

**Cooperative Development of Operational Safety and Continuing Airworthiness
Under ICAO Technical Co-operation Programme**



COSCAP-South Asia



AERODROME MANUAL

A generic Manual produced for the use of COSCAP South Asia Member States participating in a training course conducted by ACSTE.

Recognition is made of source material drawn from the manuals, practices and procedures of the Westralia Airports Corporation, Perth, Australia – operators of Perth International Airport – for their permission to allow material from the Perth Airport Aerodrome Manual to be used in development of this Manual.

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FOREWORD

This manual has been prepared in part to satisfy obligations imposed on an aerodrome operator under Civil Aviation Regulation 5.1, and is to be regarded as the Aerodrome Manual for *{name}* Airport.

It also contains details of essential operating procedures that may not be entirely safety related, but nevertheless are required to satisfy other legal, operational requirements and common law obligations.

The Manual has been structured to allow existing documents such as the Airside Vehicle Control Handbook and Airport Emergency Plan to be directly incorporated. These will continue to be amended and published separately but should be regarded as Annexes to, but components of, the Aerodrome Manual and should be read in conjunction with it.

The Civil Aviation Authority requires the Aerodrome Operator to operate and maintain *{name}* Airport in accordance with the procedures set out in the Aerodrome Manual.

Therefore staff acting in accordance with the procedures are largely indemnified against personal liability claims, should their actions for some reason endanger the safety of aircraft operations.

It is essential that the procedures documented in this manual are an accurate reflection of current practices. If staff become aware of a divergence from these procedures, or if compliance with these procedures is impossible or impracticable for any reason, they must advise their supervisor or the Airside Safety Manager immediately. Additionally staff are encouraged to query these procedures if the intended results can be achieved in a safer, more cost effective, efficient or reliable manner.

To avoid unnecessary duplication, most procedures make reference to other technical manuals and publications. Supervisors should ensure they have a copy of each relevant publication available for reference by staff who are responsible for implementing a procedure.

Airport General Manager

PART 1

General

Part 1 - General information.

Note: Refer to Part 5 Section 1 Staff Contact List & Organisational Structure for the telephone numbers of those persons identified as having responsibility for implementing the procedures detailed in this Section.

1.1 Purpose and Scope

The purpose of the Aerodrome Manual is to provide

- ◆ Confirmation of an aerodrome operator's ability comply with the aviation legislation applicable to aerodrome operations;
 - It contains detail information regarding the aerodrome site, facilities, services, equipment, operating procedures, organisation and management for {name} Airport.
- ◆ A reference document for
 - Use by staff (and contractors) of an aerodrome operator in their activities to operate and manage the activities and business of the Airport: and
 - Use by officers of the CAA in audit and inspection activities related to {name} Airport.

1.2 Legal Requirement.

As the operator of an aerodrome serving air transport operations, {name} Airport is required by Civil Aviation Regulation 4.1 to hold an Aerodrome Certificate. Aerodrome Certificate No {nn-xx} has been issued by the CAA for this aerodrome.

The requirement for an Aerodrome Manual for {name} Airport is prescribed in Civil Aviation Regulation 3. A copy of this Manual has been provided to the CAA.

1.3 Conditions of Use

{Name} Airport operates 24 hours per day for take-off and landing of aircraft and when it is so available it shall be so under equal terms and conditions to all persons and operators.

1.4 Aeronautical Information

All data relating to the aeronautical aspect of this aerodrome are published in the *{State}* Aeronautical Information Publication. The Airside Safety Manager is responsible for complete and correct promulgation of data to AIS section of the CAA in accordance with procedures described in this Manual.

1.5 Recording Aircraft Movements

All data relating to the recording of aircraft movements is collected and recorded by Air Traffic Control. The Tower team Leader is responsible for complete and correct collection recording and reporting to the Airport General Manager in accordance with procedures described in this Manual.

1.6 Obligation of the Aerodrome Operator

Under the regulations the operator of a certificated aerodrome is to:

- ◆ Comply with mandatory standards and practices;
- ◆ Employ an adequate number of qualified and skilled staff;
- ◆ Operate the aerodrome in accordance with the procedures set out in the Aerodrome Manual;
- ◆ No later than 26 November 2005 have established a safety management system;
- ◆ Arrange for audit of the safety management system and the management of airport organisations;
- ◆ Permit access to authorised CAA officers for inspection and testing purposes related to ensuring safety at the aerodrome;
- ◆ Make required notifications to the CAA, ATC or pilots;
- ◆ Conduct special inspections as necessary;
- ◆ Remove obstructions on the aerodrome that are likely to be a hazard; and
- ◆ Erect warning signs if low flying or taxiing aircraft are likely to be hazardous to people or vehicles.

PART 2

Aerodrome Site Details

PART 3

Aerodrome Dimensions and Related Information

{NAME} INTERNATIONAL *{abbr}* **ELEV 00**

WAC *nnnn* UTC +8 S31 46.4 E115 58.0 VAR 2 DEG E PUBLIC

AD OPR: *{Aerodrome Operator name}* ; *{aerodrome operator address}*

Phone 08 94788888. AH 08 94788640. FAX: 08 92777537. www.wacph.com.au

Aerodrome Reporting Officer: 08 94788441 (for disabled aircraft removal up to B767)

AD Charges: All ACFT.

Aerodrome Obstruction Chart Type A: RWY 03/21 19th Edition (APR 2000)

RWY 06/24 19th Edition (NOV 1998)

The AD OPR does not provide ACFT marshalling services. All requests for ACFT marshalling should be directed to the airlines or a Fixed Base Operator (FBO).

RFF Category 9

MOVEMENT AREA

03/21 016 113a PCN 55/F/A/1400 (203 PSI)/T Grooved

RWY WID 300 Graded 150

06/24 061 171a PCN 50/F/A/1400 (203 PSI)/U Porous

RWY WID 300 Graded 150

1. OLS extensively infringed by terrain E of AD
2. RWY 03/21: Transitional SFC infringed W side 300 M FM RWY 03 THR. OBST is illuminated WDI.
3. RWY 06/24 Wide bodied ACFT make 180 turns only at RWY ends, other ACFT ABV F28 use MNM speed and MAX RAD turns to avoid pavement damage.
4. TWY W BTN TWY C & THR RWY 24 not AVBL as TWY for ACFT ABV BA46HJ – not for ACFT ABV 5700 KAG MTOW HN.
5. Wide bodied ACFT LDG RWY 24 may turn left into TWY J2 if operationally acceptable. Wide bodied ACFT overshoot TWY J2 shall use turning node at end of RWY 24, backtrack RWY and turn right into TWY J2.
6. The FLW taxi maneuvers are not AVBL to ACFT ABV 3700 KG MTOW:
 - A. EXIT RWY 03 Via TWY D2;
 - B. EXIT RWY 21 Via TWY N;
 - C. EXIT RWY 21 Via TWY D2;
 - D. EXIT RWY 06 Via TWY S;
 - E. EXIT RWY 24 Via TWY C1;
 - F. EXIT RWY A Via TWY J2;
7. EXIT RWY 21 Via TWY P only for ACFT with 36M MAX wingspan & BLW
8. ACFT ENG overhanging TWY edges where no blast protection is provided are requested to be OPR at low PWR to prevent erosion & ENG damage.
9. TWY D & not AVBL to wide bodied ACFT.
10. TWYs H1, H2, H3 and F AVBL to F28 ACFT and all turbo-jet ACFT will a wingspan of 24M MAX
11. TWYs H4, H5 and G AVBL to VA 146 ACFT and BLW.
12. TWY R AVBL to ACFT with a 24 M MAX wingspan and BLW
13. Apron edge taxi lane VTN TWY D & TWY J only AVBL to ACFT with 52M MAX wingspan and BLW.
14. Southern Apron Limitation: PCN 29/F/A/1400/U.

LIGHTING

RWY 03/21 MIRL SDBY PWR AVBL

RWY 06/24 MIRL SDBY PWR AVBL

RWY 03 T-VASIS 3DEG 52FT

RWY 21 HIRL HIAL - CAT 1 T-VASIS GP 3DEG 49FT

RWY 06 T-VASIS 3DEG 45FT

RWY 24 HIRL HIAL - CAT 1 T-VASIS GP 3DEG 52FT

NAVIGATION AIDS

NDB { *insert* }
 VOR { *as* }
 ILS { *required* }

HELICOPTER OPERATIONS

- 1 There are no helipad facilities. HEL parking AVBL.
- 2 ENG ground running with rotors turning is not permitted WI 20 of other ACFT, motor vehicles or BLDG.
3. Where SFC taxiing is involved, existing TWY system is to be utilised. Where possible Air taxi manoeuvres should be confined to the existing TWY system to avoid pavement contamination by grass. Air Taxiing is not permitted WI 20 of other ACFT, motor vehicles or buildings. This DIST may be increased when air taxiing over unsealed SFC.

NOTICES

- 1 SEV TURB may be experienced BLW 3000FT in the terminal area during summer months when easterly wind gradients prevail.

RUNWAY DECLARED DISTANCES

RWY	TORA	TODA	ASDA	LDA
03	3444(11299)	3690(12106)(1.78%)	3444(11299)	3444(11299)
21	3444(11299)	3644(11955)(2.31%)	3444(11299)	3444(11299)
Slope 0.2% down to N. RWY WID 45. RWS WID 30. Graded 150				
06	2163(7096)	2224(7297)(2.43%)	2163(7096)	2163(7096)
24	2163(7096)	2224(7297)(2.18%)	2163(7096)	2163(7096)
Slope from THRs 0.1% down to centre. RWY WUD 45. RWS WID 300. Graded 150.				

TAXIWAY INTERSECTION DECLARED DISTANCES

RWY 03 – TKOF from TWY L; RWY remaining 2535 (8317) reduce all DIST by 909 (2982)
 RWY 03 – TKOF from TWY K; RWY remaining 2035 (6677) reduce all DIST by 1409 (4623)
 RWY 03 – TKOF from TWY J; RWY remaining 1482 (4862) reduce all DIST by 1962 (6437)
 RWY 03 – TKOF from TWY P; RWY remaining 1474 (4836) reduce all DIST by 1970 (6464)
 RWY 06 – TKOF from TWY J2; RWY remaining 1874 (6060) reduce all DIST by 316 (1037)
 RWY 06 – TKOF from TWY J1; RWY remaining 1819 (5968) reduce all DIST by 344 (1129)
 RWY 06 – TKOF from TWY D; RWY remaining 1169 (3835) reduce all DIST by 944 (3216)
 RWY 06 – TKOF from TWY C2; RWY remaining 1012 (3320) reduce all DIST by 1151 (3776)
 RWY 06 – TKOF from TWY C1; RWY remaining 967 (3173) reduce all DIST by 1196 (3924)
 RWY 21 – TKOF from TWY N; RWY remaining 2741 (8993) reduce all DIST by 703 (2307)
 RWY 21 – TKOF from TWY D; RWY remaining 2680 (8793) reduce all DIST by 764 (2507)
 RWY 21 – TKOF from TWY P; RWY remaining 2002 (6569) reduce all DIST by 1442 (4731)
 RWY 21 – TKOF from TWY J; RWY remaining 1987 (6519) reduce all DIST by 1475 (4780)
 RWY 21 – TKOF from TWY K; RWY remaining 1432 (4698) reduce all DIST by 2012 (6601)
 RWY 24 – TKOF from TWY S; RWY remaining 1318 (4324) reduce all DIST by 845 (2772)
 RWY 24 – TKOF from TWY C1; RWY remaining 1228 (4029) reduce all DIST by 935 (3068)
 RWY 24 – TKOF from TWY C2; RWY remaining 1183 (3881) reduce all DIST by 980 (3215)
 RWY 24 – TKOF from TWY D; RWY remaining 1021 (3350) reduce all DIST by 1142 (3747)

SUPPLEMENTARY TKOF DIST:

RWY 03 – 3551(11650)(1.6%)
 RWY 21 – 3136 (10289)(1.6%) 3492(11250)(1.9%) 3637(11932)(2.2%)
 RWY 06 – 1024(3360)(2.2%)
 RWY 24 – 1852(6076)(1.6%) 2084(6837)(1.9%)

PART 4

Aerodrome Operating Procedures

SECTION 4.1 AERODROME REPORTING

Note: Refer to Part 5 Staff Contact List & Organisational Structure for the telephone numbers of those persons identified as having responsibility for implementing the procedures detailed in this Section.

4.1.1 Purpose

The aim of these procedures is to ensure that CAA and AIS are notified of any changes in the physical condition of the airport and of new obstacles that may affect the safety of aircraft operations.

4.1.2 Responsibilities

The Airport General Manager has overall responsibility for ensuring that procedures are established and resources provided to report changes to aerodrome physical characteristics, the OLS, or any other change that may affect the safety of aircraft operations.

The Airside Safety Manager is responsible for documenting reporting procedures and for advising AIS of permanent changes to airport information. He is also responsible for advising CAA of any *significant* changes to aerodrome information that may occur.

The Airport Operations Supervisor is responsible for implementing the reporting procedures documented in this manual.

The Senior Operations Officers are responsible for reporting the day-to-day serviceability of the airport and notifying temporary changes to published aeronautical information to ATC and the NOF.

4.1.3 Legislation, Standards and Technical References

Regulation 5.5 requires operators to provide up to date information on airports and on hazards to air navigation. It does this through the Aeronautical Information Publications (AIP) and Notices to Airmen (NOTAM).

Regulation 5.5 requires the operator to notify CAA immediately of any changes in airport information or in the serviceability of airport facilities. Failure to do so may jeopardise the safety of aircraft operations. Regulation 5.5 also imposes similar requirements in relation to obstacles that are detected during airport inspections.

[CAAP {list no.}](#) lists requirements for the publication of permanent airport information, and gives details of what, how and where to report, if there are changes to airport information, serviceability and obstacles.

The CAAP suggests a reporting format and provides examples of typical NOTAM. A full listing of abbreviations and phrase contractions used in encoding a NOTAM is also included.

Additional information can be found in the Manual of Air Traffic Services (MATS) and in AIP.

4.1.4 Reporting Procedures

Any situation that may have an immediate affect on the safety of aircraft operations will be reported in the first instance to ATC by radio or telephone. Confirmation by NOTAM, if applicable, will follow as soon as possible.

The designated ATC Reporting Centre for *{name}* Airport is:

- For verbal reports to ATC – *{name}* Ground (*nnn.nn* MHz) or Senior Tower Controller by telephone;
- For NOTAM action – NOTAM Office (NOF).

NOTE: Urgent messages conveyed by radio to the Control Tower will be confirmed by phone or fax to the NOF as soon as possible.

Contact telephone/fax numbers for the Senior Tower Controller and the NOF are listed in Part 5 Section 1.

In most cases airport conditions or new obstacles that need to be reported immediately will be detected during the daily serviceability inspections. The procedures for these inspections and requirements for logging the results of inspections are detailed in Part 2 Section 5.

All NOTAM action is recorded in the *NOTAM Logbook* that is maintained by the Senior Operations Officers. This logbook will be made available on request by authorised CAA officers for audit.

