



# DIA Terminal Roof Access Procedures

19 DECEMBER 2022

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# 1.Introduction

## Overview

The Darwin International Airport (DIA) terminal roof is restricted access for persons with an operational need to be there. There are walkways provided on the roof that have been designed for safe access for maintenance, operational and cleaning purposes. All persons needing access to the roof must be aware of the hazards and limitations of access on the roof and to this end must be fully conversant with this procedure, have successfully completed the induction and be under the oversight of an Airport Development Group (ADG) authorised person.

## Scope

This procedure involves safe access to the DIA terminal roof only. The roof space has been divided into seven (7) designated areas as identified below:

- Area A – Flat roof space Airside
- Area B – Sloping roof Landside East and West ends
- Area C – Flat roof Landside
- Area D – Flat roof East and West ends
- Area E – Curved roof centre terminal
- Area F – Curved roof Airside centre
- Area PR – Plant Room roof and internal access - West, Centre and East  
(Note: Area PR roof access are restricted access due to Radiation Hazard Areas)

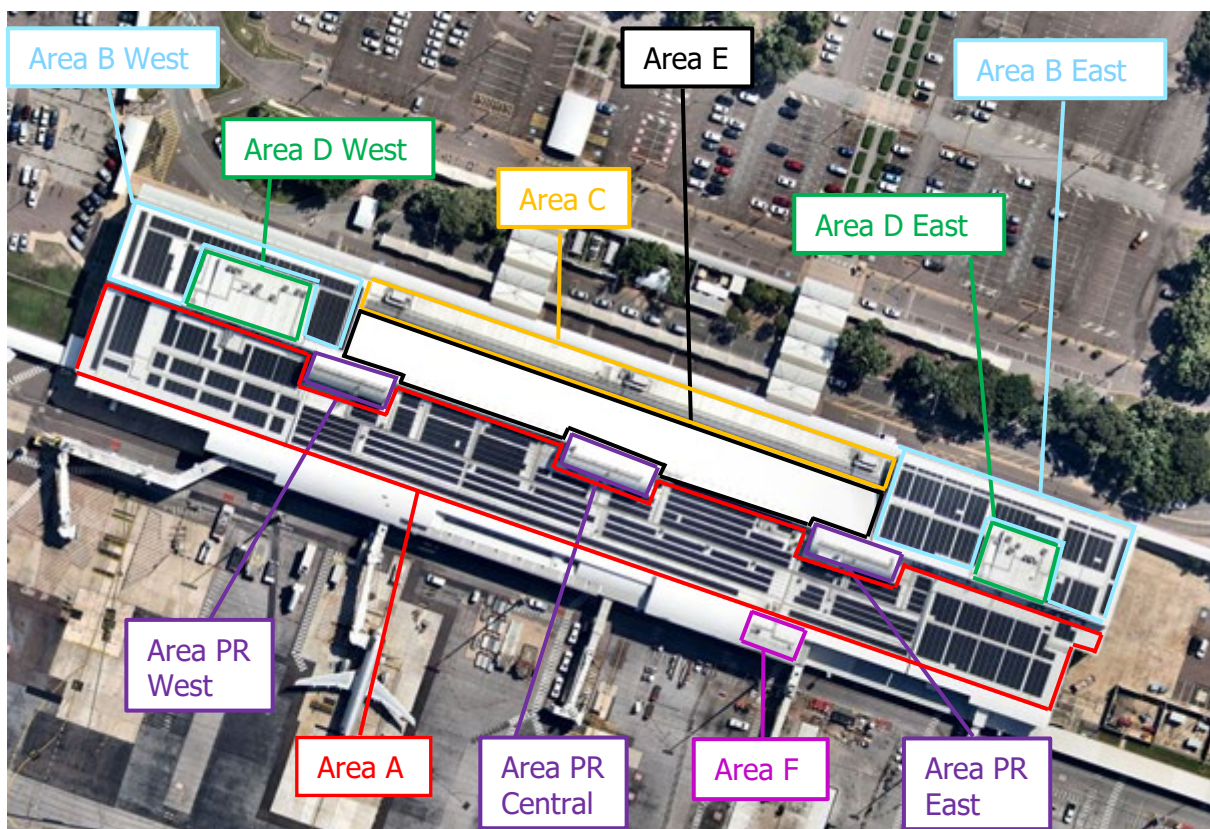


Photo 1 – DIA Terminal Roof

## Definitions

This section provides descriptions to common terms used throughout this document.

