, and the underlying pavement are at the end of their serviceable life. An overlay of the asphalt sections and associated runway Airfield Ground Lighting works on Runway 16/34 are therefore necessary.

The planned overlay works may include but are not limited to pavement, electrical works, drainage works, survey or geotechnical investigation and will be undertaken within a prescribed '[Method of Working Plan](#)' stage.

These works will affect aircraft operations and Melbourne Airport has explored all opportunities to minimise disruption to aircraft operators. As operating conditions will vary from normal during these works, it is paramount that operators and crew familiarise themselves with the changes and operational restrictions.

This briefing pack provides focused information for operators, highlighting operational restrictions, changes and identified threats specific to this project.





Scope of Works

A summary of the scope of works are described below. Some information related to the scope of works is available [here](#).

Pavement Works

- Asphalt patching of central section of Runway 16/34 (full strength flexible pavement)
- Asphalt overlay of Runway 16/34 (full strength flexible pavement), including tie ins for all entry and exit taxiways as well as the intersection with Runway 09/27
- Asphalt replacement of Runway 16/34, including runway end blast pavement
- Reinstatement of line marking
- Grooving (Trapezoidal) of the new runway surface

Airfield Ground Lighting

- Lift and reinstatement of existing Airfield Ground Lighting
- Respacing of Land and Hold Short Lights
- New high intensity LED runway edge lights
- New medium intensity omni-directional edge lights
- New Rapid Exit Taxiway Indicator Lights
- New primary and secondary pit and duct
- New primary cabling for all runway lighting back to Airfield Lighting Equipment Room buildings (excludes approach lighting)

Other

- Upgrade of sections of airside perimeter/access roads to facilitate the works

Overview of Operation

Works Program

The construction works are broken down into sixteen stages as per the method of working plan. This brief only focusses on stages that will have operational restrictions and aerodrome changes during construction namely:

- **Stage 1** with the full closure of Runway 16/34,
- **Stage 2** with the full closure of Runway 09/27,
- **Stage 4** with the turnaround/assisted pushback for aircraft and backtracking on Runway 09/27, and
- **Stage 8** with temporary displaced threshold on Runway 16/34.

Please note: The mentioned sequence of works is based on the current plan as known at the time of publication. The actual date and time of commencement will be advised by a NOTAM, typically to be issued not less than 48 hours before work commences.

Actual dates and times will also be advised via the release of a Local Works Plan to affected stakeholders and will be updated to aircraft operators via the Aeronautical Information Publication including AIP-SUP, [Aeronautical Information Circular](#) and NOTAM.

The planned activities may include but are not limited to pavement, electrical works, drainage works, survey or geotechnical investigation and will be undertaken within a prescribed method of working plan stage.

Please note: Number of shifts, start and end dates as illustrated in the table are subject to change as the project progresses. The actual shifts, dates and time of commencement will be advised by a NOTAM.

Phases	Key Activities	Approx No. of shifts	Start - indicative	End - indicative
Enabling	<ul style="list-style-type: none"> • Deep lift repairs • AGL removals 	90	03 November 2022	12 February 2023
Overlay	<ul style="list-style-type: none"> • Asphalt overlay • AGL fitting installation 	80	07 February 2023	23 May 2023
Grooving	<ul style="list-style-type: none"> • Grooving 	70	09 May 2023	27 September 2023
Remaining AGL works	<ul style="list-style-type: none"> • AGL pit and duct work • AGL Testing and commissioning 	TBC	1 February 2023 1 May 2023	21 September 2023 3 February 2024

Runway Closures

From 3 November 2022 onwards, Runway 16/34 will be subject to routine temporary closures for **the enabling and overlay works** as follows.

As for the work during the Grooving and the remaining of airfield ground lighting works phase around mid-end 2023, shifts hour requirements will be more flexible and could be determined based on the flight movement requirements at that time. These are expected to occur within the later part of the Northern Summer 2023 season (July – October 2023) and part of the Northern Winter 2023 season (November 2023 – March 2024).

An alternative runway option will be made available during the closure of Runway 16/34 and normal Runway operations will resume after the end of each construction work shift.

Types of Closure	Alternative Runway	MOWP Stage	Closure Window [^]	
			Northern Winter 22 (Nov 22 - Mar 23)	Northern Summer 23 (Mar 23 - Oct 23)
Typical (excl. intersection works)				
(i) Runway 16/34	Runway 09/27	1	2230-0630 (8 hours [#])	2200-0500 (7 hours)
(ii) Runway 09/27	Runway 16/34	2	Day shift (tbc)	Day shift (tbc)
Non-typical (intersection works) [#]				
(iii) Runway 16/34 + Taxiway Echo intersection	Runway 09/27 (backtracking / towing)	4	0000-0630	0000-0500
(iv) Runway 16/34 + Runway 09/27 (i.e., Runway intersection)	Displaced Threshold	8	2230-0530	2200-0500

