



DIA Terminal Roof Access Procedures

20 JUNE 2024

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Preamble

Responsibilities

Document Owner (in charge of relevance & compliance of this document)	ADG Health & Safety Manager
Who needs to be consulted before changes are made to the document	Relevant Heads of Departments
Who needs to be informed of changes to this document	All stakeholders who need to access or oversee people accessing the roof.

Record of Issue

Issue Date	Nature of Amendment
1 Dec 2022	Issued for Use
20 June 2024	Updated to suit changes to walkways near solar panels. – Changes approved HSM

Contacts

ADG Safety Department: Safety@adgnt.com.au

1.Introduction

1.1 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.

1.2 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)

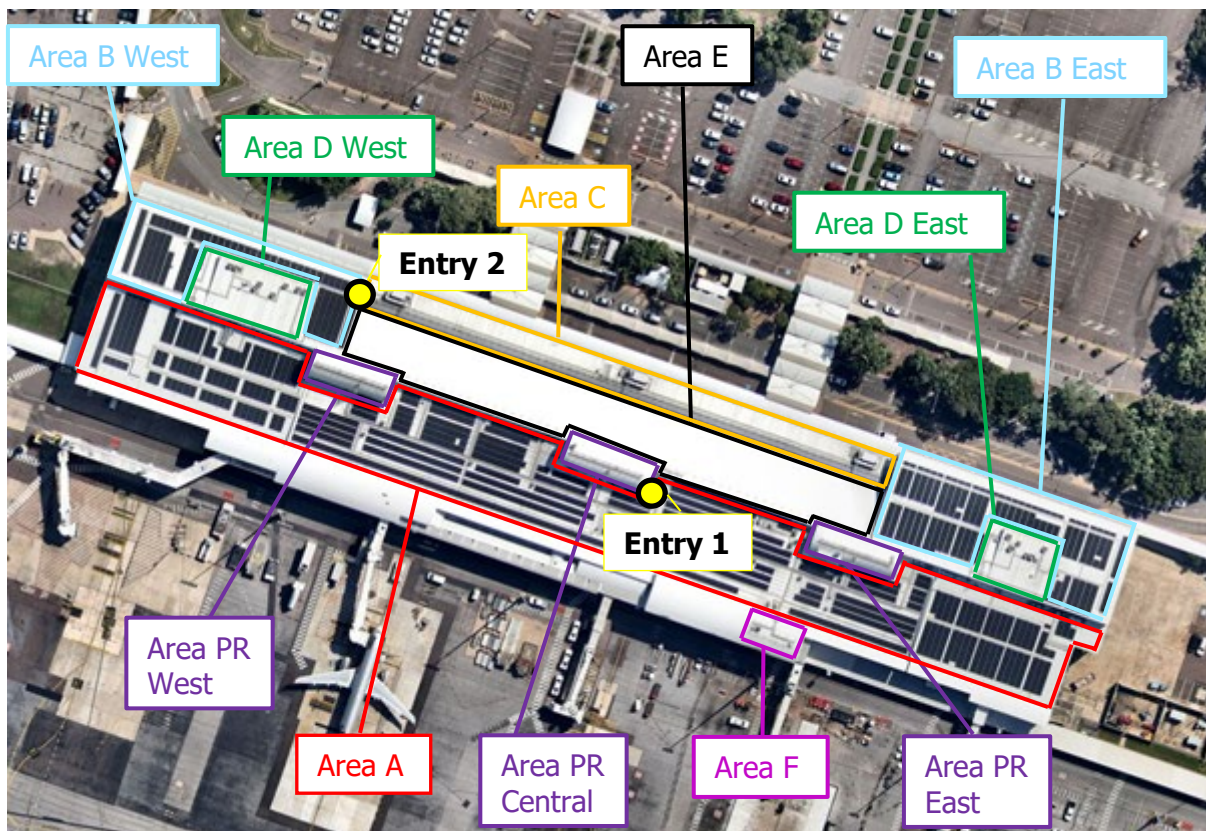


Photo 1 – DIA Terminal Roof

1.3 Definitions

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

ADG Authorised person

Is an ADG person who 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. A RED ASIC is compulsory for access to the secure areas of the airport. For the purposes of this procedure persons accessing the DIA Terminal roof must have a RED ASIC or be escorted by a RED ASIC holder and have relevant passes.