Permanent changes in airport information will be advised directly to CAA. Changes may be advised by email to [*{email address}*](#)

The Airside Safety Manager will also forward significant changes to information to CAA's Regional Office. The Airside Safety Manager will keep copies of amendments requested on file. The file will be made available for audit on request by authorised CAA officers.

4.1.5 NOTAM

NOTAM are used to advise pilots and other persons concerned with flying operations about matters of an urgent nature that may affect the safety of aircraft operations. In relation to an airport this includes temporary changes in published information, unserviceabilities, or newly detected obstacles.

At *{name}* Airport the delegation to originate a NOTAM is restricted to the Airport General Manager, the Airside Safety Manager, the Airport Operations Supervisor, and Operations Officers listed in Part 5 Section 1 of this manual.

	aerodromes with an instrument approach, or 100 FT for other aerodromes.
Runway Bearing	Change of 5 degrees or greater
Pavement Rating	Any reduction
Runway or Runway Strip Width	Any change
Runway Slope	Any change
Runway Surface	Any change
Declared Distances	Any change greater than 10 metre decrease or 30 metre increase
TODA Gradient	0.05% change or greater

SECTION 4.2 ACCESS TO THE MOVEMENT AREA

Note: Refer to Part 5 Section 1 Staff Contact List & Organisational Structure for the telephone numbers of those persons identified as having responsibility for implementing the procedures detailed in this Section.

NOTE: The Airport Security Program is published and distributed independently of the Aerodrome Manual. The Security Program is prepared primarily to address specific aviation security legislation administered by {e.g. the Department of Transport}. Its provisions for regulating airside access are also sufficient to satisfy separate CAA requirements.

As the Security Program is a restricted document, the provisions relevant to movement area access are summarised in this Section. These procedures should also be read in conjunction with Part 4 Section 11 Airside Vehicle Control.

4.2.1 Purpose

The aim of these procedures is to assist the safety of aircraft operations by only permitting access onto the movement area to authorised persons, vehicles, equipment, plant or animals.

4.2.2 Responsibilities

4.2.2.1 Airport General Manager

The Airport General Manager has overall responsibility for ensuring that procedures are established and resources are provided for aviation security and for the control of airside access to the airport.

4.2.2.2 Chief Security Officer

The Chief Security Officer is responsible for developing an Airport Security Program. He is also responsible for obtaining approval prior to any physical change of the airside/landside barrier (i.e. modifications to fencing, buildings, new access doors etc).

4.2.2.3 Airport Operations Supervisor

The Airport Operations Supervisor is responsible for ensuring the security surveillance tasks of the Operations Officers are carried out in a satisfactory manner, and for administration of contractors at manned access gates.

4.2.2.4 Operations Officers

Operations Officers are responsible for carrying out day-to-day security surveillance of airside areas.

4.2.2.5 Air Traffic Control

ATC has responsibility for control of vehicles on the manoeuvring area. No person or vehicle may enter this area without ATC approval. Any person entering the manoeuvring area must also hold, or be escorted by a person who holds, a Category 3 or 4 Authority to Drive Airside (see section 4.11 for details of Authority to Drive Airside permissions).

4.2.2.5 Security Service

Security Service are contracted by Airport Authority to provide a uniformed and armed security force to satisfy mandatory regulatory obligations

4.2.2.6 Aircraft Operators and Airport Tenants

Aircraft operators and airport tenants are responsible for controlling access to restricted areas via any part of their building or leased areas (i.e. passenger terminals, aircraft hangars, workshops and licensed aprons). They are required to establish and enforce procedures to prevent unauthorised airside access via these areas.

4.2.3 Legislation, Standards and Technical References

The *{specify legislation}* regulates aviation security. Airport security matters are dealt with in Part 3 - Aviation Security.

The *{specify legislation}* regulates the establishment of the Airport Security Committee and Airport Security Programs.

International standards for airport security are contained in ICAO Annex 17, and ICAO Doc. 8973/4, Security Manual.

The Aerodrome Manual requires control of airside access on the airport as a means of ensuring the safety of aircraft operations.

4.2.4 Access Controls

No person is permitted airside without lawful excuse. When within a security restricted area (SRA) or prohibited area they must display an acceptable form of identification. For these purposes the following are regarded as acceptable:

- Permanent valid Aviation Security Identification Card. (ASIC).
- Temporary valid ASIC.
- A visitor's pass. All visitors must be accompanied at all times by ASIC holder (temporary or permanent) whilst in the SRA.

Vehicle access airside is governed by the provisions of Part 4 Section 11 Airside Vehicle Control of this manual.

The entire SRA is bounded by a security fence or buildings for prevention of unauthorised entry. Unmanned gates are padlocked at all times. Vehicular access gates are either manned or electronically controlled and monitored. Pedestrian

access gates and doors are controlled by coded keypad, padlocks or magnetic swipe card.

Restricted access signs are located in buildings that provide direct airside access, at each access gate and at regular intervals along the boundary fence. The wording of these signs is in accordance with the Airport Security Program.

SECTION 4.3 AERODROME EMERGENCY PLAN

Note: Refer to Part 5 Section 1 Staff Contact List & Organisational Structure for the telephone numbers of those persons identified as having responsibility for implementing the procedures detailed in this Section.

The Airport Emergency Plan is published and distributed independently of the Aerodrome Manual. The AEP provides a formal record of the agreements reached between agencies that are expected to respond to an emergency at {name} Airport. The AEP serves to confirm compliance with CAA requirements and has been adopted as Annex 1 to this Manual.

4.3.1 Purpose

The aim of an AEP is to provide a timely and coordinated response for rescue and recovery from an emergency on airport. The primary purpose of this section is to document WAC responsibilities and background information in relation to the AEP.

4.3.2 Responsibilities

4.3.2.1 AEP Planning

The Airport General Manager has overall responsibility for establishing a plan to coordinate the response if an emergency occurs at the airport involving aircraft and/or airport facilities. The Airport Emergency Planning Committee, which is responsible for developing and maintaining the AEP, is chaired by the Airport General Manager.

The Airside Safety Manager fulfils the position of executive officer for the Airport Emergency Planning Committee.

4.3.2.2 AEP Operational Response

The operational responsibilities and procedures for WAC staff are documented in the WAC Standard Operating Procedures.

4.3.3 Legislation, Standards and Technical References

Regulation 6.1 requires the aerodrome operator to plan for emergencies that are caused by or may affect aircraft operations. These requirements are amplified in advisory material provided in [CAAP {n}](#).

International standards and recommended practices are found in ICAO Annex 14 and the ICAO Airport Services Manual Part 7.

Some State provide additional guidance to promote consistency of AEP activities. For example in Australia the document ["Airport Emergency Planning in Australia"](#) is produced and published by the National Airport Emergency Planning Committee. The document contains an AEP format that has been adopted as the standard for this Manual.

Other legislation, plans and procedures considered by the AEC in developing the AEP include:

- State Air Crash Emergency Management Plan
- State Welfare Support Plan
- State Public Information Support Plan
- State Communications Support Plan
- State Hazardous Materials Emergency Management Plan;
- Registration and Enquiry - State Emergency Management Plan

4.3.4 Airport Emergency Committees

The Airport Emergency Planning Committee (AEC) is the main forum to develop, distribute and amend the Airport Emergency Plan for *{name}* Airport. This committee will endorse any amendments to the AEP.

The Committee meets as often as is necessary to carry out its functions and will be comprised of a group of core members such as ;

- Airlines representatives
- ATC senior staff
- Chief, RFFS
- Department of Health senior officers
- Senior representatives of major hospitals
- State Emergency Service representatives
- Ambulance Service senior representatives
- Chief, Metropolitan Fire Brigade or Services
- Police Service senior staff
- Airport staff representatives

The Airport Emergency Planning Committee may form sub committees from time to time to deal with the detail of the planning processes such as;

- Welfare
- Media
- General Aviation
- Training
- Working Groups for special projects and exercise planning

4.3.5 Airport Emergency Exercises

To ensure that the plan is functional and that all agencies are familiar with their roles and responsibilities, an exercise program will be developed by the Airport Emergency Planning Committee. The committee will determine the frequency and type of

exercises held, subject to a minimum standard requirement of one major full scale exercise every two years.

Referees will be appointed to provide impartial comment on exercises and the performance of attending agencies. Each of the referees will provide an exercise critique for consideration by the Airport Emergency Planning Committee.

4.3.6 Airport Emergency Plan Review

After a major activation of the plan or following an exercise, the Airport Emergency Planning Committee or a sub-group of this committee will meet to identify areas where the plan might be improved.

4.3.7 Standard Operating Procedures

Each responding agency is responsible for developing its own procedures that represent its method of implementing the AEP.

Procedures defining the aerodrome operator's response to an emergency on the Airport have been issued as Standard Operating Procedures (SOP). These are published separately to the Aerodrome Manual as Annex 1 and comprise a part of this Manual.

SECTION 4.4 RESCUE AND FIRE FIGHTING SERVICE

Note: Refer to [Part 5 Section 1 Staff Contact List & Organisational Structure](#) for the telephone numbers of those persons identified as having responsibility for implementing the procedures detailed in this Section.

4.4.1 Purpose

The RFFS is provided with the objective of a rescue and fire fighting service to save lives. The facilities of the RFFS are to be directed at all times to attending at and dealing with an aircraft incident occurring on or in the immediate vicinity of the aerodrome.

4.4.2 Responsibilities

The Chief Fire Officer, or in his absence his delegate, is solely responsible for ensuring all equipment is available and the appropriate level of protection is available, including the requisite amount of extinguishing agents, to achieve the rated category of the RFFS.

4.4.3 RFF Category

The RFFS assessed category for the aerodrome shall be Category 9 as determined from ICAO Annex 14 (latest amendment) specification.

4.4.4 Reduction of Category

In the event that category cannot be maintained the matter is to be referred immediately to the Airport General Manager and a NOTAM raised to indicate the varied level of coverage available.

4.4.5 Inventory

An inventory of all equipment and extinguishing agent held by the RFFS is provided at Appendix {n}, which forms part of this Manual.

4.4.6 Standard Operating Procedures

Procedures defining the RFFS response to an emergency on the Airport have been issued as Standard Operating Procedures (SOP). These are published separately to the Aerodrome Manual as Annex {n} and comprise a part of this Manual.

SECTION 4.5 AERODROME INSPECTION

Note: Refer to Part 5 Section 1 Staff Contact List & Organisational Structure for the telephone numbers of those persons identified as having responsibility for implementing the procedures detailed in this Section

4.5.1 Purpose

The aim of these procedures is to ensure that the movement area, related facilities, and the obstacle limitation surfaces (OLS) are regularly inspected to ensure CAA safety standards are maintained.

4.5.2 Responsibilities

The Airport General Manager has overall responsibility for ensuring that procedures are established and resources provided for airport inspections in order to ensure that CAA standards are met.

The Airport Operations Supervisor has responsibility for ensuring that daily serviceability inspections are satisfactorily carried out and that appropriate actions/ reporting takes place as a result of those inspections.

The Senior Operations Officers are responsible for carrying out daily serviceability inspections of the movement area and the OLS. This responsibility may be delegated on a day-to-day basis by the duty Senior Operations Officer to on-shift Operations Officers.

The Airside Safety Manager is responsible for carrying out monthly inspections of airport facilities and OLS for the purposes of quality control. He is also responsible for ensuring that an Annual Safety Inspection is undertaken and the report submitted to CAA within the prescribed timeframe.

The Technical Maintenance Supervisor has the responsibility for ensuring that lighting inspections are carried out in accordance with the inspection and maintenance schedules detailed in Part 4 Section 6 Aerodrome Lighting of this manual.

The Airport Lighting Team Leader and Technical Officer Power Generation are responsible for carrying out and recording the inspection and maintenance of all airport lighting systems.

5.3 Legislation, Standards and Technical References

Regulation 6.3 requires the aerodrome operator to maintain airport facilities in a safe physical condition and to monitor the OLS for the presence of obstacles.

In accordance with regulations CAA will be notified if any changes in the physical condition or obstacles are detected that may affect the safety of aircraft. These reporting requirements are dealt with separately in Part 4 Section 1 of this Manual.

The relevant CAA standards are set out in *{specify detail}*. The equivalent international standards and recommended practices are to be found in ICAO Annex 14.

4.5.4 Serviceability Inspections

Operations Officers are engaged in a 24 hour roster to ensure continuous monitoring of airport serviceability.

4.5.4.1 Logbooks and Trigger List

Serviceability inspections are recorded in the *Operations Officers Logbook* and *Trigger List*.

The logbook entries should include the time that each serviceability inspection was performed and a cross-reference to the *Trigger List* serial number. Any significant occurrences or defects identified should be recorded along with action taken to rectify the problem. For example;

- Movement area deficiencies requiring a *Works Order* (note serial number);
- Significant safety or security events (separate form also required).
- NOTAM issued (separate *NOTAM Request* form also required);
- OLS infringements;
- Brief details of AEP events (more comprehensive details may be required in a separate report);
- Bird or animal strikes (separate *Bird Strike* form also required);
- Significant bird activity;
- RVR/VAL start and end times (it is not necessary to record each visibility reading in the logbook);
- Hazmat spills (separate form also required);
- Livestock transfers airside;

The logbook should be signed by the Operations Officer on start and completion of a shift of duty. The trigger list form should be completed for each inspection with ticks or crosses to denote whether each item is satisfactory. If a cross is placed against an item, details of the problem should be recorded in the logbook.

Logbooks and *Trigger Lists* are to be retained as a permanent record of airport serviceability and made available on request for audit by authorised CAA staff.

A sample Serviceability Inspection Trigger List is at Section 4.5.7

4.5.4.2 Communications

When driving a vehicle or on foot on the movement area all inspecting personnel shall keep a strict lookout and radio listening watch for aircraft.

For access to the manoeuvring area in a vehicle, all operations, maintenance and airline personnel will comply with the requirements of the Airside Vehicle Control Handbook. Refer to Part 4 Section 11 of this Manual for details.

While operating on the manoeuvring area i.e. within taxiways, taxiway strips, runways, runway strips and approach areas, all personnel must maintain continuous communication with ATC. All radios other than VHF air-band transceivers must be switched off.

4.5.4.3 Inspection Procedure and Frequency

Serviceability inspections shall be carried out as follows:

- Two routine daily serviceability inspections at approximately midday and midnight local time;
- After heavy rainfall, strong winds or other significant phenomenon which could reasonably be expected to effect the serviceability of the airport;
- When requested by ATC (i.e. after an abnormal landing); or
- If advised by a reliable source such as groundstaff, aircraft pilot, or airline representative, that there is a possible problem on the movement area.

4.5.4.4 Unserviceabilities

Operations Officers who detect an unserviceability on the movement area will take the following actions in sequence:

- **Inspect** the facility;
- **Report** the unserviceability to ATC or other appropriate personnel for action, as specified in Part 4 Section 7 of this manual;
- **Mark** (if required) the unserviceable portion of the movement area;
- **Repair** - arrange with relevant maintenance personnel for repairs to the affected area to be carried out in accordance with the provisions of Part 4 Section 7 of this manual;
- **Review** the situation prior to the nominated review date/time; and
- **Report** to ATC if the affected area has been reinstated or nominate a new expected duration date/time the unserviceability.