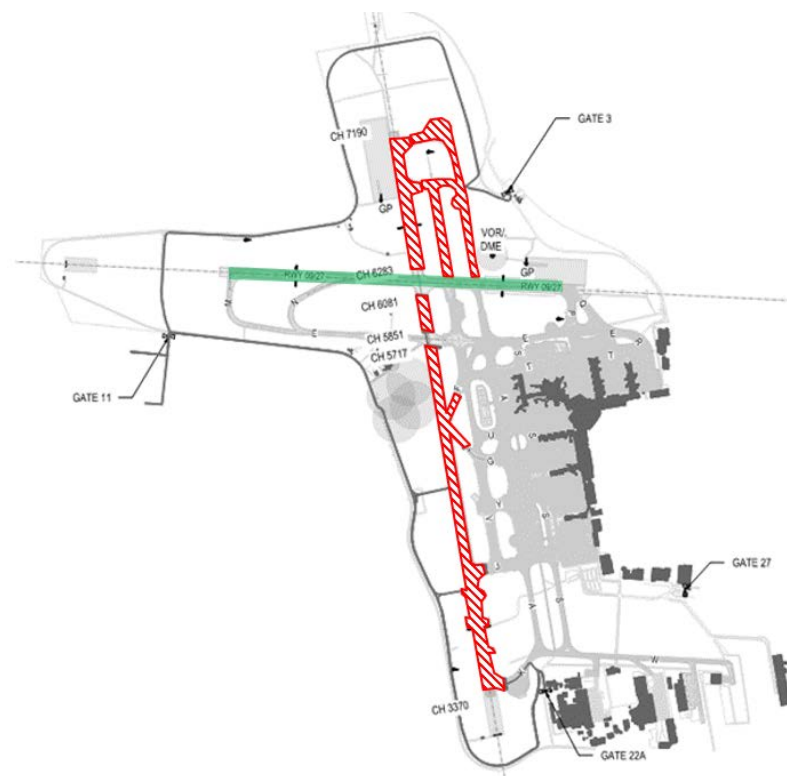
[^]Sat night / Sun morning is a rest day shift. No works

[#]During runway intersection works / MOWP Stage 8, runway closure will be adjusted to 2230-0530. 7 hours in total

Note that all the hours provided are based on Local Melbourne Time (LMT).

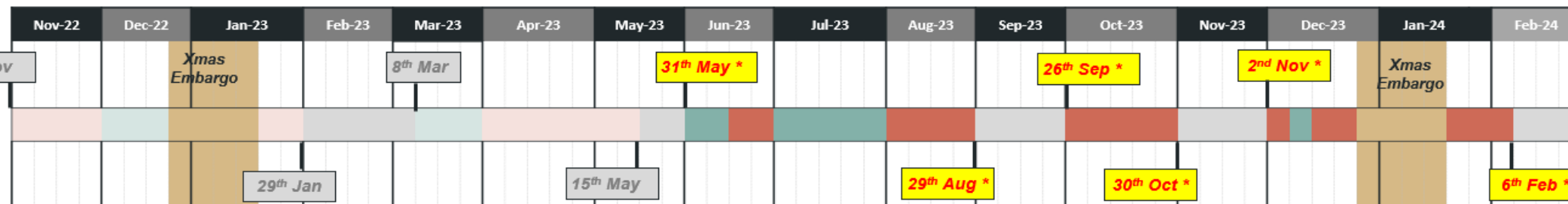
Aerodrome Changes

Stage 1 – Runway 16/34 Closure									
Description of works	Runway 16/34 will not be available. Taxiway Charlie , Taxiway Victor and Taxiway Alpha north of Runway 09/27 will not be available.								
Scheduled start date	03 November 2022								
Scheduled end date	27 September 2023								
Restrictions	Manoeuvring Area								
Runways	Runway 16/34 - Not available Runway 09/27 will be available								
Taxiways	<table border="0"> <tr> <td>Taxiway Bravo Not AVBL</td> <td>Taxiway Foxtrot west of Taxiway Victor Not AVBL</td> </tr> <tr> <td>Taxiway Charlie Not AVBL</td> <td>Taxiway Golf west of Taxiway Victor Not AVBL</td> </tr> <tr> <td>Taxiway Alpha north of Runway 09/27 Not AVBL</td> <td>Taxiway Juliet west of Taxiway Victor Not AVBL</td> </tr> <tr> <td>Taxiway Victor north of Runway 09/27 Not AVBL</td> <td>Taxiway Bravo Run-up bay CLOSED</td> </tr> </table>	Taxiway Bravo Not AVBL	Taxiway Foxtrot west of Taxiway Victor Not AVBL	Taxiway Charlie Not AVBL	Taxiway Golf west of Taxiway Victor Not AVBL	Taxiway Alpha north of Runway 09/27 Not AVBL	Taxiway Juliet west of Taxiway Victor Not AVBL	Taxiway Victor north of Runway 09/27 Not AVBL	Taxiway Bravo Run-up bay CLOSED
Taxiway Bravo Not AVBL	Taxiway Foxtrot west of Taxiway Victor Not AVBL								
Taxiway Charlie Not AVBL	Taxiway Golf west of Taxiway Victor Not AVBL								
Taxiway Alpha north of Runway 09/27 Not AVBL	Taxiway Juliet west of Taxiway Victor Not AVBL								
Taxiway Victor north of Runway 09/27 Not AVBL	Taxiway Bravo Run-up bay CLOSED								
Remarks (Details of any special restrictions and the requirements for the issue of NOTAMs)	<p>Runway 16 downgraded to CAT I</p> <ul style="list-style-type: none"> – Runway 16/34 centreline lighting not available for the duration of Early Works or Main Works – Runway 27, several centreline lights may be out of service between closures <p>A NOTAM will be issued</p>								



Stage 1 Program | 3rd November 2022 to February 2024

Note: Dates in the program are indicative and subject to change



Taxiway Echo Intersection Works - Backtracking and Towing Operations when landing on Runway 27

- Four sets of occupations [Nov 2022 / Mar 2023 / Jun 2023 / Dec 2023]

Proposed Operating Model (based on aircraft wingspan)