### **ADG Authorised person**

Is an ADG person that has the authority to approve work on the DIA Terminal Roof. This person is also responsible for ensuring that persons accessing the roof have a valid reason, have conducted a risk assessment including the relevant provisions of this procedure and have the appropriate security passes. The ADG Authorised person is also responsible for conducting a visual inspection of the area after the persons have completed their work activities to ensure it is clean and tidy and that the works has been done to the appropriate standard.

### **PERCOW**

Is a Permit to Commence Work on ADG property. This permit is required on any new building work undertaken on ADG property. Works in the same area that are like for like maintenance work does not require a new PERCOW.

### **Task Based Risk Assessment (TBRA)**

A TBRA will consist of a document that sets out the work activities in a logical sequence and identifies hazards and describes control measures relating to work on this roof. Acceptable TBRA's may include the following:

- Job Safety Analysis (JSA)
- Safe Work Method Statement (SWMS)
- Take 5
- Other risk assessment method approved by the ADG Health and Safety Manager

### **ASIC**

An Aviation Security Identification Card (ASIC) is used to identify a person who has been subjected to a background check. An ASIC is compulsory for unescorted access to the secure areas of the airport. For the purposes of this procedure persons accessing the DIA Terminal roof need to have an ASIC or be escorted by an ASIC holder.

## 2.Roles and responsibilities

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This section outlines the roles and responsibilities for all persons accessing the roof and people supervising or approving access to the roof.

### **Project / Maintenance Managers, Coordinators and Supervisors**

Project / Maintenance Managers, Coordinators and Supervisors will often be the ADG Authorised person for people accessing the DIA terminal roof. They must ensure all staff, contractors or visitors under their control understand their roles relating to compliance with this procedure and carry out their duties in accordance with the same.

### **Access Approvers**

Must be an ADG Authorised Person and ensure a TBRA has been completed, identified controls implemented, and the conditions of the roof access are understood and complied with.

### **ADG Health and Safety Manager**

Continually develop and improve these procedures and ensure the procedure is adhered to and systems are audited annually, or another period as may be required.

### **ADG Security / Terminal and Airside Operations Officer**

DIA security staff / TAOO's can issue key access for persons accessing the DIA terminal roof. They will not issue key access unless persons have completed the DIA terminal roof access induction and have confirmed who their ADG Authorised person is.

### **Persons accessing the roof**

To abide by this procedure when accessing and working on the terminal roof.

# 3. Minimum roof safety requirements

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## Training

- All persons accessing or working on the terminal roof must have completed the Terminal Roof Access Induction and have fully read and understood these procedures,
- All staff involved in supervising or conducting work on the DIA terminal roof must be inducted in the application of this procedure,
- All workers must comply with this procedure.

## Equipment required

Before working on the roof all persons must have the following:

- Hat and sunscreen
- High Viz
- Sunglasses – anti glare
- Sturdy covered footwear
- Adequate supply of cool drinking water
- Safety gloves – If working on or near solar panels

## Pre-checks before working on roof

- All persons accessing the DIA terminal roof must report through their ADG Authorised person and the ADG Health and Safety Manager,
- No building works to be done on the roof without an approved PERCOW, permits or exemptions as required,
- Approved TRBA must be provided & approved if planning to work outside designated walkways and platforms,
- No person is to work alone when conducting work on the DIA terminal roof,
- If there is a 5NM storm warning in place no access is permitted on the roof. The ADG Authorised person must ensure workers under their control are made aware of a 5NM storm warning being in place,
- Night work is generally prohibited and will only be allowed when approved in writing by the ADG Health and Safety Manager or approved delegate.

## Working on the roof

- Must walk, and work, on designated walkways and platforms at all times – unless given prior approval through TBRA,
- No rubbish, swarf or waste building materials to be left on site – ADG Authorised person is to ensure this is done,
- No building materials to be left on roof overnight without approval and verification of tie down methods by ADG Authorised person,
- No smoking on roof.



## 4. Accessing the roof and general safety

### Applying to access roof

The person or member of the group requiring access to the roof, preferably the work supervisor, shall apply to access the DIA terminal roof. This shall be done in conjunction with the ADG Authorised person. The person applying for access must have a legitimate reason for accessing the roof and must have an ASIC pass or a Visitor Identification Card (VIC) pass and be always accompanied by a sponsoring ASIC pass holder. Once approval by an ADG Authorised person has been granted, the person applying will contact security staff at the Terminal Control Centre, (Attachment 2 refers) for access.