An unserviceable portion of a runway shall be marked in accordance with the standards specified. Allowance shall be made for the effect of jet blast, RESA, and obstacle clearance in displaced threshold calculation considerations.

During daylight hours, Runway Threshold Identification Lights (RTIL) should be considered for temporary displaced thresholds on runways 03/21 and 06/24 when used by RPT jet aircraft. RTIL design details for the system used at *{name}* Airport are shown on plans *{nnn}* and *{nnn}* available from the drawing office.

If an unserviceability will continue during night operations, the standards contained in *{specify source}* for the provision of temporary runway end, threshold and limit of works lighting, will also apply. The Airport Lighting section will install temporary lighting as part of the permanent lighting system. The use of battery operated lights to define temporary runway ends and threshold lighting is permissible in emergency

situations only. Permanent lighting within the unserviceable area shall be masked. This includes green taxiway lighting situated within the runway and visible from the approach direction.

4.5.4.5 Reasons For Closure of Movement Area

Reasons that justify closure of specific facilities include:

Runway

- Runway surface flooding
- Pot holes in the runway or runway strip surface
- Deep erosion in the runway strip surface
- Obstacles on the runway or runway strip surface or infringing the associated approach/take-off surfaces
- Loose stones or other debris on the runway surface (with immediate clean up delayed)
- Excessive bird activity on a particular runway or within the approach/take-off areas of that runway
- Or any other reason which may affect the safety of aircraft operations (i.e. full or partial loss of lighting system)

Note: In determining whether a temporary threshold can/should be used instead of a full runway closure, consideration will need to be given to the length of the remaining serviceable portion (seek airline advice regarding useable lengths), and wind/traffic conditions at the time and the usability of the other runway(s) (seek ATC advice).

Normally, any condition that renders the graded portion of runway strip unserviceable, also renders the runway unserviceable.

Taxiways and Aprons

- Surface flooding
- Pot holes in surface (if beyond the scope of immediate maintenance)
- Deep erosion of the taxiway strip surface
- Loose stones or other debris covering the surface (immediate maintenance delayed)
- Soft surface
- Immovable obstacles
- Fuel or oil spills
- Or any other reason which may affect the safety of aircraft operations (i.e. full or partial loss of lighting system)

Note: In addition to an unserviceability of the movement area, any unserviceability or damage to the T-VASIS system or visual ground aids that cannot be readily rectified is to be reported. A NOTAM may be required. For details of the correct reporting.

4.5.5 Monthly Technical Inspections

Monthly inspections of airport facilities shall be performed by the Airside Safety Manager (or delegate) to assess the effectiveness of the daily inspections undertaken

by the Operations Officers. These inspections shall use similar procedures and checklists as used for the daily inspections.

Copies of each monthly report shall be held by the Airside Safety Manager and will be forwarded to relevant officers for action where required.

4.5.6 Annual Safety Inspection

An annual airport safety inspection is required to formally establish compliance with CAA safety standards and shall be carried out in accordance with the guidelines published in [CAAP {n}](#).

It shall be undertaken by a qualified Airport Safety Inspector, and/or under the direction of the Airside Safety Manager. A Safety Inspection Report shall be prepared no later than 15 months after the previous report and submitted to CAA within 30 days of completing the inspection.

The report shall include the most recent approach/take-off climb survey information, or a statement indicating that there is no change to the information; and a formal narrative report highlighting important items for attention.

The report shall clearly identify whether the airport physical and operating standards comply with mandatory standards or the formal exemptions current at the time of the report. It shall also review the status and adequacy of this Manual.

If appropriate, the report will include advice of permanent changes to the physical condition of the airport and any amendment action required to update AIP information.

4.5.7 Serviceability Inspection Trigger List

{develop as appropriate for particular airports}

SECTION 6 VISUAL AIDS, ELECTRICAL SYSTEMS AND AERODROME LIGHTING.

Note: Refer to [Part 5 Section 1 Staff Contact List & Organisational Structure](#) for the telephone numbers of those persons identified as having responsibility for implementing the procedures detailed in this Section.

4.6.1 Purpose

The aim of these procedures is to detail the arrangements for the inspection and maintenance of airport lighting and the supply of stand-by power.

4.6.2 Responsibilities

The Airport General Manager has the overall responsibility for the provision of airport lighting facilities and associated stand-by power generating equipment.

The Technical Maintenance Supervisor is responsible for ensuring that appropriate maintenance and technical inspections of airport lighting facilities are carried out and recorded in accordance with the standards and the requirements of this manual.

The Airport Lighting Team Leader is responsible for carrying out and recording the inspection and maintenance of all airport lighting systems.

The Technical Officer Power Generation is responsible for carrying out and recording the inspection and maintenance of on-airport emergency power generation facilities associated with airport lighting.

The Airport Operations Supervisor is responsible for ensuring that the Senior Operations Officers (or staff delegated by the Senior Operations Officers) carry out and record daily serviceability inspections of airport lighting in accordance with the requirements of this manual.

The Senior Operations Officers are responsible for carrying out visual inspections of airport lighting to monitor serviceability and reporting any defects detected to the Airport Lighting Team Leader. The Senior Operations Officer may delegate this task on a day-to-day basis to a suitably qualified Operations Officer.

4.6.3 Legislation, Standards and Technical References

Regulation *{n}* requires provision and maintenance of an appropriate lighting system for the movement area to permit operations at night.

The relevant CAA standards for airport lighting are contained *{specify source}*, which also specifies that a stand-by power supply must be provided for airport lighting systems for precision approach runways.

International standards and recommended practices applicable to airport lighting are specified in ICAO Annex 14 and Part 5 of the ICAO Aerodrome Design Manual.

4.6.4 Precautions Against System Failure

Runways 03/21 and 06/24 are supplied from separate external high voltage supplies. Consequently, loss of one major feeder will only result in loss of mains supply to one runway. In the event of a prolonged failure, the entire lighting system can be supplied from one feeder with manual changeover.

Complementing this facility, each runway has independent automatic stand-by generating sets confining the effects of a generator loss to one runway only. The time taken for a generating set to start and assume load is less than 15 seconds.

Field circuits for both high and low intensity runway lighting on 03/21 and 06/24 are interleaved. The loss of one circuit will therefore only affect every second runway light in the system. Similarly, loss of a single phase will only affect every second light.

High intensity approach lighting systems for runways 21 and 24 have their load spread evenly across the three-phase supply. The loss of one phase or one regulator will only affect every third light with the pattern still intact.

Runways 03/21 and 06/24 have a regulator supplying the TVASIS system at each end. Each runway end has both a day and night field circuit supplying the TVASIS. Loss of a regulator will disable the TVASIS at that runway end - loss of a day or night field circuit will only affect the ability to select the day or night intensity settings.

The following responses are required if facility or equipment faults are identified with a fault category:

4.6.4.1 Category 1 Fault

Indicates that a service or facility has been interrupted or withdrawn. Priority action is required from maintenance staff to repair the fault and restore service or facility. After hours, this may require call-out of maintenance staff.

4.6.4.2 Category 2 Fault

Indicates that a service or facility has been interrupted but will have no operational effect if restored by a nominated time. Action by maintenance staff to repair the fault may be deferred provided that the service can still be restored within the nominated time.

4.6.4.3 Category 3 Fault

Indicates that a fault exists with the service or facility that has not reduced performance to a level where it is required to be withdrawn. Repair action should be undertaken as soon as possible but may take place during the normal hours of duty of maintenance staff.

4.6.5 Standby Generation

Stand-by generation equipment is provided to ensure continuity of power should there be a failure in the main external supply. The objective in providing stand-by power is to enable all operational lighting including runway, taxiway, apron, fire stations and T-VASIS and nose in guidance systems to continue operation at an acceptable level of service and efficiency while maintaining safety standards and providing adequate security.

Two mobile generating sets (50 kW and 250 kW) are available to provide additional support at times when permanently installed generating sets may be unavailable.

4.6.6 Serviceability Inspections

Senior Operations Officers or Operations Officers carry out daily serviceability inspections of the airport lighting facilities as part of their normal serviceability inspections at approximately midnight.

The inspecting officer will submit a *Works Order* form to the Airport Lighting Team Leader detailing lighting unserviceabilities that exceed those specified in Chapter 12 Section 13 of the RPA. Other minor lighting defects (i.e. a single unserviceable taxiway light) are logged on the *Trigger List* and are not normally passed on to the Airport Lighting Section. These are detected and repaired during the weekly technical inspections undertaken by the Airport Lighting Section.

4.6.7 Technical Inspections

Airport Lighting Maintenance Schedules and *Airport Lighting Logbooks* record details of routine technical inspections and maintenance of the airport lighting system. These records are held by the Airport Lighting Team Leader.

The Technical Officer Power Generation retains *Generator Maintenance Schedules* for power generating equipment. These are held in the electrical workshop. *Generator Logbooks* showing details of inspections and maintenance carried out are held in each power house.

4.6.8 Fault Reporting System

The fault reporting and recording system comprises the following documents:

- *Fault Reporting Register*
- *Airport Lighting Logbook*
- *Works Orders* by the Operations Safety/Security Section

4.6.9 Inventory of Airport Lighting Facilities

An inventory of airport lighting facilities is contained in TABLE 1 below.

Details of the runway and approach lighting along with the visual approach slope indicator systems as required for publication by AIS, are set out in Part 3 Aeronautical Information.

TABLE 1 - INVENTORY OF AIRPORT LIGHTING

Equipment	Runway 03/21	Runway 06/24	Runway 11/29
Low intensity edge lighting (3 stage)	White omni-directional elevated edge light at 60 m intervals	White omni-directional elevated edge light at 60 m intervals	White omni-directional elevated edge light at 90 m intervals

Runway holding points are 3 inset uni-directional yellow lights placed symmetrically about the taxiway centreline.

Taxiway lighting consists of inset bi-directional green centreline lighting with the exception of taxiway F that is provided with blue elevated omni-directional edge lighting. Taxiway to taxiway clearance lines (where provided) are not lit.

Apron floodlighting is provided on the international, domestic and GA northern apron.

SECTION 4.7 MOVEMENT AREA MAINTENANCE

4.7.1 Purpose

This section is incomplete due to the scope of possible arrangements possible for maintenance of airside areas. Details will depend on individual aerodrome operator's preferences.

However the section dealing with aerodrome works provides a framework of process for managing aerodrome works safely and should be read in conjunction with this section.

SECTION 4.8 AERODROME WORKS SAFETY

Note: Refer to Part 5 Section 1 Staff Contact List & Organisational Structure for the telephone numbers of those persons identified as having responsibility for implementing the procedures detailed in this Section.

4.8.1 Purpose

The aim of these procedures is to describe the arrangements for the planning and safe conduct of works that affect the movement area or OLS.

4.8.2 Responsibilities

The Airport General Manager has overall responsibility for operational safety aspects of aerodrome work and for the formal approval of Method of Working Plans (MOWP).

The Airside Safety Manager will determine if a MOWP is required, and will also check the MOWP for accuracy and endorse the proposed staging of works.

The Airport Operations Supervisor is responsible for tasking of Works Safety Officers (WSO) appropriate to the level and complexity of the work.

The WSO is responsible for ensuring that works are executed in accordance with standard operating procedures and the arrangements notified by means of a MOWP. The WSO must be on site during the works, and may give directions to any person associated with the work to ensure the safety of aircraft operations.

The Director Technical Services is responsible for carrying out aerodrome works planning, notification, technical supervision of airport works, and will appoint a Project Officer/Manager for works that require a Method of Working Plan (MOWP).

The Project Officer/Manager is responsible for detailed works planning and coordination and ensuring that works are carried out in accordance with the MOWP.

For each major work the Project Officer/Manager also has responsibility for raising a Permit to Commence Work (PERCOW) which details (amongst other items) the special precautions needed to ensure continuity of essential services.

4.8.3 Legislation, Standards and Technical References

Regulation {n} requires the aerodrome operator to provide details of procedures for the planning and safe conduct of airport works, and specifies a requirement to properly mark any works area on or in the vicinity of the movement area.

Regulation {n} empowers CAA to regulate the use of an airport by issuing directions relating to air safety. The CAA has issued Directions Relating to Aerodrome Works under this regulation. For ease of reference these directions have been included in {specify source}.

These Directions prescribe minimum requirements for airport works including the need for NOTAM and/or MOWP, the standard form of a MOWP, and the appointment of a Project Manager and Works Safety Officer.

4.8.4 Works Planning

The CAA Directions permit airport works on the manoeuvring area to be carried out either as "time limited works", or under the provisions of a MOWP.

Airport works caused by unforeseen circumstances do not require a MOWP if it is impractical to prepare one in the time available. All reasonable measures must be taken to issue a NOTAM giving the date/time for commencement of the work with as much advance notice as possible, preferably 48 hours if this is achievable.

Refer to Part 4 Section 5 of this manual and standards for guidance in marking unserviceable areas and determining temporary declared distances. Refer to Part 2 Section 1 of this manual for information on originating NOTAM.

4.8.5 Time Limited Works

Works that can be completed within 10 minutes and will not disrupt normal aircraft operations are permitted without a NOTAM. Time limited works in this category include grass mowing, pavement rolling and sweeping, minor repairs to pavements, maintenance of markings, markers and lights, surveys and inspections.

With ATC agreement, personnel with hand tools are allowed to work inside the runway strip during aircraft operations under any of the following conditions;

- At all times except during air transport jet operations.
- At all times for gable marker maintenance including grass mowing (operations must be within 2 metres of the markers when inside the runway strip).
- Ground surveys associated with nav aid flight calibration flights (navaid calibration).

Personnel must remain in radio contact and ATC may vacate them if they consider it warranted to any operation.

Sufficient training will be given to persons working on the movement area who are not under the direct control of an Operations Officer.

Time limited works requiring more than 10 minutes but no more than 30 minutes, are advised by NOTAM which states the nature of the unserviceability, and the length of time required to terminate work and restore the works area to normal safety standards. The NOTAM is issued at least 24 hours prior to the proposed work, to minimise disruption to aircraft flight planning. Unserviceability markings/ markers will be displayed if required.

Works that require more than 30 minutes to restore to normal safety standards will be subject of a MOWP except for emergency repairs.

Annual take-off and approach surveys conducted from base lines established outside the runway strip are not subject to these constraints. Following notification to ATC, these surveys may be carried out at any time and in any location on the baseline at the discretion of the WSO/surveyor.

4.8.6 Method of Working Plan

All scheduled airport works, other than time limited or emergency works, will require a MOWP, and an appropriate NOTAM. In general these are works that require partial or complete runway or taxiway closures, or will cause significant disruption to aircraft parking arrangements on aprons.

The MOWP document provides formal advice to the aviation industry and other involved parties of the planned arrangements for the conduct of airport works. In particular, it advises of restrictions placed on aircraft operations and the works organiser as a consequence of the works.

A MOWP will be prepared for works that will have a major operational impact, or cause disturbance to operations over an extended period.

In planning the works the Project Officer/Manager must consult with organisations that may be affected. The extent and formality of the consultation process will depend on factors such as the complexity and physical scope of the work and likely extent of disruption to normal aircraft operations.

The Project Officer/Manager will consult with CAA when necessary to identify operational impacts and the measures necessary to ensure an acceptable level of aviation safety.