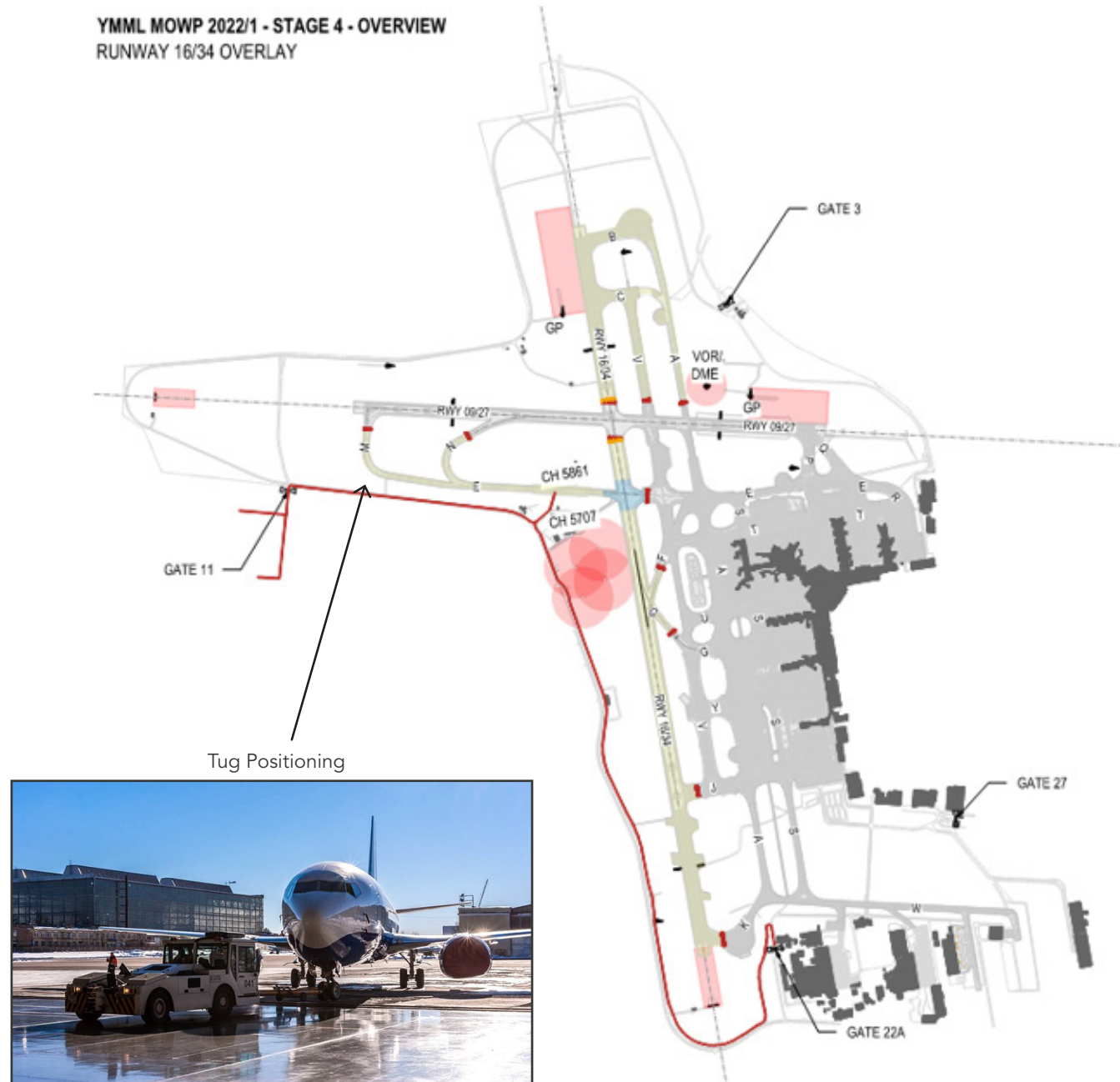
- **Code C (Wingspans 23m < 36m)** – 180 degrees turn on 09 threshold, backtrack and vacate the runway at ATC discretion
 - **Code D & E (Wingspans 36m < 65m)** –
 - Aircraft to vacate onto Taxiway Mike
 - Tug to push aircraft back to the 09 threshold (tail facing west) using available markings

Aircraft engines must remain on idle power whilst under tow.
 - Aircraft can then proceed under own power
- Notes:
1. Further details are provided over.
 2. Operating model applies unless authorised by Melbourne Airport and permitted by ATC based on operational requirements.
- To reduce runway occupancy time Code E operations should be limited for MOWP Stage 4 where possible
 - **Code F** (Wingspans 65m or greater) – Not permitted during Stage 4

Anticipated operational impact:

- Reduced capacity due backtracking / towing operations
- NOTAM advisories expected for anticipated delays