Photo 2 – Red ASIC

2. Roles and responsibilities

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

2.1 Project / Maintenance Managers, Coordinators & Supervisors

Project / Maintenance Managers, Coordinators & 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.

2.2 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.

Must ensure that a Working at Height Permit has been provided & approved by the ADG Health & Safety Manager or delegate for all works conducted outside designated walkways or as stated in this procedure.

2.3 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 Health and Safety Manager (or delegated person) must be consulted for approval to work outside of designated walkways.

2.4 ADG Security

DIA security staff 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.

2.5 Terminal and Airside Operations Officer (TAOO)

The TAOO on duty is the first point of contact in event of an emergency occurring on the roof. TAOO can also assist with roof access issues if requested after hours.

2.6 Persons accessing the roof

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

3. Minimum roof safety requirements

3.1 Training

- All persons accessing or working on the terminal roof must have completed the Terminal Roof Access Induction and have fully read and understood this procedure,
- All staff involved in supervising / overseeing workers on the DIA terminal roof must be inducted in the application of this procedure,

3.2 Equipment required

Before accessing the roof, all persons must have the following:

- High Viz
- Sunglasses – anti glare
- Sturdy covered footwear
- Adequate supply of cool drinking water
- Safety gloves – due to risks of burn and cut from hot surfaces & solar panels.
- Mobile phone
- Sun protection such as hat and sunscreen – long shirt sleeves and pants are highly recommended.

3.3 Pre-checks before working on roof

- All persons accessing the DIA terminal roof must report through their ADG Authorised person and the ADG Safety Department,
- No building works to be done on the roof without an approved PERCOW, permits or exemptions as required,
- Working at Height Permit approved by the ADG Health & Safety Manager or delegate must be provided 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 5 Nautical Miles (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.

3.4 Working on the roof

- Must walk, and work, on designated walkways and platforms at all times – unless given prior approval by the ADG Health and Safety Manager or approved delegate through an approved Working at Height permit,
- 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.

3.5 Emergency procedure on the roof

In an emergency, the ADG authorised person must be contacted immediately. The TAOO on duty (**0401 005 977**) must then be contacted & provided with the following information, as a minimum:

- description of the incident, hazards / injuries identified.
- the exact location on the roof
- a description of what action is taking place, assistance needed and
- your full name & contact phone number

The TAOO on duty will initiate an emergency activation.

4. Accessing the roof and general safety

4.1 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 the Terminal Control Centre (TCC) reception located at the terminal ground floor near gate A, to organise access to a key.

Notice of two days should be given where possible for key access.

For further information contact TCC reception 08 8920 1822.

4.2 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 1.2 of this procedure.

4.3 Approving Access

The ADG Authorised person shall:

- Check that the work does not conflict with other work being undertaken & consult with affected personnel as need be,
- When working outside designated walkways, ensure the Working at Height Permit has been approved by the ADG Health & Safety Manager or delegate, and
- Conduct a check to ensure all aspects of the work have been considered and all conditions of their Working at Height Permit have been implemented including Emergency Preparedness,
- Ensure the Applicant understands all requirements of this procedure,
- Check the accessed area prior to the person leaving.

4.4 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.

4.5 General hazards

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

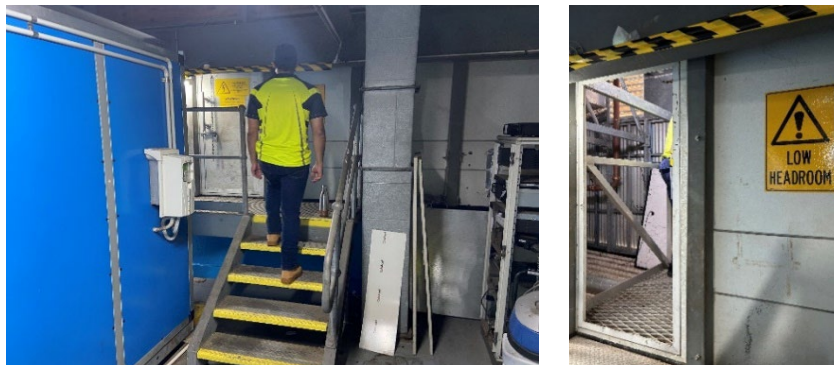


Photo 4.1 and 4.2 – Entry 1 low lying roof – marked by strip



Photo 4.3 – Trip hazards (Step over) – highlighted or marked with strip



Photo 4.4 – Trip hazards (Change of height) – highlighted or marked with strip



Photo 4.5 – Burn hazard and cut hazard – When walking & working near solar panels workers must wear gloves



Photo 4.6 – Unprotected edges – No access outside designated walkway without a Working at Height Permit approved by the ADG Health & Safety Manager or approved delegate.