### Identifying area of roof being accessed

The person applying for access to the roof must identify exactly what area of the roof they need to access as outlined in Section 1 of this procedure.

### Approving Access

The ADG Authorised person shall:

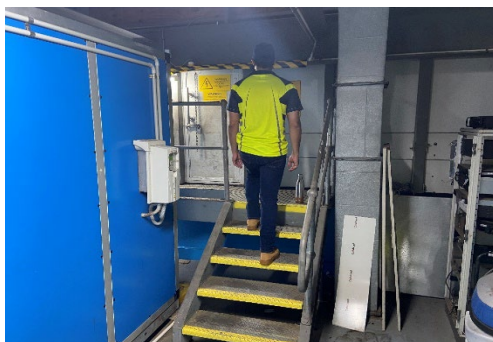
- Check that the work does not conflict with other work being undertaken or building tenants and consult with affected personnel as need be,
- Conduct a check to ensure all aspects of the work have been considered and all conditions of their TBRA have been implemented including Emergency Preparedness,
- Ensure the Applicant understands all requirements of this procedure,
- Check the accessed area prior to the person leaving.

### General safety requirements

- Generally, the DIA roof can be accessed without the need for wearing a harness or lanyard when the activity can be done from designated walkways, although need to check access restrictions for each designated area of the roof (Section 6 refers).
- All persons accessing the DIA terminal roof to conduct work MUST have been inducted in these procedures and have an ADG Authorised person approval to conduct works on the roof. Electronic key access will only be granted to approved and inducted persons.

### General hazards

The DIA terminal roof presents several general hazards that users must be aware of, these are highlighted below:

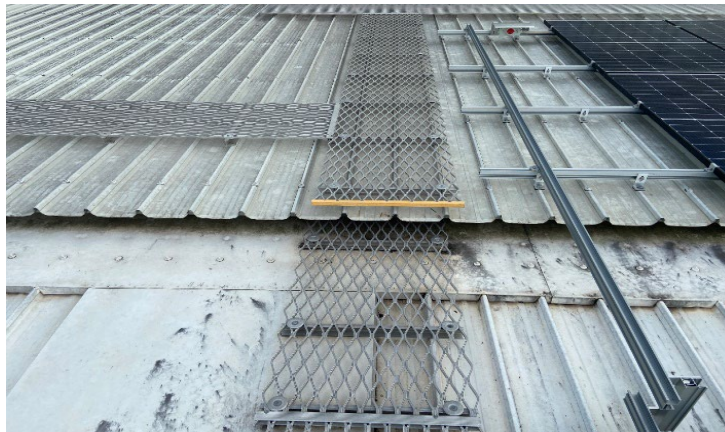


**Photo 4.1 – Entry 1 low lying roof – marked by strip**





**Photo 4.2 – Trip hazards** – highlighted or marked with strip



**Photo 4.3 – Trip hazards** – highlighted or marked with strip



**Photo 4.4 – Burn hazard** – When working near solar panels workers must wear gloves



**Photo 4.5 – Fall hazard** – only one person to access ladder at a time



## 5. Roof access points

This section identifies the locations to the entry points of the DIA Terminal roof (Photo 5.1).