After consultation the Project Officer/Manager will determine the restrictions to works and to aircraft operations. The draft MOWP is referred to the Operations Section for final comment.

Each MOWP is to be signed as approved by the Airport General Manager (or in his absence by the Airside Safety Manager).

The MOWP format will be as specified in the CAA Directions Relating To Aerodrome Works.

The MOWP is to be issued at least two weeks prior to the scheduled commencement of work, using the standard distribution list included at the end of this Section.

4.8.7 Permit To Commence Work

In addition to a MOWP, some airport works may also cause disruption (or potential disruption) to the supply of essential engineering services. The Project

Officer/Manager shall issue a PERCOW that specifies conditions that must be observed to ensure the maintenance of essential services.

4.8.8 Works Safety Officer (WSO)

The Airport Operations Supervisor will nominate a WSO for each project, ensuring that the WSO skills and competencies are matched to the complexity of the MOWP.

In many cases the WSO will be an Airport Operations Officer but other officers may be nominated, particularly for routine maintenance tasks. Trained WAC officers such as grounds maintenance and airport lighting personnel may serve as their own WSO in some cases.

The specific functions of a WSO are to;

- Ensure the safety of aircraft operations and the day-to-day safe conduct of works in accordance with provisions of the MOWP.
- Ensure that the Works are notified by NOTAM and that the text of each NOTAM is exactly as set out in the MOWP.
- Supply ATC, on a daily basis, with all information necessary to ensure the safe conduct of Works.
- Discuss with the Works Organiser, Project Manager on a daily basis (and if required with the Airport Operations Supervisor/ Airside Safety Manager also), any matters necessary to ensure the safe conduct of Works in relation to operational safety.
- Ensure that unserviceable portions of the movement area, temporary obstructions, and the limits of the Works area are correctly marked and lit in accordance with the MOWP.
- Ensure that vehicles and plant engaged on aerodrome works comply with the obstacle marking and lighting standards or alternatively are directly under escort.
- Ensure that vehicles, plant equipment and materials not directly in use on the Works, are parked or stored outside the movement area, and do not obstruct the approach, takeoff or transition OLS, or interfere with radio navigational and landing aids.
- Ensure that access routes are in accordance with the MOWP.
- Direct the immediate removal of vehicles, plant and personnel from the movement area where necessary to ensure the safety of aircraft operations.
- Ensure that the movement area is safe for normal aircraft operations following removal of markers, vehicles, plant equipment and personnel from the Works area.
- Ensure that floodlighting or any other lighting required for works is shielded so as not to represent a hazard to aircraft operations.
- Immediately on completion of the works, the Works Safety Officer is to ensure that the Reporting Centre is advised formally of the date of completion and time of cancellation of any associated NOTAM.

4.8.9 Marking and Identification of Vehicles and Plant

Vehicles and self-propelled items of plant are regarded as mobile obstacles while they are engaged on Aerodrome Works.

Vehicles or plant that are regularly used on the movement area by day should be a conspicuous colour. Vehicle warning beacons (where fitted) will be amber, yellow or orange flashing or rotating dome lights, of a type commercially available as an automobile accessory.

Vehicles or plant used on the movement area at night, while the aerodrome is available for night operations, should be operated with dipped headlights and tail-lights, and a suitably mounted warning beacon.

Works Safety Officer vehicles and others used regularly on Time Limited Works or otherwise intended for use without direct Works Safety Officer supervision must be fitted with an air band transceiver and a warning beacon.

Vehicles and plant used infrequently on aerodrome works, e.g. contractor's plant and equipment, are not required to meet the colour or lighting standards, or to be fitted with radio transceivers. They must be escorted at all times by a Works Safety Officer.

Vehicles and plant that are confined within the limits of a marked works area are deemed to be under Works Safety Officer escort.

4.8.10 Conduct of Aerodrome Works

Only vehicles, plant, equipment, materials and personnel actually engaged on Works are permitted on the movement area. All other vehicles, plant, equipment and materials will be parked or stored in an area designated by the Works Safety Officer. Temporary buildings and structures, and all materials and equipment associated with the works, will be sited or restrained so that they cannot be disturbed by jet blast or strong winds.

Personnel associated with the works will not be permitted to enter the movement area, whether on foot or while operating vehicles or plant, unless authorised and escorted by the Works Safety Officer.

4.8.11 Works Security Arrangements

The Contractors access to airside will be through a controlled gate and escorted to the work site if this gate is remote from the work site.

Temporary security passes will be issued to the contractor's supervisor or foreman and he will be responsible for the persons under his control.

In some circumstances, the Chief Security Officer may arrange for the work site and its associated access route to be temporarily excised from the Security Restricted Area, so easing the security requirements for access by staff and contractors.

4.8.12 Method of Working Plan Distribution

AIRLINES – Domestic and International

FIXED BASE OPERATORS

ATC Tower Team Leader

Chief, RFFS

Aerodrome Inspector, CAA

Military Aviation Organisations

Aerodrome Operator staff

SECTION 4.9 AIRCRAFT PARKING CONTROL

Note: Refer to Part 5 Section 1 Staff Contact List & Organisational Structure for the telephone numbers of those persons identified as having responsibility for implementing the procedures detailed in this Section.

4.9.1 Purpose

This aim of these procedures is to provide for the orderly and safe allocation of aircraft parking bays at *{name}* Airport. Parking bays have been designed and marked to ensure that appropriate separation distances are maintained and that aircraft refuelling and servicing activities can be undertaken without interference to adjacent parked aircraft.

4.9.2 Responsibilities

The Airport General Manager has overall responsibility for implementing procedures for aircraft parking control.

The Airside Safety Manager has responsibility for approving the design of aircraft parking areas. The Design and Documentation Supervisor and staff are responsible for designing the layout of aircraft parking areas.

The Duty Manager is responsible for the day-to-day allocation of aircraft parking bays, including stand-off bays, on the international apron.

Day-to-day parking arrangements on the domestic aprons are under the direct control of the airlines. The Duty Manager may be required to negotiate itinerant aircraft parking from time to time with other airline and operator needs.

The Senior Operations Officer is responsible for allocation of remote parking on the taxiway system and for parking on the domestic block-paved area.

In the General Aviation area separate parking is provided for fixed and rotary wing aircraft. Individual companies have licences to operate in designated areas and are responsible for controlling aircraft parking within those areas.

4.9.3 Legislation, Standards and Technical References

Regulation *{n}* sets out the CAA requirements for aircraft parking control procedures.

Standard clearances to be maintained in the design of aircraft parking positions are specified in standards *{specify source}*. Refueling clearances are specified in standards *{specify source}*. Apron marking standards are found in standards *{specify source}*.

The relevant international standards and recommended practices are set out in ICAO Annex 14 and in the ICAO Aerodrome Design Manual Parts 2 and 4.

4.9.4 Aircraft Parking Areas

There are four areas at *{name}* Airport designated for aircraft parking - International, Domestic, General Aviation and Helicopters. Plans detailing these areas are issued to the person/organisation having day-to-day management responsibility for the area (i.e. airline, Duty Manager, Senior Operations Officer).

Air Traffic Control Surface Movement Controller (SMC) will provide guidance to aircraft if required. Signs or pavement markings indicate pavements that are weight and/or size restricted.

As noted previously, day-to-day aircraft parking on the international terminal, remote taxiway parking and the domestic block-paved (old helipads) is controlled by the aerodrome operator. These procedures deal only with aircraft parking in those areas.

In other areas aircraft parking is at pilot responsibility.

4.9.4.1 International Apron

The Duty Manager issues a daily parking bay allocation plan to the International Terminal Control Centre (ITCC). The ITCC operator inputs the bay allocations into the flight information displays, which are then broadcast to all relevant areas.

The airline operator or agent passes relevant aircraft parking bay information to inbound aircraft via company VHF frequency radio.

Engine start and push back procedures are controlled by the SMC.

4.9.4.2 Domestic Apron

The domestic airline operators control aircraft parking on the domestic aprons. The Airport General Manager retains the right to intervene in apron management under certain circumstances which may include issues such as conflicts between operators, allocation of certain parking bays for use by VIP aircraft, relocation of aircraft for safety reasons, etc.

The airline operator passes relevant parking bay information to inbound aircraft via company VHF frequency radio.

Engine start and push back procedures are controlled by the SMC.

4.9.4.3 General Aviation Aircraft Parking

General Aviation aircraft parking at *{name}* Airport is largely confined to the north-western corner of the airport. Parking areas with hangar frontage are generally under the day-to-day management of the hangar tenants.

Tie-down GA parking is available adjacent to the northern apron. Non-leased parts of this apron are available for itinerant GA aircraft.

The block paved area (old helipads) is under the day-to-day control of the Senior Operations Officer. Any company requiring use of the area must first check availability with the Senior Operations Officer.

4.9.4.4 Helicopter Parking

Helicopter parking is available on the northern domestic apron area and is marked by blue cones.

4.9.4.5 Parking in Emergencies

During an emergency, if normal parking positions are not available, the Airport General Manager may establish alternative positions and procedures in consultation with affected operators.

This may include parking on runways or taxiways or in areas where pavement strengths would normally preclude frequent operations of larger aircraft.

4.9.5 Visual Docking Guidance Systems

Nose-in guidance (NIG) systems are provided at the terminals. The system comprises centreline alignment and side markers to indicate when to stop the aircraft. Details of the NIG systems provided for parking bays are contained in the Aerodromes and Ground Aids section of the AIP (AIP AGA)

Restrictions apply to certain parking bay, either for all or selected aircraft. Details of these restrictions and the NIG system are shown on the parking position restriction plans listed *{at the end of this Section}*.

At each bay, located at the base of the pole where the control box is mounted, a weatherproof switch is provided for the aerobridge operator/engineer for selecting the NIG system.

The NIG system contains 5 elements as detailed below.

4.9.5.1 Bay Position Marker

This marker indicates the number of the parking or docking position and has large white numerals displayed on a black background on two sides of the 3-sided box. At night these numerals are outlined by green neon lights that are switched on automatically by a photoelectric cell.

4.9.5.2 Aerobridge Retracted Indicator

This indication consists of a red light mounted on the aerobridge to warn that the aerobridge is not fully retracted and aircraft should not proceed. A green light is provided to indicate that the aerobridge is fully retracted and the visual guidance system is selected. Only one of these lights can be on at any one time.

4.9.5.3 Centreline Guidance Light

The centreline guidance lights are mounted on the face of the terminal building or on a pole. A pair of green/red lights provides azimuth guidance to the pilot sitting in the left hand seat to correctly align the aircraft on the centreline of the bay. These are standard units as documented in AIP-AGA.

4.9.5.4 Stop Indicator Or Side Marker

A combination of side marker boards or side marker lights is provided to indicate the aircraft stopping position.

The side marker board is fitted with a number of vertical slats, each one designated for use by a particular type of aircraft. The slats are painted green on the approach side and red on the rear. With the aircraft on the centreline, the pilot stops directly opposite the appropriate marker slat; i.e. when no green or red is visible on that particular slat. The units are as documented in AIP-AGA.

The side marker light provides the stop location by the emission of light signals from the unit. When approaching the correct parking position, the pilot first sees a green triangular light which decreases in size as the correct stop position is approached. At the correct stopping position, two vertical white slots of light are seen. If the aircraft overshoots, a single slot of red light replaces the white slots.

4.9.5.5 Emergency or Overshoot Indicator

A flashing red light mounted on the centreline guidance light, side marker board and side marker light can be operated by ground personnel to indicate an immediate stop is required due to an emergency or overshoot situation.

4.9.6 Procedures For Handling Oversize Aircraft

All operations by aircraft larger than those normally handled at *{name}* Airport, or that require parking at other than designated parking positions, require prior advice to the Airport General Manager (or delegate) for assessment of runway, taxiway and apron clearances and weight limitation requirements.

The Airport General Manager may grant approval and issue directions to Duty Managers, Operations Officers and the airline or ground handling agent, for taxiing, towing, marshalling and parking the aircraft.

4.9.7 Radio Frequencies

Airline	Frequency MHz
Airline #1	130.6
Airline #2	129.5
Airline #3	131.9
Airline #4	128.8
Airline #5	128.9

SECTION 4.10 APRON SAFETY MANAGEMENT

Note: Refer to Part 5 Section 1 Staff Contact List & Organisational Structure or the telephone numbers of those persons identified as having responsibility for implementing the procedures detailed in this Section..

4.10.1 Purpose

{INSERT APPROPRIATE PROCEDURE AS NECESSARY}

SECTION 4.11 AIRSIDE VEHICLE CONTROL

Note: Refer to Part 5 Section 1 Staff Contact List & Organisational Structure or the telephone numbers of those persons identified as having responsibility for implementing the procedures detailed in this Section..

4.11.1 Purpose

The purpose of the Airside Vehicle Control Handbook (the Handbook) is to ensure the safe airside operation of vehicles on {name} Airport. The Handbook is compiled as Annex {n} to this Manual and forms part of it. However it is issued as a separate document to this manual.

4.11.2 Responsibilities

The Airport General Manager has overall responsibility for the development and implementation of procedures and provision of resources for the control of persons and vehicles entering and operating on the airside of {name} Airport.

The Airport Operations Supervisor is responsible for ensuring that the provisions of the Handbook are implemented, for conducting audits of Approved Issuing Authorities, and authorising in writing the appointment of Approved Issuing Officers.

The Senior Operations Officers and approved Operations Officers are responsible for carrying out instruction, testing and maintaining records of persons approved for an Authority to Drive Airside (ADA).

The Senior Operations Officers and Operations Officers have day-to-day responsibility for ensuring that the movement of persons and vehicles airside are in accordance with the Handbook.

Companies wishing to operate a vehicle airside on {name} Airport are responsible for obtaining an Airside Vehicle Permit and an Authority to Drive Airside for each vehicle and driver, respectively. They are also responsible for training of drivers to operate specific vehicle types (for example hi-lift trucks, pallet lifters, tugs etc) and also for providing training of company specific requirements (for example procedures when operating around aircraft).

If authorised by the Airport General Manager, a company accepts responsibility for issuing the relevant Permit/Authority for their own vehicles and employees as an Approved Issuing Authority. Such authorisation is restricted to the issue of a category 1 or 2 Authority to Drive Airside. Companies are responsible for maintaining an acceptable standard of driver training and testing. (Note: The requirement for authorisation by the Airport General Manager of Approved Issuing Authorities only applies from the date of issue of this manual)

The Airport General Manager has sole responsibility for issue of an ADA category 3 or 4.

Airside drivers are responsible for compliance with the detailed rules set out in the Handbook.

4.11.3 Legislation, Standards and Technical References

Regulation 6.1 requires the Airport General Manager to document procedures for the control of vehicles operating on or in the vicinity of the movement area. The appropriate CAA standards are detailed in *{specify source}*.

Regulations *{specify source}* require drivers issued with a ADA category 3 or 4 (see para 4.11.4) at *{name}* Airport to also hold an Aircraft Radiotelephone Operator Certificate of Proficiency.

4.11.4 Application of Procedures

Companies and persons requiring access to airside for aviation business purposes must obtain sufficient copies of the Handbook to provide one for each airside driver. This is the regulatory document for drivers and provides the basis for testing applicants for an Authority to Drive Airside.