Photo 4.7 – Ladder – only one person to access ladder at a time only one person to access ladder at a time

5. Roof entry points

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

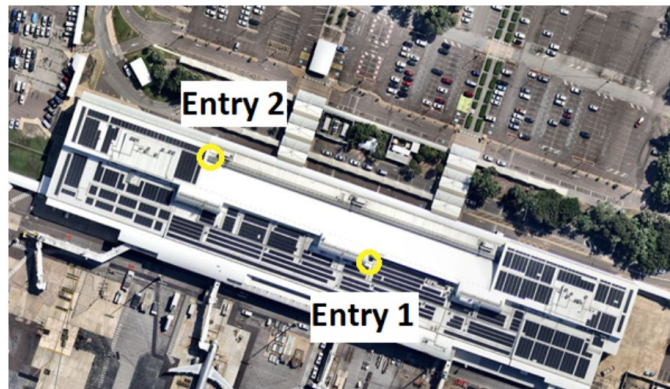


Photo 5.1 – DIA terminal roof – Entry points

5.1 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 screening point on the ground floor then using a swipe card/ e-key to access the plant room door C1 located on the first floor. There is a Tag Out procedure when accessing the roof (Attachment 1 refers).



Photo 5.2 – Plant Room 1st floor

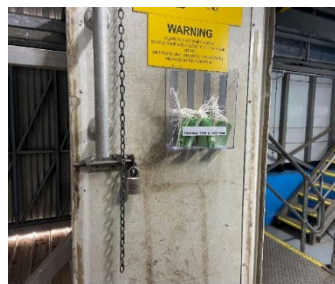


Photo 5.3 – Entry 1 - Central Plant room

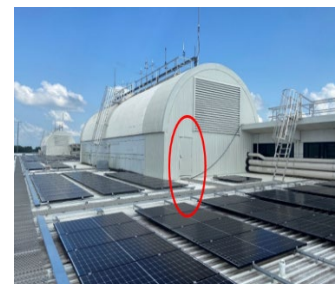


Photo 5.4 – Entry 1 (from roof side)

5.2 Entry 2

Provides access to the landside roof (referred to as Area C) & is located at the west end of the terminal through ADG Office Darwin 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.



Photo 5.4 – Access door in ADG offices



Photo 5.5 – Access door to roof

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

6. Working on the roof

This section highlights what must be done to access each designated area of the roof. No person is permitted to work outside designated walkways at any time without a Working at Height Permit approved by the ADG Health & Safety Manager or approved delegate.

CAUTION: When working on roof, section 3 Safety requirements must be adhered at all times.

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.

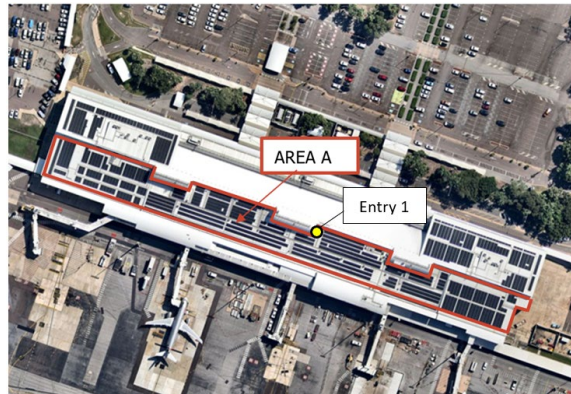


Photo 6.1 – Area A – Overview



Photo 6.2 – Area A – looking east



Photo 6.3 – Area A – looking west



Photo 6.4 – Area A – highlighting east roof live edge



Photo 6.5 – Area A – highlighting west roof live edge

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

Area B – East & West ends

This area is restricted 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 person is permitted to work outside designated walkways at any time without a Working at Height Permit approved by the ADG Health and Safety Manager or approved delegate.