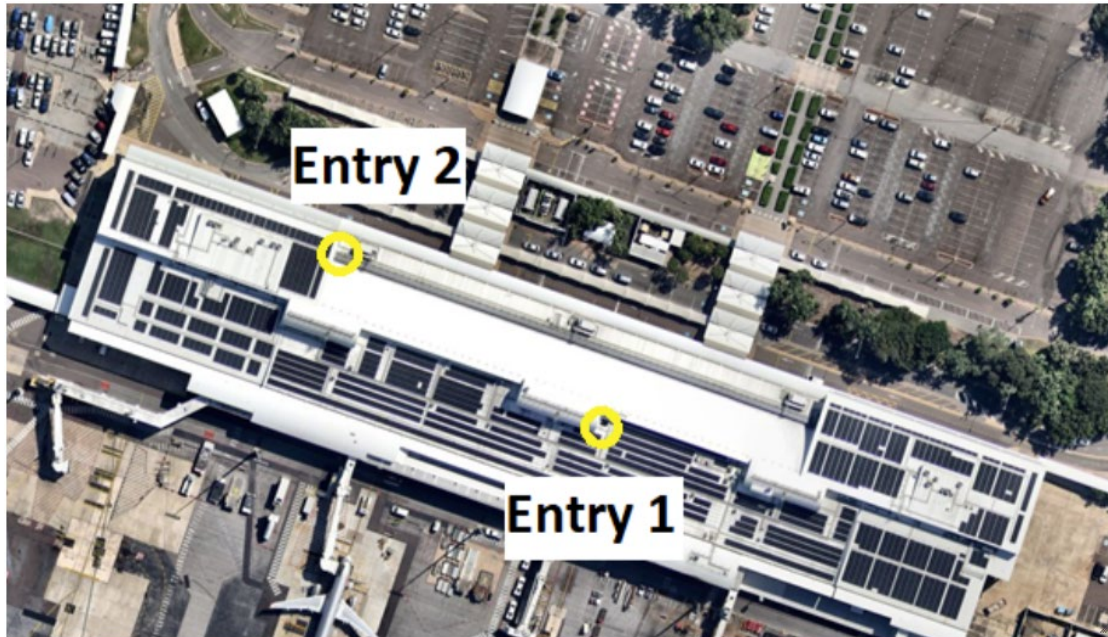


Photo 5.1 – DIA terminal roof – Access points

### Entry 1

Provides access to the roof through the central plant room door by electronic key. To access this plant room workers must present through the central screening point on the ground floor then using a swipe card through the Powders, Liquids And Gels Screening (PLAGS) area. There is a Tag Out procedure when multiple people are accessing the roof (Attachment 1 refers).



Photo 5.2 – Entry 1 - Central Plant room door

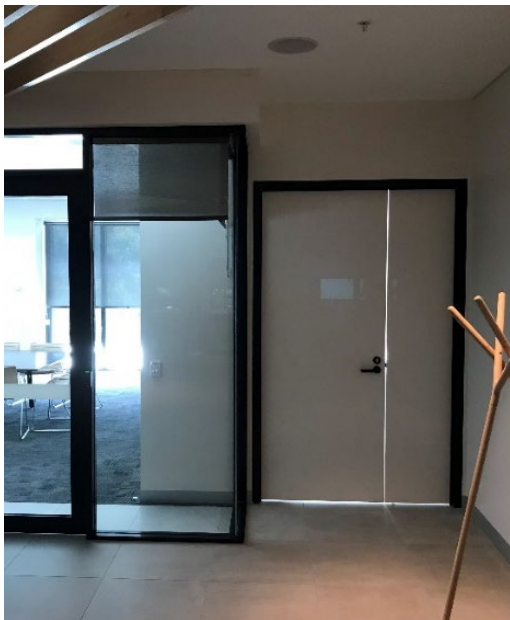


**Photo 5.3 – Entry 1** (from roof side)

## Entry 2

Provides access to the landside roof (referred to as Area C) and is located at the west end of the terminal through the Wirraway Business Centre on the first floor (Photo 5.4 refers). There is a door to the right of the Board room down the hallway and then access the roof through a door (Photo 5.5 refers) requiring an electronic key.

**CAUTION:** Both accesses have low headroom doorways just prior to accessing roof and care must be taken in these areas, particularly when returning from outside to inside.



**Photo 5.4 – Access door Wirraway**



**Photo 5.5 – Access door to roof**



## 6. Working on the roof

This section highlights what must be done to access each designated area of the roof. Work on any other areas not designated in this section or without walkways is strictly prohibited unless approved by the ADG Health and Safety Manager or approved delegate.

### Area A – Flat roof space Airside

Access to this part of the roof is via Entry 1 in the Central Plant Room. This area can be accessed without a harness or lanyard while working on a designated walkway.



Photo 6.1 – Area A – looking west & east



Photo 6.2 – Area A – highlighting east & west roof live edges

**Caution:** Any works conducted within 3 metres of the exposed edge on the East or West ends must not be done without a TBRA approved by the ADG Health and Safety Manager or approved delegate.

### Area B – East & West ends

In general terms, this area is prohibited access and the ladders to access this part of the terminal roof (east & west ends) are locked with strict controls in place for access to this part of the roof.