YMML MOWP 2022/1 - STAGE 4 - OVERVIEW
RUNWAY 16/34 OVERLAY



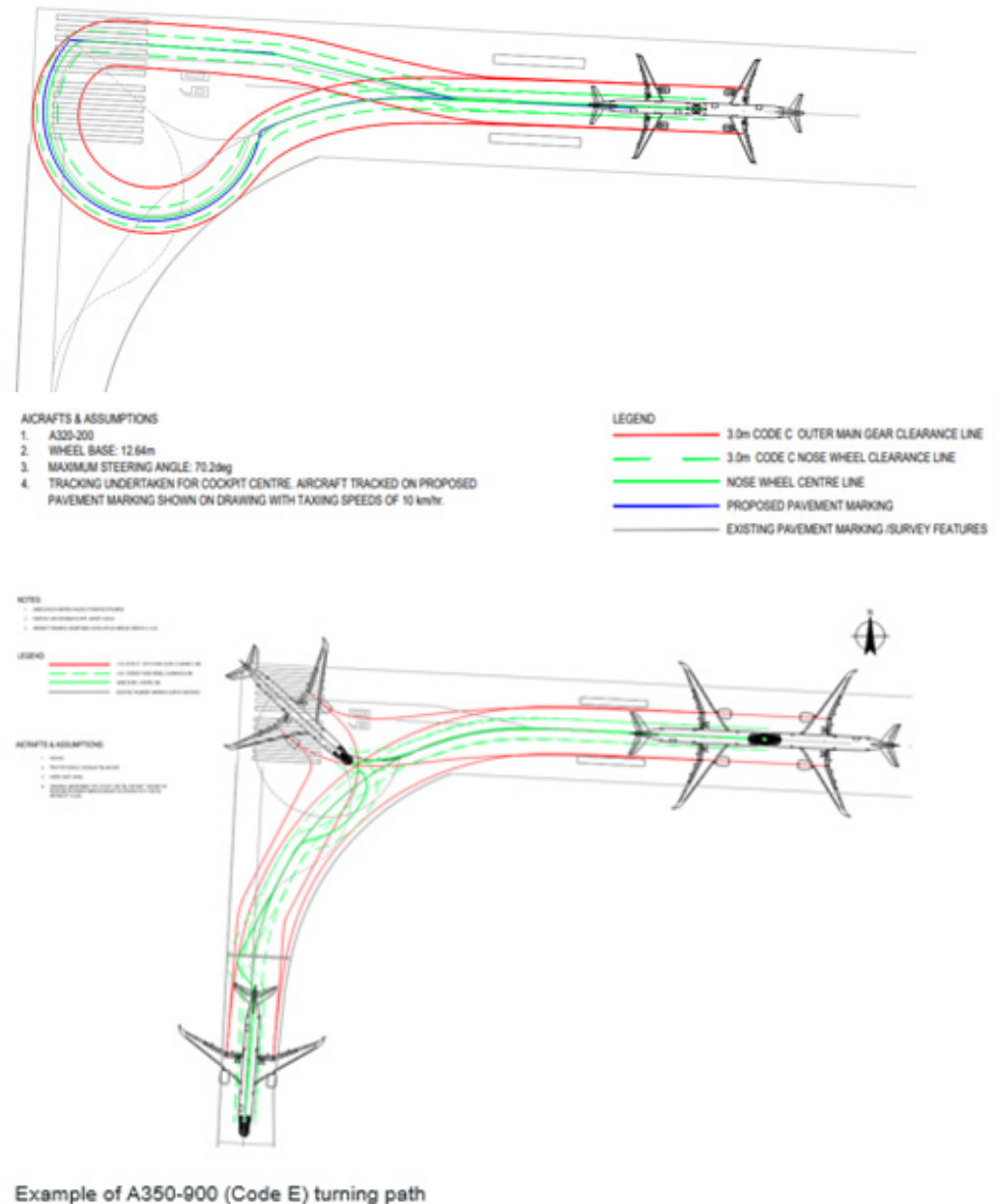
Taxiway Echo Intersection Works - Stage 4 Operational Impacts

Unless authorised by Melbourne Airport and permitted by ATC based on operational requirements, aircraft operations are subject to the following restrictions:

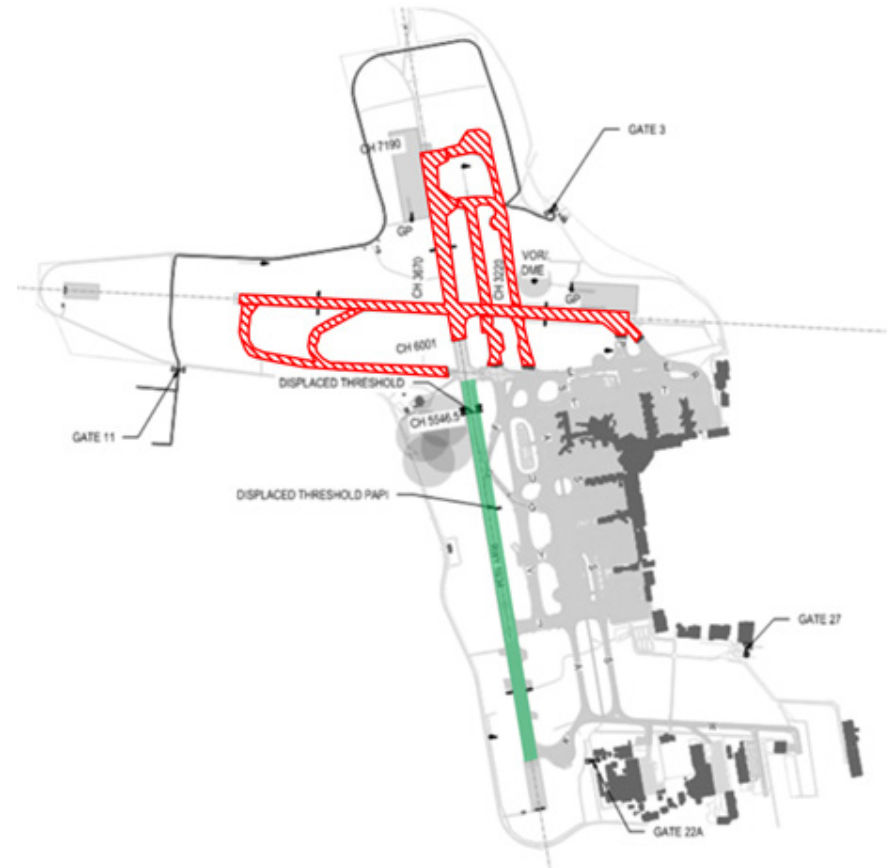
- For aircraft with wingspan up to but not including 36m (i.e., B737, A321) – a 180-degree turn will need to be performed on the Runway 09 threshold, before the aircraft can backtrack and vacate the runway following ATC instruction.
- For aircraft with wingspan from 36m up to but not including 65m (i.e., B767, B777, A330, A350) – Aircraft will need to vacate Runway 27 onto Taxiway MIKE. A tug will be available to push the aircraft back to Runway 09 threshold, tail facing west. Aircraft can then proceed under their own power vacating Runway 09 following ATC instruction.
- For aircraft with wingspans at or above 65m (i.e., B747-8, A380) - operations on Runway 27 are not permitted during Stage 4.