The airside operation of each vehicle must be approved by the issue of an Authority for Use Airside (AUA), which must be displayed on the vehicle. For this purpose the term vehicle includes any motorised equipment used in aircraft servicing or maintenance.

Each driver must be approved to operate a vehicle airside on *{name}* Airport by the issue of an Authority to Drive Airside.

The Authority to Drive Airside will specify the areas where a driver is authorised to operate:

- Category 1 - Perimeter roads only;
- Category 2 - Perimeter roads and aprons; or
- Category 3 - Perimeter roads, aprons and taxiways; or
- Category 4 - All movement areas.

For an Authority to Drive Airside category 1 or 2, companies may be authorised as an Approved Issuing Authority for their own vehicles, staff and subsidiary companies (not contractors). Only the aerodrome operator is authorised to test staff requiring a category 3 or 4 Authority to Drive Airside.

Approved Issuing Authorities are required to nominate Approved Training Officers for endorsement by the Airport Operations Supervisor. Applicants for an Authority to Drive Airside are to be trained and tested by Approved Training Officers for their knowledge of:

- Rules for Drivers Operating Airside;
- Geography of Perth Airport;

- Airport markings;

The Airport Operations Supervisor will audit each Approved Issuing Authority in relation to the above items to ensure that an adequate training course is provided and that records are maintained to demonstrate a uniform standard of training and testing is being provided.

In addition to the above, Approved Issuing Authorities are expected to undertake company and equipment/plant specific training and other items such as aircraft towing and pushback procedures.

CAA has agreed that RFFS personnel holding a category 3 or 4 Authority to Drive Airside are not required to hold an Aircraft Radiotelephone Operator Certificate of Proficiency.

4.11.5 Enforcement

Note: the information in this section is provided as a guide as to how an enforcement policy may be implemented

The Airports (Control of On-Airport Activities) Regulations permit withdrawal or suspension of an Airside Vehicle Permit or an Authority To Drive Airside (irrespective of the source of issue), or an authorisation for a company to be an Approved Issuing Authority.

Operations Officers will log any breaches of the airside driving rules, and report them to the Airport Operations Supervisor so that appropriate action may be initiated against offending drivers. The Airport General Manager will be the arbiter in dispute situations.

Breaches that constitute an incident require submission of an *Incident Report* form.

A demerit point system is in place for breaches of the Airside Vehicle Control Handbook driver rules. Demerit points are held for a period of two years. An Authority to Drive Airside will be withdrawn for a period of one month if a driver accumulates more than 12 demerit points. Subsequent accumulation of an additional 12 demerit points may result in permanent withdrawal of an Authority to Drive Airside.

Demerit points scale

Exceeding Speed Limit

Apron	4-9 km/h	2 points
	10-14 km/h	3 points
	15-19 km/h	4 points
	20 + km/h	6 points
Perimeter Road	10-14 km/h	1 point
	15-29 km/h	3 points

30-44 km/h	4 points
44 + km/h	6 points

Failing to stop at a stop sign	3 points
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Failing to comply with road signs and markings	3 points
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Failing to give way to an aircraft	4 points
------------------------------------	----------

Driving contrary to any other rules in the Airside Vehicle Control Handbook	3 points.
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SECTION 4.12 WILDLIFE HAZARD MANAGEMENT

Note: Refer to Part 5 Section 1 Staff Contact List & Organisational Structure for the telephone numbers of those persons identified as having responsibility for implementing the procedures detailed in this Section.

4.12.1 Purpose

The aim of these procedures is to minimise the hazard to aircraft operations created by the presence of birds and/or animals on or in the vicinity of the airport.

4.12.2 Responsibilities

The Airport General Manager has overall responsibility for the bird and animal hazard management program for *{name}* Airport.

The Airport Operations Supervisor is responsible for ensuring the bird and animal hazard management program is satisfactorily carried out and is also responsible for allocating a suitable area for the transfer of livestock to and from aircraft, and will provide safety procedure guidelines to airline companies as required.

Senior Operations Officers and Operations Officers are responsible for the day-to-day implementation of the bird and animal hazard management program. They are responsible for bird harassment and dispersal and are authorised to use firearms with "Birdfrite" or live ammunition while operating within the airport boundary.

4.12.3 Legislation, Standards and Technical References

Regulation requires documented procedures to deal with wildlife hazards. CAA Standards *{specify source}* state that a wildlife hazard management program must include arrangements for:

- wildlife monitoring and hazard assessment
- wildlife hazard notification
- wildlife reduction methods

4.12.3.1 Bird Hazards

Legislation *{specify source}* classifies a bird strike as an air safety incident that must be reported to the Air Safety Investigators (ASI). The ASI have determined that Bird Strike reporting is only required if there is damage to aircraft. (Some aerodrome operators may continue to collect information about bird strikes on their on aerodromes for statistical purposes).

ICAO Annex 14 includes reference to bird hazard reduction. Detailed guidance on the identification and assessment of bird hazard is given in the ICAO Airport Services Manual, Part 3, "Bird Control and Reduction."

4.12.4 Monitoring Bird Activity

Bird activity on the airport will be monitored as follows:

- During routine daily serviceability inspections by Operations Officers
- By bird counts carried out 3 times a week by Operations Officers (usually Tuesday, Thursday and Sunday)
- As part of the annual safety inspection

For routine bird count purposes the Airport has been divided into 18 separate count areas. These areas are shown on Plan {*nnn*}, Bird Count Areas.

The number of each species present on airport is to be recorded on a standard Bird Count Form. These forms will be retained at the airport either for auditing by CAA and as a data source for analysis if required.

Areas of high attraction or unusual bird activity in the airport vicinity, particularly in the approach and take-off areas, will be monitored separately as required.

A Bird Strike Report Form will be completed for each bird strike and the carcass collected and frozen for future reference if required. The report form will be held by the Airport Operations Supervisor for analytical purposes. Carcasses will be identified, usually by enclosing a copy of the bird strike report form. The carcass may need to be sent to a laboratory for analysis, but if this has not been required by the ASI or CAA at the end of six months it may be destroyed.

All bird strikes or suspected strikes will be recorded, even if the carcass has not been recovered.

4.12.5 Bird Control

The on-shift Senior Operations Officer or Operations Officers carry out harassment and dispersal of birds.

Any birds sighted adjacent to runways and runway strips and posing a threat to the safety of aircraft operations, will be immediately dispersed using "Birdfrite" cracker shells. The killing of protected birds will only be undertaken as a last resort. In general all plovers and pigeons found airside, or other troublesome territorial birds which ignore persistent harassment efforts, will be culled and their remains buried.

Excessive bird activity on a particular runway or within the approach/take-off areas of that runway may require closure of the runway or raising a NOTAM to advise of increased bird activity. If possible, it is helpful in the NOTAM to specify parts of the airport affected. Part 4 Section 1 details the appropriate reporting procedures.

All bird harassment activities are to be logged on a *Bird Dispersal Form*.

4.12.6 Use of Firearms

Firearms must not be discharged on aprons, near public or airport staff amenity areas, over boundary fences or in the direction of an aircraft. They must be unloaded when carried in vehicles or stored in the locker.

Neither firearms nor ammunition will be taken outside the airport boundary (except for firearm maintenance). When not in use, firearms must be held in the secure lockable cabinet or containers provided.

Firearms must not be discharged from within vehicles at any time.

4.12.7 Environmental Management

Operations Officers who monitor wildlife activity will monitor any obvious environmental attractions to birds such as nearby rubbish dumps (either legal or illegal), wetland areas, etc. These will be reported to the Airport Operations Supervisor who will determine what action should be taken.

Contractors operate landside to routinely collect rubbish from public areas to help remove bird attractions.

As required recommendations and/or restrictions to new developments on or adjacent to the airport to prevent bird attraction will be made by staff as necessary.

4.12.8 Animal Hazards

Animals are normally prevented from entering airside by keeping gates shut and maintaining the integrity of the boundary fence. However, if animals do gain entry to airside, ATC will be advised immediately and the animals removed as soon as possible. Should the problem be beyond the scope of airport staff, then special assistance will be called e.g. staff of specialist animal organisations or an appropriate commercial organisation.

Airport staff pursuing animals adjacent to aircraft movement areas will take reasonable steps to ensure that their actions do not frighten animals into the path of an approaching aircraft.

Firearms will be used only as a last resort to harass animals away from the movement area. Public and airport staff sensitivities are always to be considered and animals will not be destroyed unless there is immediate danger to essential facilities or to the safety of an aircraft.

4.12.9 Livestock Transfers

The provisions of the following instructions will be applied for the safe transfer of livestock between the landside of *{name}* Airport and an aircraft, or vice versa. These requirements do not apply to domestic pets normally consigned through freight companies or airline check-in.

For livestock transfer where stock is not containerised, only positions designated by the Airport Operations Supervisor will be approved. In such cases livestock transfers will wherever possible be remote from other aircraft operations.

For all livestock transfers the Senior Operations Officer will be the contact point for the aircraft ground handler. The Senior Operations Officer will notify other Operations Officers as appropriate.

The airline operator or aircraft ground handling agent shall inform the Senior Operations Officer of any proposed livestock transfer, giving reasonable prior notice. Written notification must include shipment and flight details.

Where the livestock transfer to/from airline containers is to take place on the Airport, this activity should be confined to a landside area. Where this is not possible for any reason, the operator or agent must provide a secure race to convey livestock between the land transport and the aircraft door, to minimise the risk of livestock escaping airside.

Where this method of transfer is to be used the operator or agent is to provide details of the proposed equipment and procedures. These details must be faxed to the Senior Operations Officer at least 7 days prior to the proposed shipment. The Airport Operations Supervisor will impose any conditions required to maintain the safety of aircraft operations.

An Operations Officer will be present during the loading or unloading of such livestock to or from aircraft. He will maintain radio contact with ATC at all times.

Should livestock escape either on airside or landside the operator/agent shall immediately notify the Airport General Manager, and take immediate action to recapture it. If airside this is to be under supervision of the Operations Officer, who will provide assistance. If landside, the operator/agent shall take immediate action to ensure the safety of the public. The Airport General Manager, will provide assistance wherever possible, and issue any directions considered necessary.

On completion of the livestock transfer, the Operations Officer is required to ensure that the operator/agent leaves the apron and loading areas in a clean and serviceable condition.

Operators/agents are required to ensure compliance with all relevant non-aviation legislative requirements for the handling and transport of livestock.

SECTION 4.13 OBSTACLE CONTROL

Note: Refer to Part 5 Section 1 Staff Contact List & Organisational Structure for the telephone numbers of those persons identified as having responsibility for implementing the procedures detailed in this Section.

4.13.1 Purpose

The aim of these procedures is to ensure that suitable provision is made to monitor and control the erection of temporary and permanent structures that may adversely impact aircraft upon operations.

4.13.2 Responsibilities

The Airport General Manager has overall responsibility for establishing procedures to monitor and notify the presence of obstacles to CAA, and to control the erection of temporary and permanent structures in the vicinity of the airport.

The Planning Coordinator is responsible for handling applications for approvals to erect permanent structures and other temporary structures if the duration is likely to exceed three months. This responsibility does not include the delegation to issue a NOTAM.

The Airport Operations Supervisor is responsible for handling applications for temporary structures if the duration of the structure is likely to be less than three months. This function is normally delegated to the Senior Operations Officer on a day-to-day basis and may require the issue of a NOTAM.

The Design and Documentation Supervisor is responsible for providing technical advice on the location of OLS/PANS-OPS surfaces in relation to controlled activity applications and the preparation of Type A charts.

The Airside Safety Manager has responsibility for monitoring published information relating to obstacles (i.e. arranging approach and take-off surveys, normally done as part of the annual safety inspection, and for Type A chart surveys).

The Operations Officers are responsible for day-to-day monitoring of the OLS and PANS-OPS to detect unapproved obstacles and to take measures to have them removed or lowered to a safe operational height.

4.13.3 Legislation, Standards and Technical References

Section {nn} of the Civil Aviation Act empowers CAA to make regulations to prohibit, restrict or remove structures or objects that may cause obstruction or hazard to aircraft operations.

Regulation {n} requires all reasonable measures to be taken to detect new obstacles and to notify CAA giving full details of them. Regulation {n} requires appropriate procedures to be documented.

Regulation *{n}* empowers CAA to determine if an obstacle, or any structure taller than *{xxx}* metres is a hazardous object, and would endanger the safety of aircraft operations. In relation to any new building proposal, the aerodrome operator may apply to CAA for a hazardous object determination.

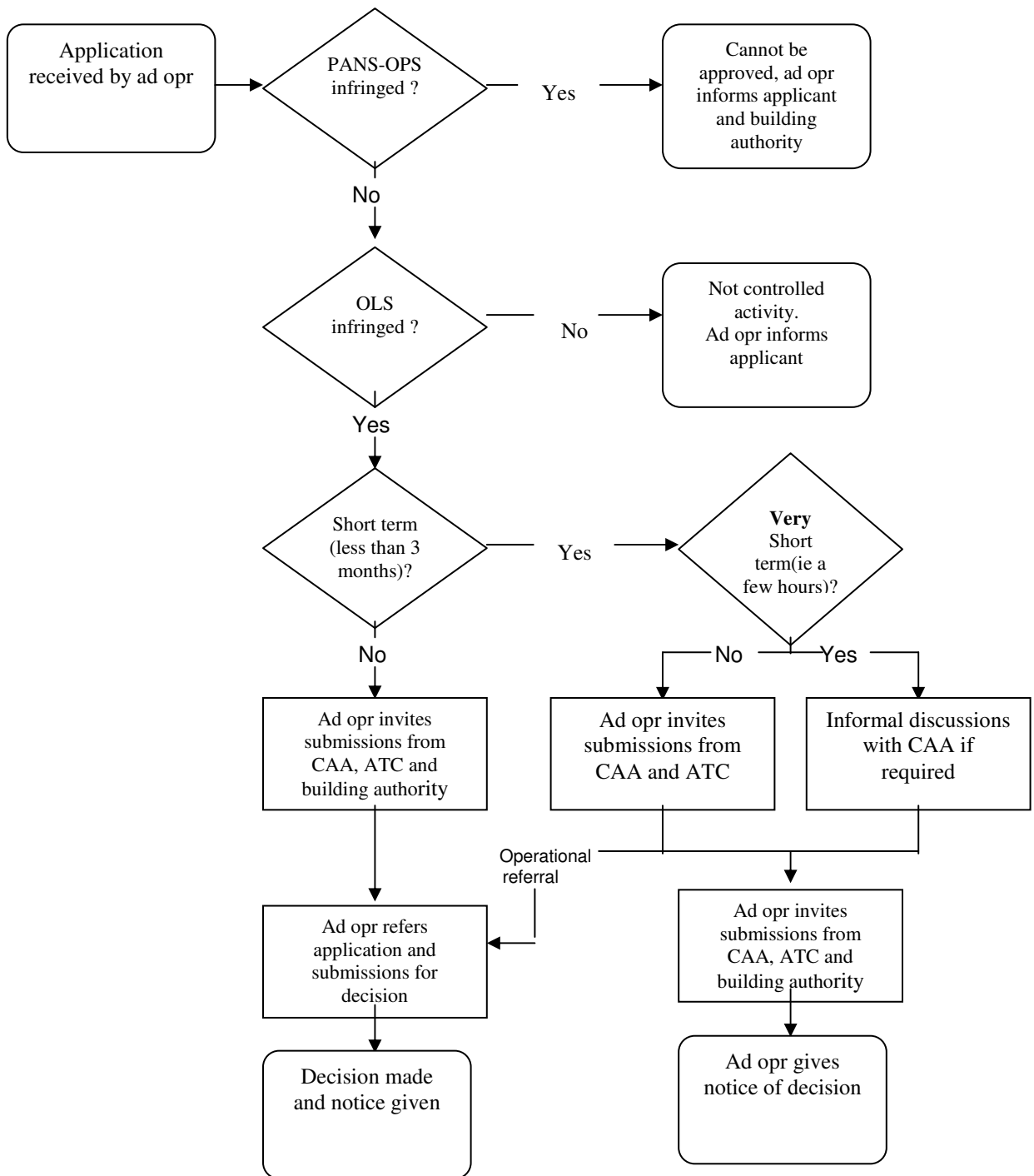
Legislation *{specify source}* confers the legal power for a CAA officer to enforce the removal of an obstacle that is erected without approval.