Caution: Area B West has a sloping walkway at its east end & access to this walkway is prohibited unless a Working at Height Permit approved by the ADG Health and Safety Manager or approved delegate has been given (Photos 6.12 & 6.13 refer).

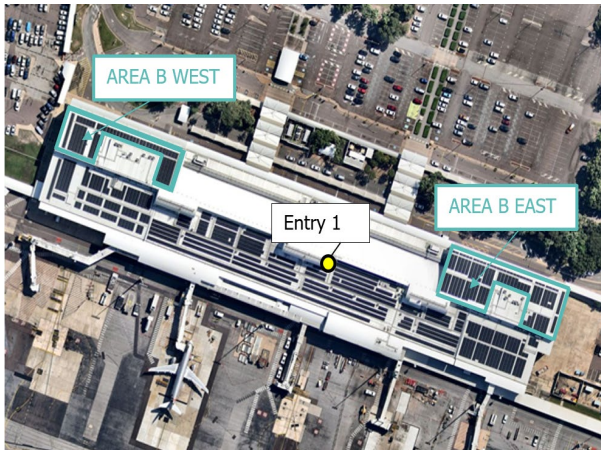


Photo 6.6 – Area B – Overview



Photo 6.7 – Area B West – Locked access from Area A to B West



Photo 6.8 – Area B West – Roof walkways Western end



Photo 6.9 – Area B West – Roof walkways looking West.



Photo 6.10 – Area B West – View from walkway facing East



Photo 6.11 – Area B West – View from walkway facing North



Photo 6.12 – Area B West – Prohibited access to eastern sloping walkway from bottom walkway– Must have a Working at Height Permit approved by ADG Health & Safety Manager or approved delegate.



Photo 6.13– Area B West – Prohibited access to eastern sloping walkway from top walkway – Must have a Working at Height Permit approved by ADG Health & Safety Manager or approved delegate.



Photo 6.14 – Area B East – Locked Ladder - Area A to Area B East



Photo 6.15 – Area B East – Western view from top roof

Area C – Flat roof Landside

Access to this part of the roof is via Entry 2 which can be accessed through the ADG offices located on the first floor of the terminal. This area has designated walkways & handrails where work can be conducted. No person is permitted to work outside designated walkways at any time without a Working at Height Permit approved by the ADG Health and Safety Manager or approved delegate.

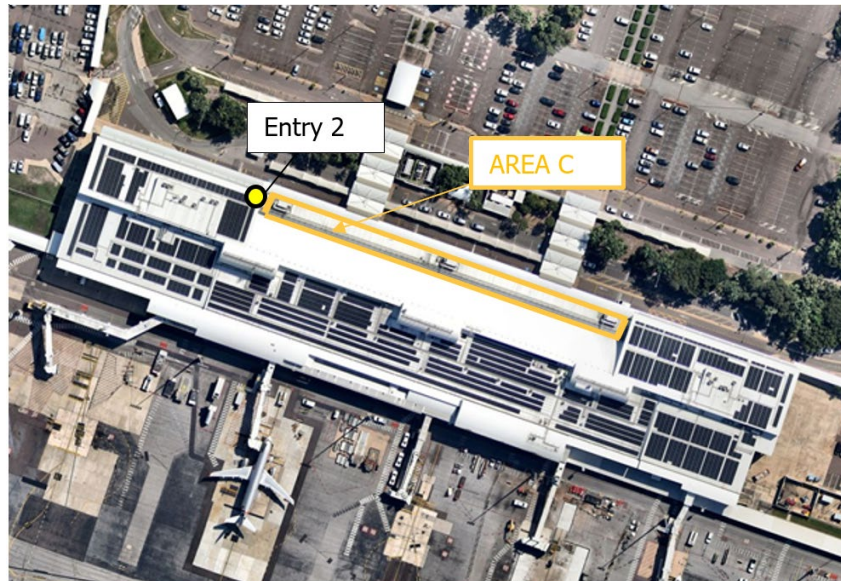


Photo 6.16 – Area C – Overview



Photo 6.17 – Area C – Viewed from Area B East



Photo 6.18 – 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, then up the east or west ladder (Photo's 6.7 and 6.14 refer). These areas have designated walkways, and no person is permitted outside designated walkways at any time without a Working at Height Permit approved by the ADG Health & Safety Manager or approved delegate.

Caution: 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 (i.e., cannot reach any live edges in any configuration); and have a Working at Height Permit approved by ADG Health & Safety Manager or delegate for this activity.