Figure 1 - Existing Markings



Stage 8 – Runways Intersection / Displaced Threshold	
Description of works	Runway 16/34 north Taxiway Echo and Taxiways Charlie and Victor will not be available. Amended declared distances will be in effect for Runway 16/34 Operations.
Scheduled start date	29 January 2023
Scheduled end date	28 November 2023
Restrictions	Manoeuvring Area
Runways	Please see Stage 8 – Operational Impacts
Taxiways	Taxiway Alpha north of Runway 09/27 – Not available Taxiway Victor north of Runway 09/27 – Not available Taxiway Charlie – Not available Taxiway Bravo – Not available
Remarks <small>(Details of any special restrictions and the requirements for the issue of NOTAMs)</small>	Displaced threshold PAPI angle set for pilot eye height of 74 ft above threshold Runway 16 downgraded to CAT I <ul style="list-style-type: none"> – Runway 16/34 centreline lighting not available for the duration of Early Works or Main Works – Runway 27, several centreline lights may be out of service between closures A NOTAM will be issued



Stage 8 Program | 29th January 2023 to November 2023

Note: Dates in the program are indicative and subject to change



Stage 8 - Temporary Displaced Threshold

Whilst working in Stage 8, there will be a requirement to establish a temporary displaced threshold on Runway 16 with a corresponding reduction in operational length on Runway 16 and Runway 34.

To maximise operational length and enhance safety, a runway starter extension will be provided for Runway 16 departures and a stopway established for Runway 34 departures. Aircraft will enter Runway 16 (Displaced threshold) and exit Runway 34 (reduced length) via Taxiway Echo. Aircraft exiting Runway 34 will need to pass through the red Runway end lights, through a central gap (in accordance with the Part 139 Manual of Standards). See Figure 2.

Take-off power is not permitted until the aircraft is established on the runway 16 centreline as there may be WAE located behind the aircraft.