Access to this part of the roof is via Entry 1 in the Central Plant Room. No work is to be conducted on this area of the roof without a TBRA approved by the ADG Health and Safety Manager or approved delegate. Once TBRA is approved, workers and the ADG Health and Safety Manager, or approved delegate, are to conduct an initial inspection / consultation together, on the roof where the works are to be conducted.



**Photo 6.3 – Area B West** – Locked ladder access from Area A to Area B West



**Photo 6.4 – Area B West** – Roof walkways – **NO ACCESS beyond this walkway handrail**



**Photo 6.5 – Area B West** – View west from roof walkways



**Photo 6.6 – Area B West** – View from bottom of roof walkway facing West – **NO ACCESS ON THIS WALKWAY**





**Photo 6.7 – Area B West** – View from bottom of roof walkway facing East – **NO ACCESS on this walkway**



**Photo 6.8 – Area B East** – Locked Ladder access from Area A to Area B East

## Area C – Flat roof Landside

Access to this part of the roof is via Entry 2 which can be accessed through the Wirraway offices. These areas have designated walkways and handrails where work can be conducted. No person is permitted to work outside designated walkways at any time without a TBRA approved by the ADG Health and Safety Manager or approved delegate.



**Photo 6.9 – Area C** – Viewed from Area B East



**Photo 6.10 – Area C** – Viewed from Entry 2

## Area D – Flat roof East and West ends

Access to this part of the roof is via Entry 1 and then up the east or west ladder (Photo's 6.3 and 6.10 refer). These areas have designated walkways and handrails and no person is permitted outside designated walkways at any time without an approved TBRA by the ADG Health and Safety Manager or

approved delegate. When working on fixed plant in this area the worker must be attached to an approved fixing point with a lanyard that will ensure fall restraint is achieved (ie; cannot reach any live edges in any configuration).

It should be noted that access to Area D also gives access to Area B (East & West) which is a restricted area. Strictly NO ACCESS to Area B walkways.



**Photo 6.11 – Area D –** Step access from Area B West to Area D West



**Photo 6.12 – Area D East –** Step ladder access from Area B East to Area D East

## **Area E – Curved roof centre terminal**

Access to this part of the roof is via Entry 1. This area of the roof is strictly prohibited to all persons without a TBRA approved by the ADG Health and Safety Manager. This will include competency of workers including abseiling skill sets, approved gear and other strict protocols.





**Photo 6.13 – Area E – View from Area PR Central facing West**



**Photo 6.14 – Area E – View from Area PR Central facing East**

## Area F – Curved roof Airside centre

Access to this part of the roof is via Entry 1. Access and work on this area can only be done on the designated walkway and handrail system. Work outside these areas will require a TBRA approved by the ADG Health and Safety Manager or approved delegate.



**Photo 6.15 – Area F – Ladder view from Area A to Area F**

## Area PR –Plant Rooms – East, Centre and West

This area is a radiation hazard area and only authorised personnel should access and work on this platform. Access to this part of the roof is via Entry 1. Access and work on this area can only be done on the designated walkway and handrail system. Work in these areas will require a TBRA approved by the ADG Health & Safety Manager.



**Photo 6.18 – Area PR rooftop** – Ladder view from Area A to Area PR



**Photo 6.19 – Area PR rooftop** – Radiation Hazards



## Central plant room filter access

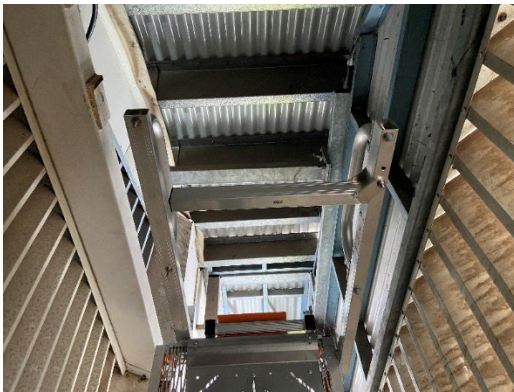
Access to this area is via Entry 1. Due to restricted access, entering this area requires two people. Once the door is opened, the ladder (Photo 6.20 refers) can be accessed by lifting from its recessed holder and placing the top rung of the ladder into the recessed holder of the work platform. Maintain a stable base for the ladder and maintain good ladder discipline when climbing the ladder (Photo 6.21 refers). At the top of the platform lift the safety guard rail to step onto the platform (Photo 6.22 refers). Close the safety guard rail before commencing work.