Definitions and standards for the establishment of the OLS are contained in CAA aerodrome Standards. These generally follow international requirements specified in ICAO Annex 14.

The separate functions of the OLS and PANS-OPS surfaces are explained in the ICAO Airport Services Manual, Part 6 "Control of Obstacles." Details of the surfaces used to account for obstacles in instrument procedure designs are contained in the ICAO document "Procedures for Air Navigation Services - Aircraft Operations (PANS-OPS), Volumes I and II.

4.13.4 Administration of Obstacle Control

The process for assessing and approving an application to erect an obstacle is dependant on the whether it is temporary or permanent and whether it infringes the OLS or PANS-OPS. The process is depicted in the following flow diagram:



4.13.5 Obstacle Monitoring

Operations Officers will monitor the OLS and critical PANS-OPS surfaces daily during their airport serviceability *inspections*.

If a temporary obstacle is erected without approval and detected during the airport serviceability inspection, the Senior Operations Officer will:

- Immediately advise ATC of the obstacle;
- If the obstacle is on airport land have it removed immediately, if off airport land, attempt to negotiate its removal to below the OLS/PANS-OPS surfaces or to a reduced height so that published runway information is not affected;
- If negotiations fail;
 - Advise the Airport Operations Supervisor or Airside Safety Manager who will contact the local council
 - If the obstacle is infringing a take-off or approach splay, discuss the issue with ATC. Determine the operational requirements for runway use and whether alternatives are available. If the runway is operationally required, calculate and mark off the reduced runway length available (displaced threshold) and raise a NOTAM
 - If the obstacle is infringing any other part of the OLS/PANS-OPS surfaces, raise a NOTAM with a description of the obstacle, height AMSL, magnetic bearing and distance from the ARP, and surface infringed. (CAAP {n} contains guidelines)
- Once the obstacle is removed, advise ATC, remove temporary markings and cancel the NOTAM.

Any apparently new permanent obstacles detected during daily inspections should be assessed and surveyed by the Airside Safety Manager as soon as possible to determine the extent of the infringements and changes to published information. If they exceed the limits specified in Section 3.7, the Airside Safety Manager will raise a NOTAM and advise AIS. If the changes are significant, a copy of this advice is to be forwarded to the CAA.

4.13.6 Operational versus Design Surfaces

Operations Officers should note the distinction between *Operational* and *Design* surfaces.

Design surfaces are used for determining allowable heights of *permanent* obstacles and take into account the ultimate development of the airport including extensions to, or additional runways. Runway extensions in the 03 and 06 take-off directions are catered for in the design surfaces.

Operational surfaces are used for *temporary* obstacle assessment and reflect today's runway configurations. The OLS plan in the Senior Operations Officer's office is based on operational standards and should therefore be used for assessment of *temporary* obstacles only.

Another method of calculating the allowable heights for temporary obstacles within the take-off splay is to assess them against the existing STODA distances and TODA gradients. A temporary obstacle may be permitted above the standard OLS heights provided that the published STODA distances and TODA gradients are not altered. This should only be done, if an assessment of the Type A chart for the runway shows that the proposed obstacle height is generally comparable to other obstacles in the vicinity.

4.13.7 Type A Charts

Type A charts are produced for runways 03/21 and 06/24. The current editions of the charts are published in AIP. Generally, the charts are updated on a two-year cycle. They are made available to operators on request. Currently the following operators and organisations are on the distribution list for updated type A charts and any amendments thereto;

- All operational Airlines
- ATC
- CAA
- Jeppesen
- SITA

SECTION 4.14 DISABLED AIRCRAFT REMOVAL

Note: Refer to Part 5 Section 1 Staff Contact List & Organisational Structure for the telephone numbers of those persons identified as having responsibility for implementing the procedures detailed in this Section.

The Disabled Aircraft Removal Strategy Plan is a supporting plan issued as part of the {name} Airport AEP, which in turn forms Annex 1 to this Manual and is a component of the Manual.

4.14.1 Purpose

The aim of the Disabled Aircraft Removal Strategy Plan is to provide for an efficient, co-ordinated response to quickly and safely remove an aircraft that has caused temporary closure of a runway, taxiway or affected the OLS.

These procedures are intended to deal solely with disabled aircraft within the airport boundary only after the requirements of the AEP relevant to the aircraft incident or accident have been completed.

4.14.2 Responsibilities

4.14.2.1 Airport General Manager

The Airport General Manager has overall responsibility for the Disabled Aircraft Recovery Plan at the Airport.

For minor incidents, the Airport General Manager is responsible for controlling and co-ordinating the response for recovery of a disabled aircraft. This may require liaison with the airline or aircraft operator and the Air Safety investigation team and/or Police (if involved) to obtain a clearance to remove the aircraft.

In the event that the Airport General Manager is not available the Airside Safety Manager, Chief Security Officer or Airport Operations Supervisor will undertake these responsibilities.

For accidents of a more serious or protracted nature, the Chairman of the Airport Recovery Committee has responsibility for coordinating the removal of the aircraft and returning the airport to full operational status. The Director Technical Services normally fills this position.

The Senior Operations Officer is responsible for notifying ATC of disabled aircraft (if ATC are not already aware) and raising an appropriate NOTAM. He is also responsible for ensuring that any unserviceable portions of the manoeuvring area are correctly marked, in accordance with CAA standards, to provide for safe aircraft operation on the remaining usable areas.

4.14.2.2 Air Traffic Control

ATC will initiate activation of the Recovery Plan if advised of an immobilised aircraft by the pilot.

Note This next section is included as an example of how specific circumstances may be included in an Aerodrome Manual. In such cases the enabling legislation to permit the procedure should be cited.

Due to the remote location of the Airport, ATC may direct the removal of an aircraft - irrespective of investigation requirements - if it is considered vital to do in the interests of air safety.

RFFS may be required to remain on standby to assist with operations as required, especially when de-fuelling is required.

4.14.2.3 Aircraft Owner/Operator

The aircraft owner, defined as the holder of the certificate of registration, is responsible for the aircraft removal and disposal of fuel and other hazardous materials that have been spilt as a result of the incident/accident.

Prior approval for aircraft removal may be required from either Air Safety Investigation and/or Police for accidents of a more serious nature that require on-scene investigations.

4.14.2.4 Air Safety Investigation

The Air Safety Investigator is responsible for the investigation of all aircraft accidents and incidents involving civil aircraft operations. If he elects to conduct an on-scene investigation, a disabled aircraft cannot be removed from the movement area until authorised by him.

4.14.2.5 Police

The Police (if involved through activation of the AEP), in conjunction with the Air Safety Investigator, authorise the removal of a disabled aircraft when their on-scene investigation has been completed.

4.14.2.6 Air Force Director of Flying Safety

If an emergency involves an Air Force aircraft, the Air Force Director of Flying Safety authorises its removal including any dangerous cargo on the aircraft.

4.14.3 Legislation, Standards and Technical References

Regulation {n} requires documented procedures for the removal of a disabled aircraft on or near the movement area.

Under Regulation {n} it is permissible to extricate persons, animals or mail and to take whatever action may be necessary to "...protect the wreckage from further damage, and to prevent danger to aircraft, other transport or the public."

International recommendations for the removal of disabled aircraft are described in the ICAO Airport Services Manual, Part 5.

4.14.4 Immediate Operational Considerations and Actions

The following criteria are to be used for determining the availability of runways affected by a disabled aircraft:

- If the aircraft is within 105 metres of the runway centreline for RWY 03/21 and 06/24, or inside the runway strip for RWY 11/29, revised declared distances must be provided.
- If the aircraft is inside the flyover areas for RWY 03/21 or 06/24 (located between 105-150m from centreline), unrestricted operations may continue in VMC. In IMC CAA may impose operational restrictions (i.e. raising the landing minima). In either case, a NOTAM must be issued advising of the location of the aircraft, along with any operational restrictions.
- If the threshold requires displacement it will be marked in accordance with CAA standards and revised declared distances calculated.

4.14.4.1 Aerodrome Controller

- Notify the RFFS.
- Notify the Senior Operations Officer.
- Determine ETA of all aircraft requiring use of the closed runway.
- Determine latest time for affected aircraft to divert.
- Notify Air Safety of;
 - Aircraft identification and type.
 - Nature of aircraft unserviceability.
 - Location of aircraft.
 - Section of the manoeuvring area affected.
 - POB.
 - Other aircraft likely to be affected by a prolonged unserviceability of the manoeuvring area.
- Advise aircraft owner.

4.14.4.2 International Terminal Control Centre (ITCC)

- Confirm Senior Operations Officer is aware of the details.
- Notify Airport General Manager.
- Notify Airside Safety Manager.

4.14.4.3 Senior Operations Officer

The Senior Operations Officer will;

- Complete AEP duties before becoming involved with the removal.

- Inform the Aerodrome Controller of the location, nature and extent of the accident with emphasis on the operational viability of the manoeuvring area.
- Arrange NOTAM action if applicable in accordance with the requirements of Section 3 Part 2 Section 3 of this manual.

4.14.5 Aircraft Removal

When a disabled aircraft is removed from the airport manoeuvring area it shall be taken to a location, and by a route, approved by the Airport General Manager (or Chairman of the Airport Recovery Committee as appropriate).

If removal is delayed or is progressing at an unacceptable rate, the Airport General Manager, on instruction from ATC, will remove the disabled aircraft at the owner/operator's expense and risk. Prior to doing so, the Airport General Manager will request the owner to complete the indemnity release at Section 4.14.6 below.

4.14.5.1 Aircraft Owner

When advised of a disabled aircraft, the owner should;

- Liaise with the Airport General Manager.
- Consider contingency planning for aircraft removal as soon as practicable following its release by the Air Safety investigator.

4.14.5.2 Air Safety Requirements

Airport staff are required to cooperate with and provide all reasonable assistance to Air Safety Investigators should an on-scene investigation be necessary.

Air Safety requirements are broadly stated in AIP under Accidents and Incidents.

4.14.6 Indemnity and Release - Movement of Stationary Aircraft

TO: Aerodrome Operator

1. I, the undersigned, being the owner or the duly authorised representative of the owner of the aircraft described below hereby agree to provide this indemnity and release on the conditions set out below.
2. I agree and consent to the aerodrome operator, its servants, agents, contractors and employees to move at any time required the aircraft at my sole cost and expense.
3. In consideration of the aerodrome operator moving the aircraft I agree to indemnify and keep indemnified the aerodrome operator against all and any loss damage cost charge expense or other liability however suffered paid or incurred by or threatened against the aerodrome operator in relation to or arising out of or in consequence of any action, proceeding, claim or demand which is or may be brought made or prosecuted or threatened against the aerodrome operator in respect of any loss of or damage to property, loss of life

or personal injury or other loss that may arise in any way from the moving of the aircraft by the aerodrome operator.

4. I further agree to release the aerodrome operator from all claims actions, causes of actions, proceedings and demands which I and or the owner now has or but for this indemnity and release would or might at any time in the future have against the aerodrome operator and from all present and future liability of the aerodrome operator to me and or the owner however caused in relation to or arising out of or in consequence of the moving of the aircraft.
5. I confirm that it is the intention of this indemnity and release that each servant, agent, contractor and employee of the aerodrome operator obtain the benefits expressed in their favour under this indemnity and release and be entitled to enforce such benefits.
6. I confirm that I and the owner have abided and will abide by all applicable laws including without limitation acts, regulations, bylaws, directions and determinations relating to or made by the Civil Aviation Authority, the Office of Air Safety Investigation, the aerodrome operator and any other relevant authority or body which has authority in relation to interference with or movement of an aircraft.

Description of Aircraft

Type of Aircraft:

Registration No:

Full name:

Signed by:

Date:

In the presence of:

SECTION 4.15 HANDLING OF HAZARDOUS MATERIALS

Note: Refer to Part 5 Section 1 Staff Contact List & Organisational Structure for the telephone numbers of those persons identified as having responsibility for implementing the procedures detailed in this Section.

Hazardous materials emergencies are dealt with in the context of the {name} Airport AEP which forms Annex 1 to, and is a component of, this Manual.

4.15.1 Purpose

This aim of these procedures is to ensure the safe handling of hazardous materials or dangerous goods on airport, including:

- Flammable liquids and solids
- Corrosive liquids
- Compressed gases
- Magnetised or radioactive materials
- Explosives
- Biological substances

The procedures are intended to ensure both public safety and the continued safety of aircraft operations.

4.15.2 Responsibilities

The Airport General Manager has overall responsibility for establishing procedures to ensure the safe handling of hazardous materials at the Airport.

The Senior Operations Officer is responsible for designating appropriate parking areas for aircraft transshipping explosives.

In the course of their normal day-to-day airside surveillance, Operations Officers are responsible for limited monitoring of the movement of hazardous materials on airside (when such movement is known to them).

Each organisation involved in air freighting hazardous materials is responsible for compliance with dangerous goods provisions, adopting correct procedures for packaging, storage and their transfer between aircraft and landside facilities.

For explosive freight, forwarders are responsible for advising the Airport Operations Supervisor on each occasion that hazardous materials are to be transhipped, together with a copy of the CAA instrument authorising the transshipment.

Airlines are responsible for warning and screening passengers in regard to the unlawful carriage of hazardous materials.

4.15.3 Legislation, Standards and Technical References

Legislation *{specify source}* requires CAA to regulate the carriage of dangerous goods by air, and prescribes significant penalties for breach of regulations.

The Act provides for persons involved in cargo handling to undertake specific training relating to dangerous goods.

{specify source} of the Regulations provides the detailed rules applicable to the transport of dangerous goods or hazardous materials on civilian aircraft, or on foreign aircraft within *{State}* Territory.

The Regulations contains a listing of materials classified as dangerous goods. This is drawn from the ICAO "Technical Instructions for the Safe Transport of Dangerous Goods by Air." The list includes substances that may be transported without reference to CAA provided the technical requirements of the Regulations are complied with, and items that are forbidden without the express approval of CAA.