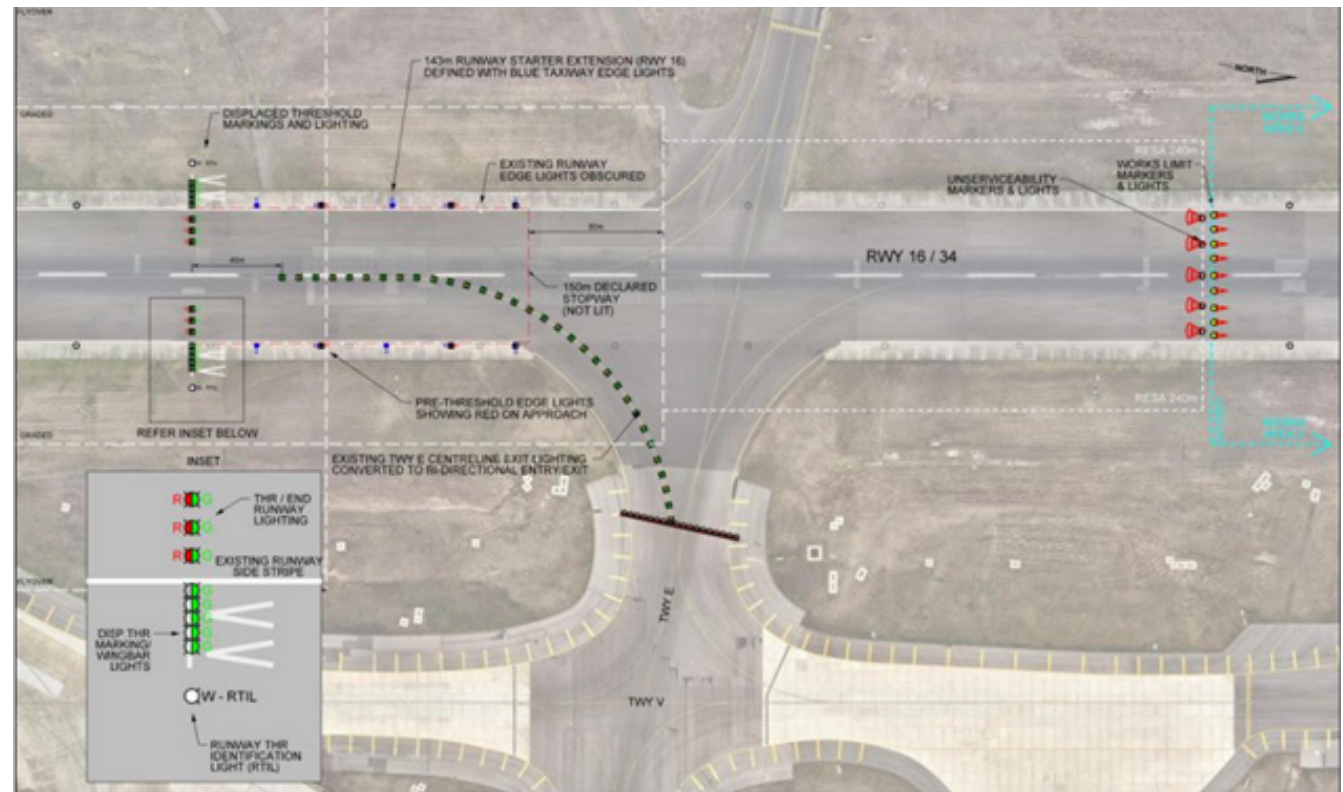


Figure 2 - Displaced Threshold Runway Marking & Lighting

Stage 8 Operational Impacts

1. The temporary displaced threshold will be in operation as per published NOTAM. This stage will be scheduled from 29 January 2023 to 28 Nov 2023. The actual dates will be confirmed via NOTAM. Please refer to NOTAM.
2. The **deployment** of the Temporary Displaced Threshold at the start of the nightworks shift will require a short-term closure of Runway 16/34 of between 30 to 45 mins duration. Once the displaced threshold is placed, Runway 16/34 will return to operation **but on reduced operating lengths**.
3. The removal of the Temporary Displaced Threshold at the end of the nightworks shift will require a short-term closure of Runway 16/34 of between 30 to 45 mins duration. Once the displaced threshold placement, **Runway 16/34 will return to operation on its normal published length**.
4. During Stage 8 the following visual aids will be in place:
 - A. Inset Temporary Runway 16 Threshold Lights / Runway 34 End Lights will be installed and activated for the duration of the displaced threshold.
 - B. Inset Temporary Runway 16 Threshold Lights / Runway 34 End Lights will be installed and activated for the duration of the displaced threshold.
 - C. Runway Threshold Indicator Lights (RTIL) at the displaced threshold location will be deployed and activated for the duration of the displaced threshold period.
 - D. Temporary Precision Approach Path Indicator (PAPI) (single side) at the displaced threshold location will be activated for the duration of the displaced threshold period.
 - E. A runway starter extension, 143m in length with temporary blue and red edge lights will be deployed for the duration of the displaced threshold period.
 - F. The existing Taxiway Echo Lead Off lighting (Runway 34) will be changed to bi-directional Lead On/Lead Off lights. The Lead On Lights will remain operational for the duration of the Stage 8 works.
 - G. The existing Runway 16 Threshold Lights / Runway 34 End Lights and Runway edge lights (north of the temporary displaced threshold) will be obscured for the duration of the displaced threshold period.
 - H. The original Runway 16 Precision Approach Path Indicator (PAPI) at the normal threshold location will be obscured for the duration of the displaced threshold period.
 - I. The existing Taxiway Echo Lead Off lighting (Runway 16) will be taped out for the duration of the works.
 - J. The Taxiway Echo centre line lights (Runway 16/34) will be taped out for the duration of the nightworks shift and returned to service upon removal of the Displaced Threshold at the end of the nightworks shift.
 - K. Manoeuvring Area Guidance Signs with declared distances will be obscured for the duration of the displaced threshold period.

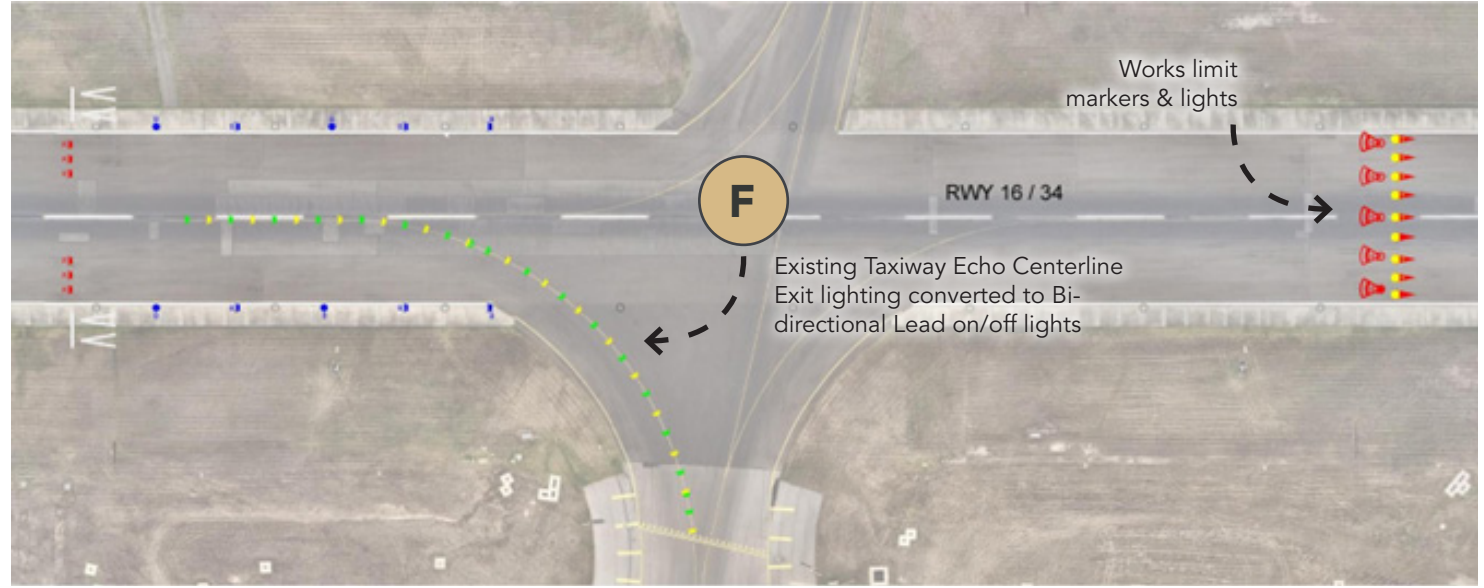
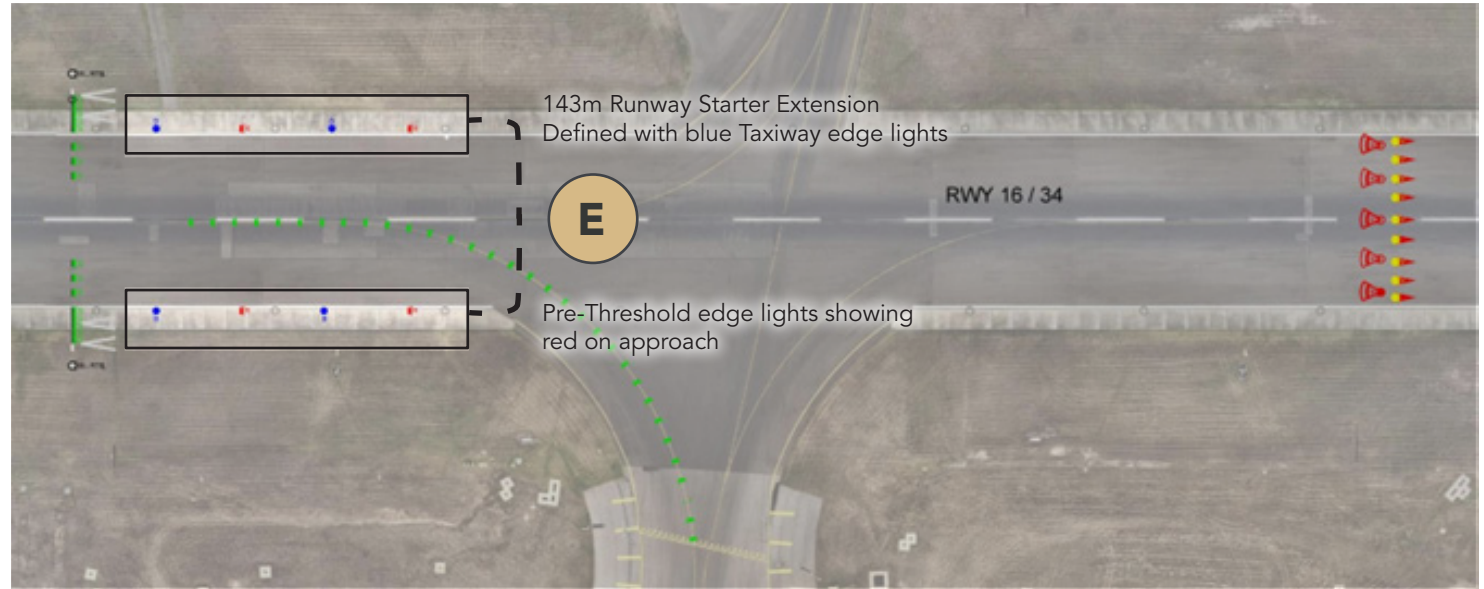
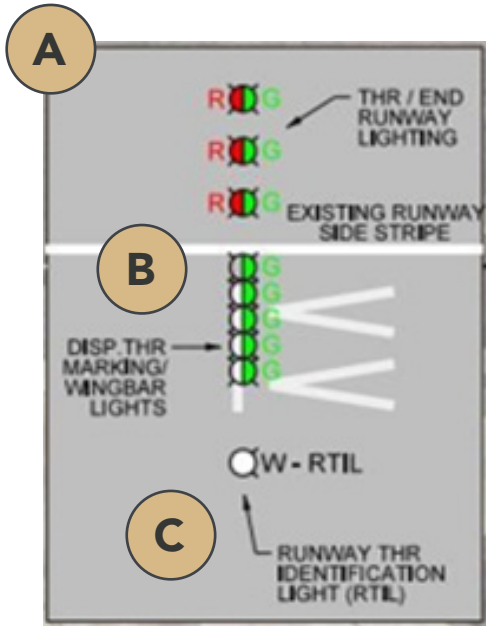
5. The following Declared Distances (in metres) will be in effect for the Displaced Threshold:

Runway	TORA	TODA	ASDA	LDA
16	2232	2352 (2.02%)	2292	2089
34	2089	2149 (2.02%)	2239	2089

6. The following Supplementary Declared Distances (in metres) will be in effect for the Displaced Threshold:

Runway	1.6% STODA	1.9% STODA	2.2% STODA
16	2242	2327	NIL
34	1095	1722	2105

Further information in respect to Stage 4 and Stage 8 operational impacts can be found in the [Aeronautical Information Circular](#) document.



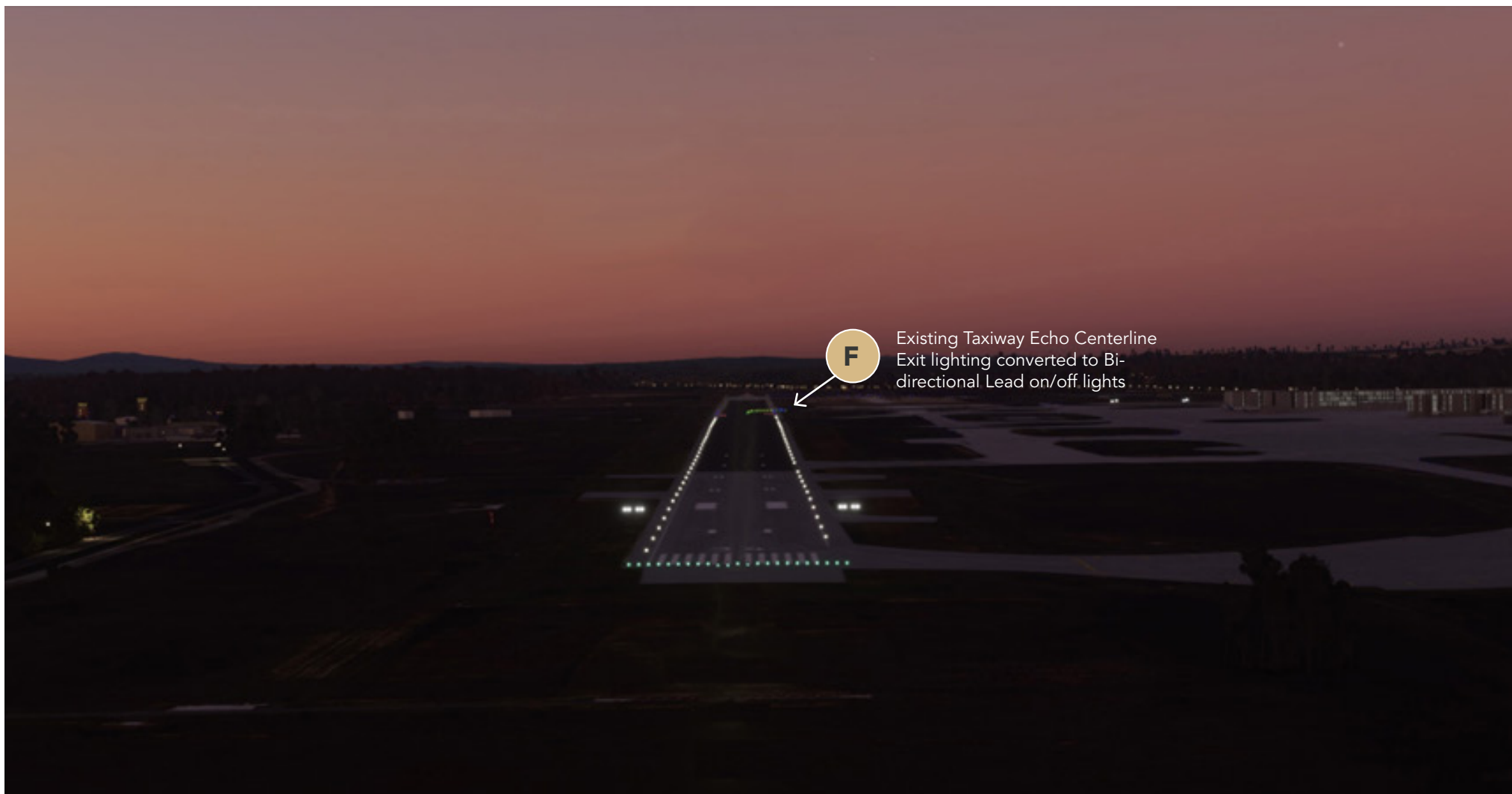
Runway 16 Approach on night (Runway 16 displaced threshold) - Visual Impression