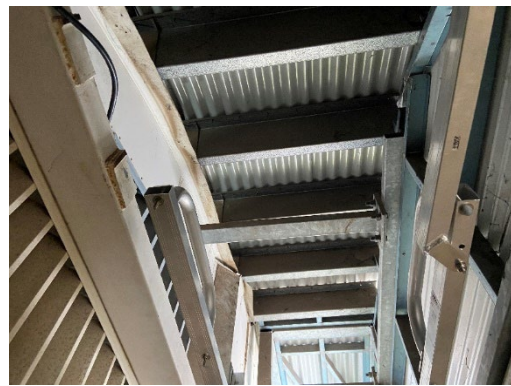
**Photo 6.20 – Area Central PR filter access**



**Photo 6.21 – Area Central PR filter access – Correct ladder discipline**



**Photo 6.22 – Area Central PR filter access – Guard rail in closed & open position**



## Leaving roof / returning the e-key

When persons leave the roof area for the working day they should return the e-key to the Key Watcher Cabinet (Attachment 2 refers). They must advise their ADG Authorised person that they have completed their work and that they have left the roof. The ADG Authorised person can then verify that the works have been completed to the quality standards required and the area inspected to ensure no rubbish or building materials have been left on the roof.



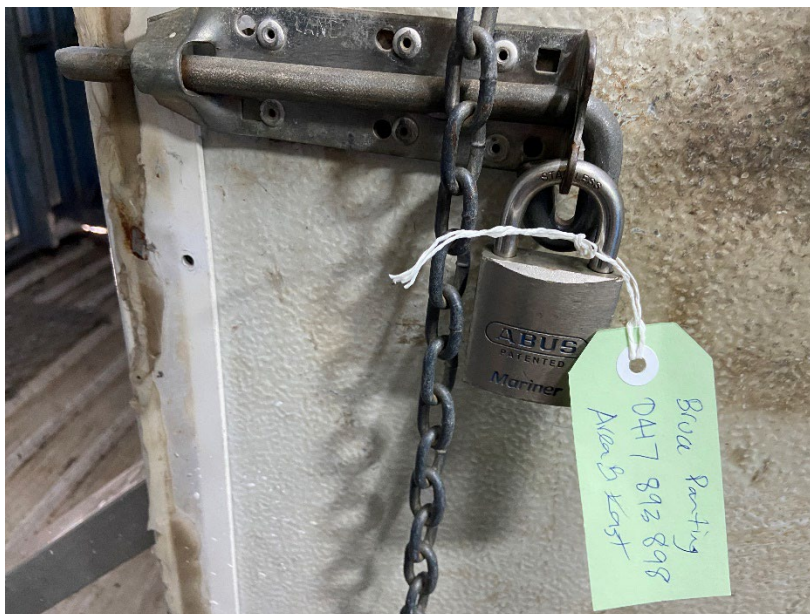
**Photo 6.23 – Key Watcher Cabinet** (located at OOG)

# Attachment 1 – Tag Out Procedure

Date: 1 December 2022

## Background

If you have an authorised need to access the DIA terminal roof and you come to the roof access door in the central plant room (Photo 1 refers) then you will need to use a tag provided to inform other persons that you are on the roof.



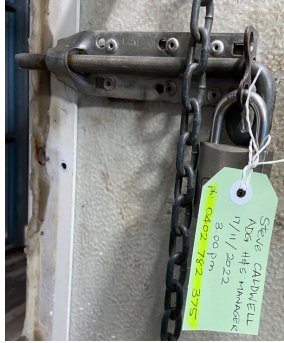

**Photo 1** – Terminal roof access door is locked in the open position when you access the roof

This instruction sheet outlines how to use the roof access tag system.

## Tag in

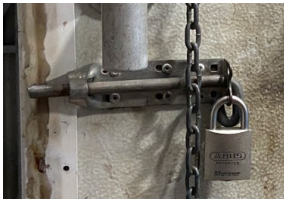

You will need to tag in before you access the roof as per the following procedures:

Step	Action	Photo
1	Grab tag from the Terminal Roof Access Tag storage box located on the access door.	A photograph of a clear plastic storage box containing several green tags. The box is labeled 'TERMINAL ROOF ACCESS TAGS'.
2	Write your details onto the tag – Name, & mobile number <b>as a minimum</b> and other information could include, date & time accessing the roof and area of the roof.	A photograph of a green tag with handwritten details: 'Steve CALDWELL', 'ADG H&S MANAGER', '17/11/2022', '3.00 pm', and 'Ph: 0402 782 375'.