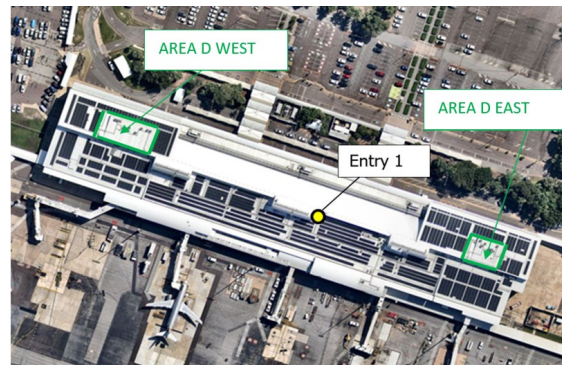


Photo 6.19 – Area D – Area D Overview



Photo 6.20 – Area D – Step access Area B to Area D West



Photo 6.21 – Area D East – Step access Area B to Area D East

Area E – Curved roof centre terminal

This area of the roof is strictly prohibited to all persons without a Working at Height Permit 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 6.22 – Area E – View from Area PR Central facing West

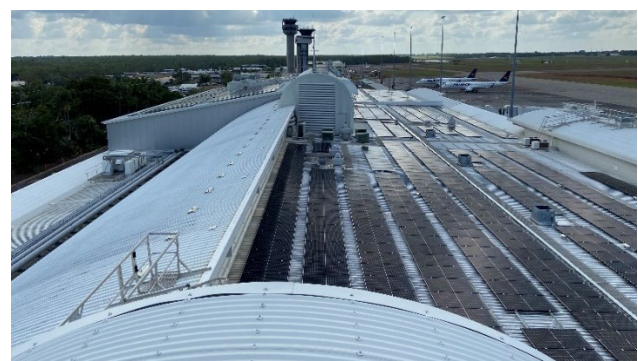


Photo 6.23 – Area E – View from Area PR Central facing East

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 Working at Height Permit approved by the ADG Health and Safety Manager or approved delegate.

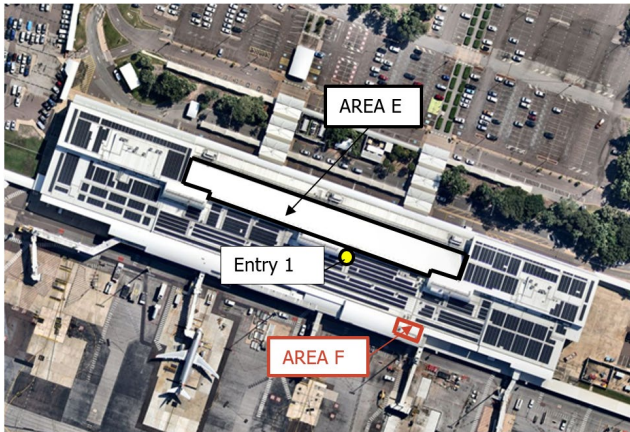


Photo 6.24—Overview Area E and Area F



Photo 6.25 – Area F – Ladder view from Area A to Area

Area PR –Plant Rooms – East, Central & West

This area is a radiation hazard area, only authorised personnel should access & 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 & handrail system. Work in these areas will require a TBRA approved by the ADG Work Health & Safety Manager or approved delegate.