IATA produces the "Dangerous Goods Regulations" which covers the classification of dangerous goods that may be transported by air and special procedures required.

CAAP *{n}* provides guidance on the safety distances to be maintained around explosive laden aircraft. For ease of reference, key material from CAAP *{n}* is included at the end of this section in TABLE 2 and TABLE 3.

Flammable liquids are required to be handled in accordance with *{specify source}* "Flammable and Combustible Liquids Code."

This Section is to be read in conjunction with Part 4 Section 3 of this Manual, which details the procedures to be adopted should there be an accident or incident involving hazardous materials.

The Airport Emergency Plan (Annex 1 to this Manual) has been developed taking account of the ICAO "Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods" (Doc 9481-AN/928).

4.15.4 CAA Contact

The CAA Contact for advice on the air transportation of dangerous goods is:

Inspector (Air Cargo)

4.15.5 Hazardous Materials Storage

4.15.5.1 Aviation Fuel

Jet aviation fuel (Jet-A1 / Avtur) is stored in 4 tanks, 2 at the JUHI compound near the International Terminal and 2 at the JOSF on the Domestic side. These above ground tanks supply aircraft at the International Terminal and the Domestic aprons.

The JUHI tanks consist of 2 fixed cone roof tanks each with a capacity of {nn} million litres, in a common bunded area.

The JOSF tanks are contained in a bunded area and are {nn} million and {nn} million litres in capacity.

A number of valves within the system allow sections of the pipe network to be isolated for maintenance or emergencies. Emergency shut-off buttons are provided adjacent to aircraft parking bays serviced by fuel hydrants. If actuated, they shut down all pumps and relevant valves in the respective tank farms.

Aviation gasoline (Avgas) is stored in a {nn} million litre below ground tank at the fuel depot.

Road-tanker fuel to service is provided to General Aviation aircraft.

4.15.5.2 Fuel Storage Systems - NonAircraft

Several outlets exist for non-aviation services:

- Petrol Service Station
- Maintenance Yard
- Taxi depot
- LPG tanks are associated with the above facility

4.15.5.3 Other Hazardous Materials

No other hazardous materials covered by these procedures are stored permanently on airport. Temporary storage pending consignment by air is the responsibility of the Freight Forwarder.

4.15.6 Hazardous Materials Incidents

A hazardous materials incident may be of a minor nature (i.e. a minor fuel spill) or a major incident that requires activation of the Airport Emergency Plan (Annex 1 to this Manual).

Operations Officers will routinely monitor fuel, grease, oil and sewerage spills on aprons as part of their daily serviceability inspections. They will check each bay and report any spills that require clean up, or are significant enough to require parking bay closure.

Note - fuel and oil spills are routinely reported to the Airport General Manager for statistical purposes. Major spills must also be reported to the Director Technical Services.

4.15.7 Handling Procedures

4.15.7.1 Aviation Fuel

AVTUR (JET A1) is dispensed to aircraft at the International and Domestic Terminals, by an in ground hydrant system and mobile tankers. Other areas requiring Avtur are serviced by tankers. AVGAS is dispensed to aircraft in the General Aviation area by mobile tankers.

During fuelling operations the provisions of Regulations *{specify source}* apply. When not in use, mobile tankers and other dispensing equipment are to be stored in an area meeting the requirements of State Standards.

4.15.7.2 Explosives

Refer to Section 4.15.8 Operational Safety Policy for Transfer of Explosive Cargo for details.

4.15.7.3 Other Hazardous Materials

For the shipment of non-routine hazardous materials the following criteria will be considered when allocating an area for the procedure:

- Drainage flow;
- Clearance distances from other aircraft, the public, buildings and equipment;
- Possible effects of spillages and drifting vapours if containers are punctured; and
- Possible effects to pavement surfaces and other adjacent facilities.

4.15.8 Operational Safety Policy for Transfer of Explosive Cargo

4.15.8.1 Introduction

Transfer of explosives between aircraft and transport vehicles may only take place at the Airport in accordance with the following procedures.

4.15.8.2 Approval

All airline operators and freight forwarders must seek approval prior to carrying explosive cargo through the Airport. Approval must be sought at least two working days in advance of the proposed shipment. In seeking approval the airline company or shipper shall provide the following information to the Airport Operations Supervisor or Senior Operations Officer

- Date and time of expected arrival and departure
- Category of movement (International or Domestic)
- Type of aircraft (and flight number if appropriate)
- Airline Coordinator and contact telephone number

- Number and type of vehicles involved in the explosive transfer
- Type and quantity of explosive
- A copy of the CAA approval

4.15.8.3 CAA Approval

Approval to carry explosives by air must first be obtained from the Civil Aviation Authority by the Airline Operator. A copy of the CAA approval must be given to the Airport Operations Supervisor or Senior Operations Officer

4.15.8.4 ICAO/IATA Compliance

The Airline Operator is to ensure that the flight and cargo comply with all the requirements of ICAO Technical Instructions for the Safe Transport of Dangerous Goods by air and the IATA Dangerous Goods Regulations.

4.15.8.5 Safety Distances

At the Airport, CAA recommendations are used to determine safety distances from other airport facilities/aircraft and explosive laden aircraft. These are reproduced in TABLE 2 and TABLE 3 below.

4.15.8.6 Preferred Aircraft Parking Positions

The preferred aircraft parking positions for aircraft transshipping explosives are the intersection of TWY Charlie 3 and Lima 2, and TWY Alpha 3 adjacent to the noise attenuation bund. ATC operational requirements will usually dictate the selection of the parking position.

The aircraft and any vehicles or equipment associated with the cargo transfer may require an escort. Any directions given by the officer carrying out the escort must be complied with.

4.15.8.7 Alternative Parking.

Should operational considerations dictate that the preferred parking positions are unsuitable the Senior Operations Officer will select another site in conjunction with ATC.

4.15.8.8 General Requirements

Standard safety and security measures will apply to all staff involved in the transfer operation.

These requirements include:

- Only vehicles involved in the explosive transfer are to be brought airside.
- Personnel, vehicles and handling agent equipment will be subject to escort formalities and will hold short of the manoeuvring area until the transfer is ready to commence.

- (vi) Definition of Hazard Divisions 1.1, 1.2, 1.3 and 1.5 is contained in ICAO Technical Instructions for the Safe Transport of Dangerous Goods. Details of the hazard divisions of the explosives transported should be made available by the consignor/consignee of the explosives or the aircraft operator carrying the explosives.

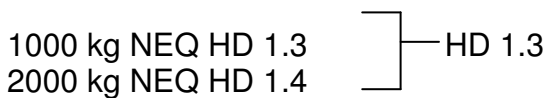
TABLE 3 - DETERMINATION OF HAZARD DIVISION FOR LOADS CONTAINING MORE THAN ONE HAZARD DIVISION

Division	1.1	1.2	1.3	1.4	1.5	1.6

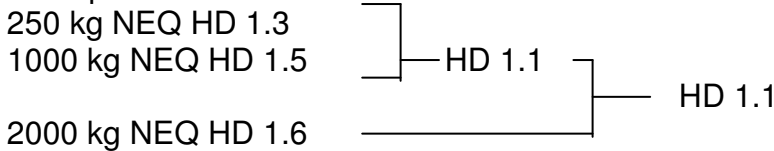
Notes:

When more than two Hazard Divisions (HD) are present in any load, two HD shall be considered in determining a resultant HD which should then be considered with the next HD and so on until all HD present in the load have been considered, as shown in the examples below:

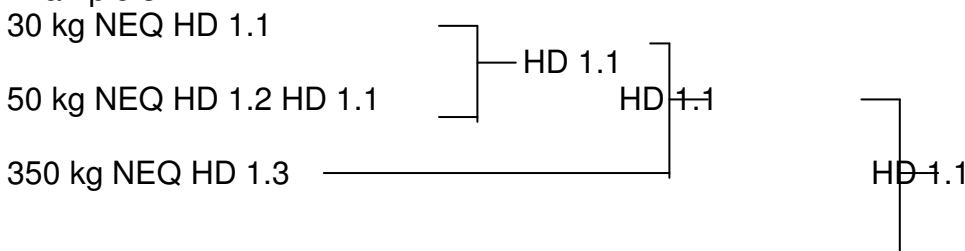
Example 1



Example 2



Example 3



1000 kg NEQ HD 1.4

SECTION 4.16 LOW VISIBILITY OPERATIONS

Note: Refer to Part 5 Section 1 Staff Contact List & Organisational Structure for the telephone numbers of those persons identified as having responsibility for implementing the procedures detailed in this Section

4.16.1 Purpose

The aim of these procedures is to provide pilots with information relevant to aircraft departures in conditions of low visibility at the Airport.

4.16.2 Responsibilities

The Airport General Manager has overall responsibility for ensuring that low visibility procedures are developed and sufficient resources are available.

The Senior Operations Officer is responsible for carrying out Visual Assessment Light (VAL) and Runway Visibility Range (RVR) measurements. This responsibility may be delegated on a day-to-day basis by the duty Senior Operations Officer to a suitably qualified Operations Officer.

VAL and RVR measurements are only carried out at the request of ATC.

4.16.3 Legislation, Standards and Technical References

Regulation {n} requires the aerodrome operator to establish procedures for the measurement of Runway Visibility, and for providing these measurements to ATC.

The ICAO "Manual of Runway Visual Range Observing and Reporting Practices" (Doc 9328-AN/908) provides useful guidance material in this regard.

This document should be read in conjunction with ATC Local Instruction {No. NNN} effective {dd Month yyyy}.

4.16.4 Low Visibility Operations

4.16.4.1 Take-Off

Airlines and other commercial aircraft operators are able to take-off when visibility is below 800 metres provided their procedures are approved by CAA. Pilots require ATC and aerodrome operator assistance in determining the visibility at such times.

CAA permits low visibility operations with different minima, depending on the available runway facilities:

- Minima of 800 m if runway edge lighting or centreline marking is clearly visible to the pilot in command;
- Minima of 400 m, restricted to approved company pilots, if runway edge lighting and centreline marking is clearly visible to the pilot in command.

All other IFR aircraft require a minimum take-off visibility of 2000 m.

4.16.4.2 Landing

Precision Approach Runway Category 1 facilities are available to RWY 21 and 24. CAT-1 is an instrument runway served by an ILS and visual aids intended for operations down to decision height of 200 feet and a Runway Visibility in the order of 800m.

Requirements for landing in reduced visibility include operational High Intensity Approach Lighting (HIAL) system and High Intensity runway edge lighting.

4.16.5 Visual Assessment Lights - Visibility 800-2000 Metres

VAL are installed at the Airport to permit assessments of visibility in the range from 800 -2000 m, for take-off on runways 21 and 24.

The lights are located external to the graded runway strip, and are observed from a position outside the runway strip. This permits the visibility assessments to be made without disruption to aircraft operations.

Four VAL are provided for runways 21 and 24, located at 800 m (low intensity flashing), 1 200 m (low intensity steady), 1 500 m (high intensity flashing) and 2 000 m (high intensity steady). Each light is spaced at one degree azimuth when viewed from the observation point with the 2000 metres VAL appearing closest to the runway.

Note. An additional omni-directional light connected to the low intensity circuit is co-located with the high intensity light at 2000 m

The observer reports which lights are visible from the viewing point and hence the Runway Visibility. The viewing points (one metre square white marking) and VAL locations for each runway are shown on Plan {*nnn*}.

4.16.6 Runway Visual Range - Visibility Below 800 Metres

Observations are made from the runway centreline at designated positions for each runway, one at the threshold and the second in excess of 1100 metres from the threshold as shown on Plan {*nnn*}. Observations are made in the direction of take-off.

The actual positions for each runway are shown on the plan included at the end of this Section. These positions have been determined in relation to the various runway edge light positions, runway slopes and experience.

The Operations Officer making the Runway Visibility observation will have continuous radio communication with ATC. The observations may be made in any order, but the Officer needs to drive along the runway between the observation points to ensure the runway is clear.

Vehicle Parking Position points 1, 3, 5, 7 and 9 are located some 150 m from the runway centreline, as shown on the plan and marked on the ground by black numerals in yellow circles.

Observation points other than at thresholds are marked by black numerals in yellow circles adjacent to the runway centreline marking together with reference yellow circles similarly identified and semi-flush uni-directional reflectors off the runway edge.

ATC may require confirmation of vehicle location by radio before authorising aircraft to taxi.

On completing the observations, the Operations Officer vacates the runway and proceeds to the designated parking area number 9. ATC will confirm by radio that the vehicle is stationary prior to any clearance being given for aircraft take-off.

The Operations Officer will not move from parking position number 9 until directed by ATC. The interval between RVR observations will be as directed by ATC.

If visibility is inadequate to permit take-offs, ATC may choose to permit the Operations Officer to remain on the runway to continually update the RVR readings.

4.16.7 Runway Inspection

Runway inspections are required prior to authorising an aircraft take-off in low visibility conditions:

- A full length runway inspection within 30 minutes immediately preceding; and
- A supplementary inspection over the first 1100-1500m every 5 minutes, as the runway visibility observations are made or as directed by ATC.

4.16.8 Manoeuvring Area Safety and Security

An inspection of the security fence should be made prior to the first instrument meteorology conditions departure utilizing low visibility procedures (if possible).

Vehicular movement on the maneuvering area will be restricted to Operations Officers, RFFS and vehicles or aircraft escorted by an Operations Officer. Non-essential vehicles are not permitted on the manoeuvring area in low visibility conditions.

No vehicle is permitted within 150 m of the runway centreline while a take-off or landing is in progress. Other safety considerations include:

- Two-way radio communications are to be maintained between the Operations Officer and ATC on the Aerodrome Control Frequency 120.5 MHz during runway visibility assessments.
- A copy of Plan {*nnn*}, Runway Visibility Assessment Chart, is to be retained in the Operations Officer's vehicle at all times.

SECTION 4.17 PROTECTION OF RADAR AND NAVIGATION AIDS

Note: Refer to Part 5 Section 1 Staff Contact List & Organisational Structure for the telephone numbers of those persons identified as having responsibility for implementing the procedures detailed in this Section.

4.17.1 Purpose

The aim of these procedures is to ensure there will be no interference to the operation of air navigation aids (navaids) at the Airport caused by the erection of structures, or work activities within the vicinity of a navaid or associated cabling.

4.17.2 Responsibilities

The Airport General Manager has overall responsibility for establishing procedures to ensure that activities under his direct or indirect control do not have an adverse impact on the safe operation of radar and navaids.

The Works Project Manager, or any other staff member controlling any work activity on the airport, is responsible for advising ATC of any works proposals that may affect the operation of radar or navaids on the airport, including any cables associated with the facilities.

ATC is responsible for the physical protection of its radar and navaids located on the Airport. This may include appropriate fencing and warning signs to restrict entry to each site.

ATC is responsible for site maintenance of off-airport radar and navaids.

4.17.3 Legislation, Standards and Technical References

Regulation *{specify source}* specifies details of the procedures to be documented to control activities that may cause interference to radar and navaids located on the airport.

CAA standards specify site maintenance requirements (e.g. grass or tree height) for each type of installation.