3	Tie the completed tag onto the closed lock.	
4	Access the roof. Leaving the door in the open position & the padlock closed	

## Tag out

On returning to leave the roof, you must do the following:

Step	Action	Photo
1	When returning from the roof you <b>MUST</b> remove your tag.  If there are no other tags on the lock you can then lock and close the door behind you.	
2	If there is another tag on the lock, <b>Do not lock the door.</b>  You can ring the person listed on the tag to check they are still on the roof & let them know you are leaving the roof.	
3	Leave the roof via the Plant Room.	



# Attachment 2 – Security Key Access

## Background

To access the DIA terminal roof, after you have received approval from your ADG authorised person, you will need to contact security staff at the Terminal Control Centre.

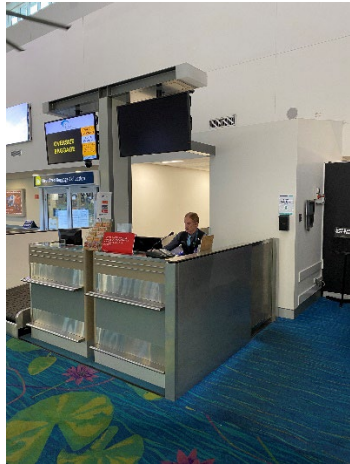
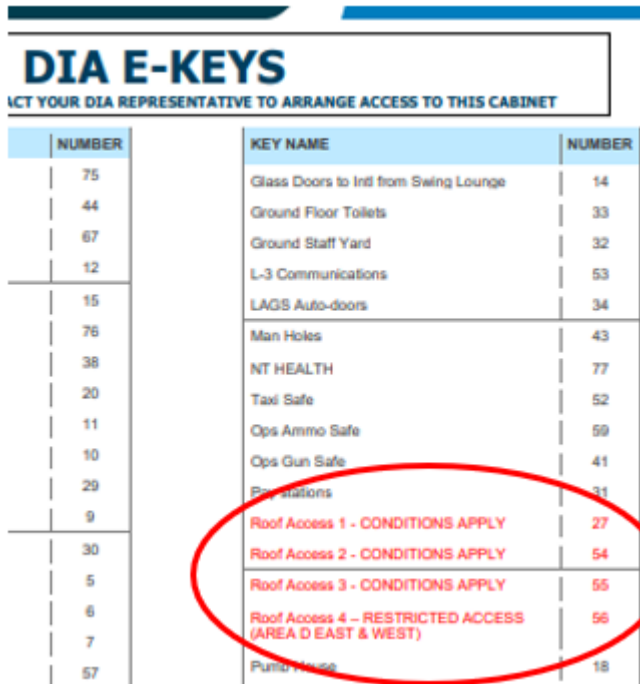



After you receive approval from security staff they will give you access to the Key Watcher Cabinet (Photo below refers). This instruction sheet outlines how to access electronic keys once approval has been granted.







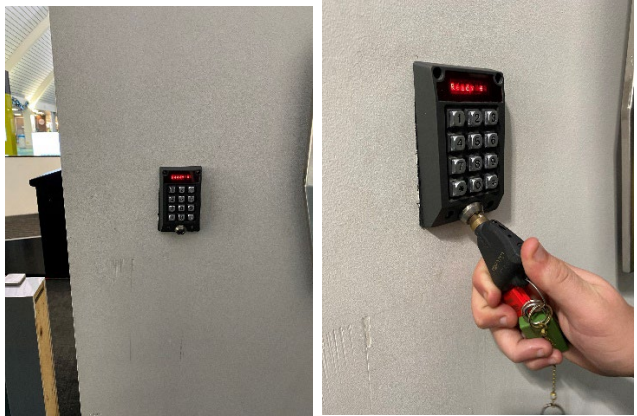
DIA Key Watcher Cabinet

## How to access

The following steps outline how to access the DIA Key Watcher Cabinet (KWC).