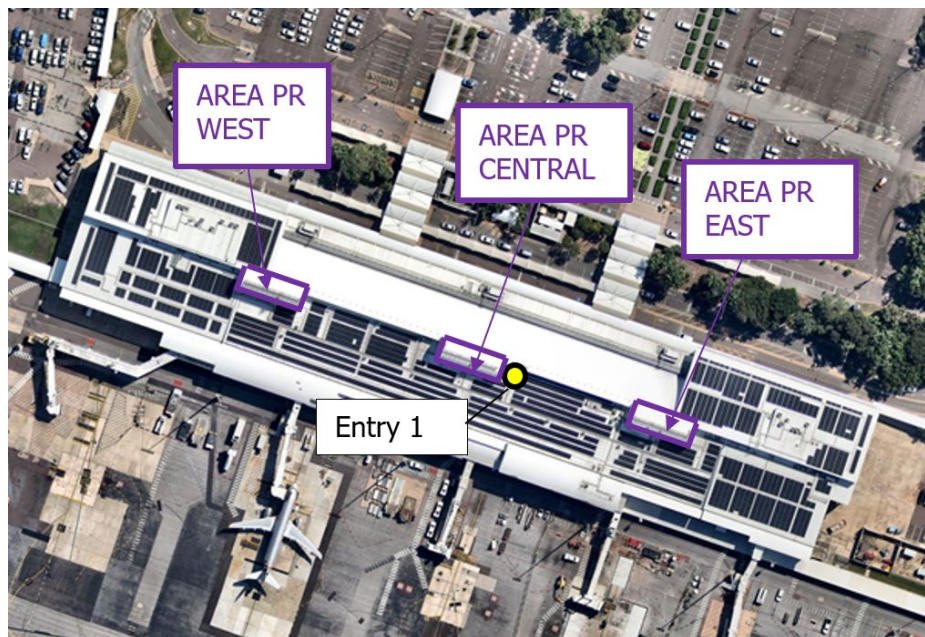


Photo 6.26 – Area PR Overview



Photo 6.27 – Area PR – Ladder view from Area A to PR



Photo 6.28 – Area PR – Radiation Hazards

Central Plant Room filter access

Access to this area is via Entry 1. Due to cramped conditions, entering this area requires two people. Once the door is opened, the ladder (Photo 6.29 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 & maintain good ladder discipline when climbing the ladder. At the top of the platform lift the safety guard rail to step onto the platform. Close the safety guard rail before commencing work. (Photos 6.30 & 6.31 refer).

Repeat the process in reverse order when exiting the area.



Photo 6.29 – Area Central PR filter



Photo 6.30 – Area Central PR filter – Correct ladder discipline



Photo 6.31 – Area Central PR filter – Guard rail closed



Photo 6.32 – Area Central PR filter – Guard rail open position

Leaving roof / returning the e-key

When persons leave the roof area for the working day they must follow the Tag Out procedure (Attachment 1 refers) and return the e-key.

Persons must advise their ADG Authorised person that they have completed their work & that they have left the roof. The ADG Authorised person must verify that the works have been completed to the quality standards required & the area inspected to ensure no rubbish or building materials have been left on the roof.

Attachment 1 – Tag Out Procedure

Background

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


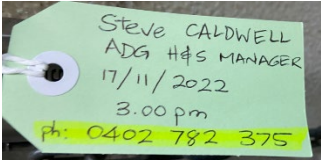


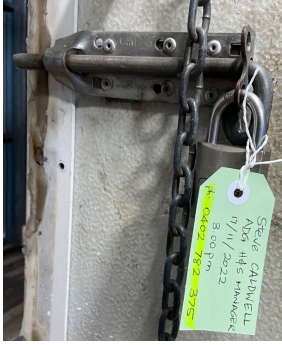

Photo 1 – Terminal roof access door is locked in the open position when you access the roof

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

Tag in

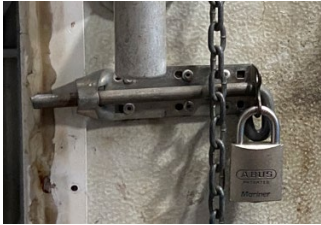
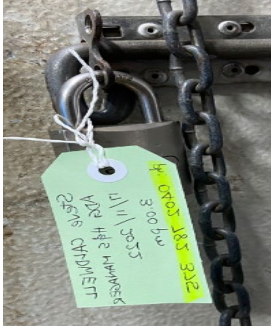
You will need to tag in before you access the roof as per the following procedures:

Step	Action	Photo
1	Grab tag from the Terminal Roof Access Tag storage box located on the access door.	
2	Write your details onto the tag – Name, & mobile number as a minimum and other information could include, date & time accessing the roof and area of the roof.	

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	<p>When returning from the roof you MUST remove your tag.</p> <p>If there are no other tags on the lock you can then lock and close the door behind you.</p>	
2	<p>If there is another tag on the lock, Do not lock the door.</p> <p>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.</p>	
3	<p>Leave the roof via the Plant Room.</p> <p>Take your used tag with you for disposal.</p>	

Note: If you identify any non-compliances with this Tag Out Procedure, please contact ADG Security.

Security.drw@adgnt.com.au / 08 8920 1822 / 0429 562 221
 After Hours contact: TAOO's: 0401 005 977