4.17.4 Works Planning and Coordination

The Airport General Manager's nominees with responsibility for airport works are required to give prior notification to ATC of:

- Work activities in the vicinity of radar and navaids on the Airport which might effect the signals to and from those facilities; and
- Proposed excavation work within 3m of cables associated with the facilities.

This advice may be either verbal or provided formally during the planning stage of a MOWP or PERCOW.

The Airport General Manager will prepare a Permit to Commence Work (PERCOW) or a Method of Works Plan (MOWP) for any activity that may affect aircraft operations by causing interference with a radar or navaid, or its signal to aircraft. Planning for such work will include input from ATC.

ATC is to establish any restrictions necessary. A copy of any MOWP or PERCOW issued for such works is to be forwarded to ATC for advice.

The Works Project Manager and WSO will ensure that all persons involved in works on the airport understand and comply with the restrictions imposed to protect the radar, navaids, and their associated cables. This applies to staff, sub-contractors, and any other organisation required to carry out work at the airport.

Where there is a possibility of interference to the radar or navaid signal due to transient obstacles, such as vehicles travelling on perimeter roads, signs displaying the appropriate warning or instruction will be erected.

Vehicles and plant will not enter the navaid restricted areas to RWY 21 and 24 without ATC approval. Vehicles crossing these approaches on the northern link road will maintain 40 km per hour to avoid signal interference.

4.17.5 Maintenance Works Affecting Radar and Navigation Aids

All ATC personnel or contractors are required to abide by the security arrangements established by WAC for gaining airside access. Refer to Part 4, Section 2 of this Manual for further details.

The Airport General Manager will contact ATC where mowing works may affect navaid signals. The Grounds Maintenance Supervisor will contact ATC at least 24 hours prior to the works to ensure that navaids can be turned off when required e.g. not in IMC or no flight testing will be in progress.

ATC will be notified for works affecting the DME/VOR NAVAID at least 24 hours prior to works commencing. This will allow ATC time to issue a NOTAM and to arrange for qualified personnel to be in attendance to deactivate or activate the facilities if or as required.

Localiser navigational aids at the 21 and 24 runway ends and other ILS navaids do not have remote ATC control and require physical switching.

Temporary decommissioning of a navaid for airport works is permitted only in VMC (1500 ft ceiling and 5 km visibility)

As a guide in preparing for minor maintenance activity, work within the following areas can be expected to cause interference with the relevant navaid:

- Localiser - from 360 metres in front to 10 metres behind the localiser aerial, and 90m either side of the runway centreline;
- Glidepath - from glidepath building, an area extending 700 m directly in front of the building towards the landing aircraft, at a width of 175 m towards the associated runway centreline; and
- VOR - within a radius of 150 m of the VOR.

Any other major works or works involving a large amount of equipment, or tall equipment, should be referred to ATC for advice on the affect on nav aids.

4.17.6 Airport Radar and Navigation Aids: Clearance and Locations

Clearances for radar and nav aids facilities associated with the Airport are shown on Plan *{nnn}*.

PART 5

Aerodrome Administration

The following chart shows details of the organisational structure and reporting points for staff with airport operational responsibilities as documented in this manual.

{provide appropriate chart}

5.1.3 Airport committees

The following committees have been assembled to conduct business about matters addressed in this Manual.

{provide appropriate details}

5.1.4 Distribution of Manual and Plans

5.1.4.1 Manual Distribution

5.1.4.1.1 Printed Version

Printed copies and updates of this manual are distributed as follows;

- Airport General Manager
- Airside Safety Manager (Master Copy)
- Airport Operations Supervisor
- Civil Aviation Authority, Aerodrome Inspector
- Air Traffic Control, Tower Team Leader.

5.1.4.2 Electronic Version

Electronic copies and updates of this manual are distributed as follows;

- Civil Aviation Authority, Aerodrome Inspector
- Air Traffic Control, Tower Team Leader.
- All Airport Authority staff via corporate intranet

5.1.4.3 Associated Documents

The following documents form part of this manual and are distributed by other means. Please contact the person indicated if you need a copy of any of the above documents.

- Aerodrome Emergency Procedures (Airside Safety Manager)
- Airside Vehicle Control Handbook (Airport Operations Supervisor)
- Airside Vehicle Control Handbook (Airport Operations Supervisor)
 - Radio Procedures.

5.1.5 Plan Distribution

Printed plans and updates are distributed to holders of the printed version of this manual as indicated in the table below. If there is a need for additional plans that you do not currently receive, then please contact the Airside Safety Manager.

Staff using the electronic version of the manual can either view the relevant plans by contacting staff of the Design Office or by using appropriate software if installed on workstation computers.

Title	Size	Plan/Sheet	ATC	CASA	Duty Manager	Ops. Super	Safety Manager
Aerodrome Plan	B3	AP 2002-A1	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓	✓	✓

SECTION 5.2 NON-STANDARD ITEMS AND EXEMPTIONS

Note: this section contains non-generic information which is provided as an example only

5.2.1 Non-Standard Items

There are a number of minor departures from the standards at the Airport. The Civil Aviation Authority has decided not to issue formal exemptions but requires documentation of each item in the aerodrome manual. These are;

- 5.2.1.1 Excessive “drop-offs” between the turning node on runway 06 and the runway shoulders. Drop-offs are up to 60mm. The RPA standards require no more than 25mm. This defect will be rectified during the next major re-sheet of the runway,
- 5.2.1.2 The drainage points and grading of a number of parking positions on the domestic and international aprons do not comply with RPA Chapter 7 standards regarding the direction of fuel flow in the event of a spill;
- Bay 22 flows to bay 30
 - Bay 23 flows to bay 29
 - Bay 19 flows to bay 20A
 - The grated cut-off drain running along the rear of Bay 30 is too close to the tail of an aircraft parked on the bay
 - The grated cut-off drain running along the rear of Bay 50 is too close to the tail of an aircraft parked on the bay
 - Non-standard stop bars are used throughout the airport on aerobridge positions.
 - Painted bay markers on the domestic apron are oversize (being 2m instead of 1m high).
 - Non-mandatory MAG signs (i.e. taxiway guidance signs) are not currently illuminated by any means - the signs instead are manufactured from Class 2 retro-reflective material and rely on illumination from other sources (aircraft lights, flashing lights etc). RPA requirement is for either backlit or front illumination for all MAG signs used by Code 4 aircraft.

5.2.2 Exemptions

The following table summarises the current exemptions for the Airport that have been issued by the Civil Aviation Authority. The complete text of each exemption is also included below.

Reference	Period	Description
AI 01/2000	4-May-2003 or until withdrawn	Embraer 120 operations on Taxiway Romeo – exemption against non-standard width.
PH 02/1997	Valid until varied or withdrawn	Dash-8 operations on Taxiway Romeo - exemption against non-standard width.

PH 03/1997	Valid until varied or withdrawn	Runway 06 approach slope - exemption against certain sections of RPA Chapter 10
PH05/1997	Valid until varied or withdrawn	Runway 24 approach slope - exemption against certain sections of RPA Chapter 10.

Note : This exemption is provided as an example only. This specific document should not be used as a component of this generic manual, as exemptions should be generated in accordance with the specific rules and requirements of individual States.

EXEMPTION FROM STANDARDS IN RULES AND PRACTICES FOR AERODROMES

Subject: Embraer 120 (Brasilia) operations on Taxiway Romeo.

I Derek Redvers Geer, District Aemdrome Inspector, Perth District Office, a delegate of the Civil Aviation Safety Authority (CASA) for the purposes of subregulation 89ZD(l) of the Civil Aviation Regulations, exempt Westralia Airports Corporation, operator of Perth Aerodrome, from complying with the Rules and Practices for Aerodrome, Chapter 7 page 7-39, in respect of taxiway widths viz. the width of taxiway Romeo and a stab taxiway leading onto the Mining and Executive apron, for use by the Embraer 120 aircraft (Code 3C).

This exemption is subject to the following conditions:

- Installation of nose wheel guidelines as shown on drawings attached to your letter of 14 April 2000 must be completed prior to commencement of operations
- Sufficient centreline reflectors are to be installed to adequately mark the nosewheel guidelines for night use.
- Where there is no fixed lighting, portable blue taxiway edge lights are to be in place for night operations.
- The aircraft operator should be encouraged to provide a marshaller when necessary to ensure that the guidelines are followed.

- The aircraft operator is to be made aware of this exemption and the nature and Implications of the non-standard taxiway width including the fact that the stub taxiway is in effect narrower than taxiway Romeo. There also needs to be a clear explanation of the fact that there are different guidelines for arrival and departure.

You should be aware that granting this exemption does not absolve you of responsibility for any safety occurrence associated with a non-compliance covered by this exemption. Liability for any safety occurrence does not, in general, transfer to CASA upon grant of an exemption.

This exemption stops having effect at to end of 4 May 2003 or if cancelled by CASA, which ever occurs earlier

Note : This exemption is provided as an example only. This specific document should not be used as a component of this generic manual, as specific exemptions should be generated in accordance with the rules and requirements of individual States

EXEMPTION NUMBER PH1002

EXEMPTION FROM THE STANDARDS

IN THE RULES AND PRACTICES FOR AERODROMES

i William Bennett Deuchar, a delegate of Civil Aviation Safety Authority, revoke Exemption Number PTH 001196 Issued to the Federal Airports Corporation and issue this exemption to the Westralia Airports Corporation Ply Ltd.

I William Bennett Daurhar, District Aerodrome Inspector, Perth District Office, a delegate of the Civil Aviation Safety Authority (CASA) under sub-Regulation 89ZD(l) of ft Civil Aviation Regulations, exempt the Westralia Airports Corporation Pty. Ltd. the operator of Perth Airport from complying with the taxiway width as prescribed In to Rules and Practices for Aerodromes under Civil Aviation Regulation 89P for Dash 8 aircraft operations on taxiway Romeo.

The exemption Is subject to the following conditions:

- I. The taxiway shoulders be considered part of the taxiway providing an overall taxiway width of 16m.
- II. Westralia Airports Corporation advise the operators of the variances of the taxiway Surface.
- III. Portable taxiway edge lighting as per RPA standard be provide for night operations.
- IV. Due consideration be given to the suitability of the taxiway should the unsealed section be permeated by water.
- V. This exemption must be placed In the Exemptions section of the aerodrome manual

This exemption remains valid until varied or cancelled by CASA.

APPENDICES

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Staff and Organisations

Airport Lighting Team Leader	
Airport Operations Supervisor ..	
Airside Safety Manager ..	
Air Safety investigator	
APS	
ATC	
CAA	
Chief Executive Officer	
Chief Security Officer	
Design and Documentation Supervisor	
Director Technical Services	
Duty Manager	
Environmental Officer	
Airport General Manager ...	
Grounds Maintenance Supervisor	
ITC.....	
Operations Officer	
Planning Coordinator	
Technical Maintenance Supervisor	
Technical Officer Power Generation.....	

ABBREVIATIONS

The following list contains key abbreviations used in this Manual, as well as others likely to be in common use in the operation of the Airport. A more complete list of abbreviations used in the composition of NOTAM is available in AIP.

ATC	Air traffic Control
ACI	Airports Council International
AAA	Australian Airports Association
ACFT	Aircraft
ACN	aircraft classification number
ADA	authority to drive airside
ADC	Aerodrome Controller (ATC position in tower)
AEC	airport emergency committee
AEP	airport emergency plan
AGL	above ground level
AIC	aeronautical information circular
AIP	aeronautical information publication
AIRAC	aeronautical information regulation and control
AIS	aeronautical information service/s
AMSL	above mean sea level
ANO	air navigation order
ANR	air navigation regulation
AOC	aerodrome obstacle chart
AOC	air operator's certificate
APPR	Approach
APU	auxiliary power unit
ARP	aerodrome reference point
ASDA	accelerate-stop distance available
ASI	airport safety inspector
ASIC	aviation security identification card
ASIR	air safety incident report
ATIS	automatic terminal information service
ATC	air traffic control
ATS	air traffic services
AT-VASIS	abbreviated T(one side only)-visual approach slope indicator system
AVGAS	aviation gasoline
AVTUR	aviation turbine fuel (Jet-A1)
CAA	Civil Aviation Authority
CAAP	civil aviation advisory publication
CAO	civil aviation order
CAR	civil aviation regulation
CofA	certificate of airworthiness
CWY	clearway

DAP	departure and approach procedures
DISPLAN	disaster plan
DM	duty manager
DME	distance measuring equipment
DOD	Department of Defence
DOT	Department of Transport
ECC	emergency coordination centre
EOC	emergency operations centre
ELB	emergency locator beacon
EST	eastern standard time
EST	estimated
GA	general aviation
GP	glide path
HAZMAT	hazardous materials
HD	hazard division
HF	high frequency (3,000 - 30,000 kHz)
HJ	daylight hours (sunrise to sunset)
HLS	helicopter landing site
HN	night hours (sunset to sunrise)
H24	continuous (day and night)
IAL	instrument approach and landing chart
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
IFR	instrument flight rules
ILS	instrument landing system
IM	inner marker
IMC	instrument meteorological conditions
DTB	domestic terminal building
ITB	international terminal building
ITCC	international terminal control centre
IWDI	illuminated wind direction indicator
IWI	illuminated wind direction indicator
JOSF	joint oil storage facility
JUHI	joint user hydrant installation
LDA	landing distance available
MAG	magnetic
MAGS	movement area guidance signs
MATC	Manager Air Traffic Control
MATS	manual of air traffic services
MAUW	maximum all up weight
MM	middle marker
MOWP	method of working plan
MSL	mean sea level
MTOM	maximum take-off mass
MTOW	maximum take-off weight
NDB	non-directional beacon
NIG	nose-in guidance

NOF	(Australian) NOTAM office
NM	nautical mile
NOTAM	notice to airmen
OLS	obstacle limitation surface
OM	outer marker
PANS-OPS	procedures for air navigation services - aircraft operations
PAPI	precision approach path indicator
PCN	pavement classification number
PERCOW	permit to commence work
POB	persons on board
QFE Q	code - altimeter setting to obtain height above the airport datum
QNH Q	code - altimeter setting to obtain altitude (height AMSL)
RESA	runway end safety area
RFFS	Rescue and Fire Fighting Service
RVR	runway visual range
RWS	runway strip
RWY	runway
SES	State Emergency Service
SID	standard instrument departure
SIN	security incident notices
SIR	security incident report
SMC	surface movement controller (ATC position in Tower)
SOT	start of take-off
STODA	supplementary take-off distance available
SUP AIP	supplement
SWY	stopway
THR	threshold
TKOF	take-off
TLW	time limited works
TODA	take-off distance available
TORA	take-off run available
TVA	T-VASIS
T-VASIS	T-visual approach slope indicator system
TWR	airport control tower
TWS	taxiway strip
TWY	taxiway
UHF	ultra high frequency (300 – 3000 MHz)
UTC	coordinated universal time
VAL	visual assessment lights
VASIS	visual approach slope indicator system
VFR	visual flight rules
VHF	very high frequency (30 – 300 MHz)
VMC	visual meteorological conditions
VOR	very high frequency omni-directional radio range
WAC	world aeronautical chart
WDI	wind direction indicator
WID	width

WIP works in progress
WSO works safety officer.