*The image above is an indicative only and does not represent a true to life depiction of the expected conditions.

*Airfield taxiway lighting and construction works related lighting are not illustrated on the above image.

Runway 34 Approach on night (Runway 16 displaced threshold) – Visual impression



*The image above is an indicative only and does not represent a true to life depiction of the expected conditions.

*Airfield taxiway lighting and construction works related lighting are not illustrated on the above image.

Threats - Stage 4

The following threats relate to the displaced threshold (Method of working plan - Stage 4)

Code D and E aircraft landing on Runway 27

- Taxiway Mike is the nominated exit point. Taxiway November is not to be used.
- Flight crew should take care when entering Taxiway Mike from Runway 27 as a tug and operator will be prepositioned in the vicinity
- It is recommended that the Auxiliary Power Unit is started and is available to assist with maintaining aircraft systems and any required engine restarts
- Flight crew should stop at the nominated point and set engines to idle power. Once contact is made with ground support and the tug is connected, flight crew should then monitor the turnaround manoeuvre from the aircraft
- Once the aircraft is repositioned back on the runway, tail west, the tug needs to be disconnected and moved clear before a powered back track down Runway 09 can commence with ATC approval. The aircraft can then vacate Runway 09 under ATC instruction.

Threats – Stage 8

The following threats relate to the displaced threshold (Method of working plan - Stage 8)

Aircraft utilising correct approach on Runway 16

- The status of the normal Runway 16 approach procedure will be communicated via NOTAM
- The ILS will be available as the primary precision approach aid for normal operations to the existing threshold location, when the displaced threshold is not in place
- A GLS terminal instrument flight procedure to the Runway 16 displaced threshold location will be enabled whilst the threshold is displaced. Its status will be communicated via NOTAM
- The existing GLS Runway 16 procedure (GLS-Z) will not be available during the day and night for the duration of Stage 8 works. ILS will only be in service during the day, the new (displaced Runway 16) GLS procedure (GLS-T) will only be in service when the runway is displaced. A temporary RNP approach will also be available for the displaced threshold for non GLS capable operators
- Reduced runway lengths for landing will apply during the period where the threshold is displaced. Ensure correct landing performance information is used. ATC will communicate the active runway mode in use (i.e. via the ATIS or verbal instruction)
- When the Runway 16 threshold is displaced, entry for Runway 16 departures is only permitted from Taxiway Echo and entry for Runway 34 departures is only permitted from Taxiway Kilo. This will provide the maximum runway length available.
- When the threshold is displaced, ensure the correct approach is selected
- The visual aids and ILS for the normal Runway 16 approach will be obscured and disabled whilst the displaced threshold is in place

- Whilst the displaced threshold is not in place, the associated visual aids for the displaced threshold will be obscured.

Reduced operating lengths available on Runway 16 and Runway 34

- Reduced runway lengths for take-off and landing will apply. NOTAM information will contain updated data for the available runway length
- Ensure correct landing performance information is used and confirm that sufficient runway is available for the required operation
- There may be an increased possibility of diversion in poor weather due to increased minima
- Workers and equipment will be operating within the closed portion of the runway, but will remain outside of any jet blast affected areas
- Flight crew applying take-off power prematurely when departing Runway 16
- ATC will communicate the active runway mode in use (i.e. via the ATIS or verbal instruction)
- A Local works plan and Method of Works plan are available to notify the location of the works.

General

- No centreline lights will be available on Runway 16/34 for the duration the early and main works. As a result, Runway 16 will be only able to support CAT I operations until these visual aids are eventually restored during the works.
- A NOTAM will be issued identifying the relevant operational impacts and outages during the works.

Further Information

Should further information be required, please contact aviation services via email: aviationservices@melair.com.au, the following resources are also available:

- **Method of Working Plan 2022-2** which is available on the [Melbourne airport's website](#). This is subject to change.
- Two [Aeronautical Information Circulars](#) which will be issued prior to commencement of the runway closures:
 - #1 Project Overview
 - #2 Specific operational restrictions for Stage 4 & Stage 8

Authorisation

This application is authorised by:

Darren Angelo
Airfield Standards Manager

Melbourne Airport



MELBOURNE AIRPORT