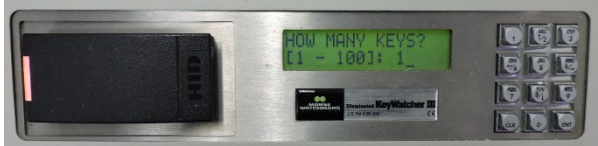


Step	Action	Photo																																																						
1	<p>Locate Out of Gauge area (oversize baggage area).</p> <p>The KWC is in the open room behind the desk. Enter through the steel swing door to the right of the counter.</p>																																																							
2	Select the appropriate key from the list in the Key Watcher cabinet.	 <table border="1"> <thead> <tr> <th>NUMBER</th><th>KEY NAME</th><th>NUMBER</th></tr> </thead> <tbody> <tr> <td>75</td><td>Glass Doors to Infil from Swing Lounge</td><td>14</td></tr> <tr> <td>44</td><td>Ground Floor Toilets</td><td>33</td></tr> <tr> <td>67</td><td>Ground Staff Yard</td><td>32</td></tr> <tr> <td>12</td><td>L-3 Communications</td><td>53</td></tr> <tr> <td>15</td><td>LAGS Auto-doors</td><td>34</td></tr> <tr> <td>76</td><td>Man Holes</td><td>43</td></tr> <tr> <td>38</td><td>NT HEALTH</td><td>77</td></tr> <tr> <td>20</td><td>Taxi Safe</td><td>52</td></tr> <tr> <td>11</td><td>Ops Ammo Safe</td><td>59</td></tr> <tr> <td>10</td><td>Ops Gun Safe</td><td>41</td></tr> <tr> <td>29</td><td>Play stations</td><td>31</td></tr> <tr> <td>9</td><td>Roof Access 1 - CONDITIONS APPLY</td><td>27</td></tr> <tr> <td>30</td><td>Roof Access 2 - CONDITIONS APPLY</td><td>54</td></tr> <tr> <td>5</td><td>Roof Access 3 - CONDITIONS APPLY</td><td>55</td></tr> <tr> <td>6</td><td>Roof Access 4 - RESTRICTED ACCESS (AREA D EAST &amp; WEST)</td><td>56</td></tr> <tr> <td>7</td><td>Pump House</td><td>18</td></tr> <tr> <td>57</td><td></td><td></td></tr> </tbody> </table>	NUMBER	KEY NAME	NUMBER	75	Glass Doors to Infil from Swing Lounge	14	44	Ground Floor Toilets	33	67	Ground Staff Yard	32	12	L-3 Communications	53	15	LAGS Auto-doors	34	76	Man Holes	43	38	NT HEALTH	77	20	Taxi Safe	52	11	Ops Ammo Safe	59	10	Ops Gun Safe	41	29	Play stations	31	9	Roof Access 1 - CONDITIONS APPLY	27	30	Roof Access 2 - CONDITIONS APPLY	54	5	Roof Access 3 - CONDITIONS APPLY	55	6	Roof Access 4 - RESTRICTED ACCESS (AREA D EAST & WEST)	56	7	Pump House	18	57		
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3	Swipe your ASIC (or use your 4-digit ID Number) and insert your 4-digit Pin.																																																							
4	<p>Use the keypad arrows to go up and down, press 'Enter' to accept the action.</p> <ul style="list-style-type: none"> <li>- Remove Keys and press 'Enter'.</li> </ul>																																																							
5	Enter the number of the key you wish to eject, and press 'Enter'.																																																							



6	Press 'Enter' to confirm or add additional keys.	
7	Open the door.	
8	The key which you have selected to eject will light up red - remove this key.	
9	Close the door when you have removed the key.  *Always double check the door is secured.	
10	Move to the electronic keypad located near the steel swing door at the entry of the Out of Gauge area (oversized luggage).  Place electronic key into keyhole and turn. Enter 4-digit code when prompted. Remove key once completed.	

## Return Key

The below outlines the process to return the electronic key to the Key Watcher Cabinet.

Step	Action	Photo
1	Swipe your ASIC and insert your 4-digit Pin - alternatively enter your ID number followed by your pin and press 'Enter'.	
2	Using the pin pad use the down arrow until you see 'Return Key' displayed and press 'Enter'	
3	The Key watcher will now ask you how many keys you wish to return – if you only have one key press '1' and 'Enter'  *Remember to only enter the number of keys you wish to return <u>NOT</u> what key number you released.	
4	Open the door and return key by pushing the key green tag into a vacant slot – all the way until the box beeps to let you know the key has been returned.	
5	Close and secure the door.	

If you have any questions or require assistance, please contact your ADG Authorised person

Terminal Control Centre Reception telephone number: 08 8920 1822