

Maintenance of Aerodrome Lighting and AGL Systems Procedure

AREA OF APPLICABILITY
ALL ACSA AIRPORTS

DIVISION
Capital Infrastructure Asset Management
(Infrastructure Asset Management)

Next Revision Date:
14th February 2028

Control Disclosure:
Public

Effective Date: 14th February 2025

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1. Scope

This procedure covers all activities to be carried out at all sites, by an approved contractor and/or Electrical Maintenance and/or Maintenance Engineering personnel involved in the maintenance and repair of aeronautical ground lighting systems and controls at all sites. It also defines the specific maintenance activities to be carried out on aerodrome lighting, including illuminated signage and AGL systems and steps to be followed to ensure that this infrastructure is effectively maintained in accordance with applicable policies, regulations and standards.

2. Objective

The objective of this procedure is to always ensure the maximum efficiency of aerodrome lighting, illuminated signage and aeronautical ground lighting systems, which in turn shall enable all sites to operate at the category as published in the aeronautical information publication. The secondary objective is to ensure the safety of all authorised (internal and external) Electrical Maintenance personnel working on AGL in accordance with the requirements of the Occupational Health and Safety Act 85 of 1993.

3. Definitions and Abbreviations

3.1 Definitions

Aerodrome

Aerodrome is a defined area on land or water (including any building, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft. This Includes runways, taxiways, aprons, taxilanes, rapid exit taxiway (RET), roads.

Aircraft Stand Taxilane

A portion of an apron designated as a taxiway and intended to provide access to aircraft stands

Airport

Airport is a location where aircraft such as fixed-wing aircraft and helicopters take off and land. Aircraft may be stored or maintained at an aircraft hangar. An airport consists of runway/s for aircraft take off and land, a helipad, or water ways for takeoff and landing and include buildings such as control towers, hangars and terminal buildings.

Airfield

Airfield is an area designated for landing, take off and maneuvering of aircraft

Airside

Airside is the area after security check, where only passengers and staff are allowed.

Air Traffic Control

Air Traffic Control is a service provided by ground-based controllers who direct aircraft on the ground and in the air. The primary purpose of ATC systems worldwide is to separate aircraft to

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prevent collisions, to organise and expedite the flow of traffic, and to provide information and other support for pilots when able.

Preventing collisions is referred to as a separation, which is a term used to prevent aircraft from coming too close to each other using lateral, vertical and longitudinal separation minima. Many aircraft now have collision avoidance systems installed to act as a back up to ATC observation and instructions. In addition to the primary function, the ATC can provide additional services such as providing information to pilots, weather and navigation information.

Air Traffic Control services are provided by Air Traffic Navigation Services (ATNS) throughout the country and its services are available to all users (private, military and commercial). When controllers are responsible for separating some or all aircraft, such airspace is called controlled airspace (at all Sites) in contrast to uncontrolled airspace (Grand Central Airport) where aircraft may fly without the use of the ATC System. Depending on the type of flight and the class of the airspace, ATC may issue instructions that pilots are required to follow, or merely provide flight information to assist pilots operating in the airspace. In all cases, however, the pilot in command has the final responsibility for the safety of the flight and may deviate from ATC instructions in an emergency.

Air Traffic Navigation Services (ATNS)

Air Traffic Navigation Services is an air navigation service provider who provides ATC service.

Apparatus

Any generator, transformer, motor, switchgear, isolator, feeder, electrostatic precipitator or any other high- voltage plant installed in a station.

Approved Contractor

A contractor that has been registered on the Company vendor list by the Company Manager: ME at a specific airport, to state that they can be trusted to do work in a satisfactory way on specified equipment.

Apron/Ramp

Apron/Ramp is part of an airport where aircraft are parked, unloaded or loaded, refueled or boarded. Although the apron is covered by regulations, such as lighting on vehicles, it is typically more accessible to users than the runway or taxiway. However, the apron is not open to the public and a permit is required to gain access. The apron is designated by International Civil Aviation (ICAO) as not being part of the maneuvering area. All vehicles, aircraft and people using the apron are referred to as apron traffic.

Breaker/Circuit Breaker

A mechanical switching device, capable of making, carrying and breaking of currents under normal circuit conditions and also making, carrying for a specified time and breaking currents under specified abnormal conditions, such as fault conditions

Cable

Two (2) or more wires (cores) in parallel bonded, twisted or braided to form a single assembly

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Circuit

The whole of the conductors and apparatus from and including the blades of all isolators or the contacts of other apparatus provided for completing the connection to the bus bars

Danger/Dangerous

A condition/substance that constitutes a risk of personal injury, impairment of health, death or property damage

Ground or Floor Level

A permanent structure that is designed to walk on and can be elevated

Hazard(S):

A source of or exposure to danger

Illuminated Signage

Lit-up signs provided to convey a mandatory instruction, information on a specific location or destination on a movement area. Refers to illuminated signage on the airfield

Insitu Calibration Check

This is the process whereby the prescribed angles of the PAPI are verified to be within tolerance and recorded.

International Civil Aviation Organisation (ICAO)

International Civil Aviation Organisation is a specialised agency of the United Nations (UN), codifies the principles and techniques of international air navigation and fosters the planning and development of international air transport to ensure safe and orderly growth.

The ICAO Council adopts standards and recommended practices concerning air navigation, its infrastructure, flight inspection, prevention of unlawful interference, and facilitation of border crossing procedures for international civil aviation. ICAO defines the protocols for air accident investigation followed by transport safety authorities in countries signatory to the Convention on International Civil Aviation, commonly known as the Chicago Convention.

Isolate

To physically disconnect from all possible sources of electrical potential. This can be achieved by opening of links, removing of fuses, racking out switchgear, locking off and placing a danger tag.

Isolator

A device provided for the purpose of isolating apparatus from the source of electrical potential.

Live Chamber

Any chamber, enclosure or any situation in which inadvertent human contact with conductors or live parts of electrical apparatus working at high voltage is possible from ground/floor level

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Medium Voltage

Nominal voltage levels greater than 1kV and less than 44Kv

Manoeuvring Area

Manoeuvring Area is the part of an aerodrome to be used for the take off, landing and taxiing of aircraft, excluding apron/s

Movement Area

Movement Area is the part of the Manoeuvring Area is the part of an aerodrome to be used for the takeoff of landing and taxiing of aircraft, consisting of the manoeuvring area and the apron.

Notice to Airmen (NOTAM)

Notice to Airmen, is issued promptly whenever the information to be distributed is for a temporary nature and of short duration or when operationally significant permanent changes are made at short notice.

Oracle eAM System

Software system that enables the scheduling and planning of maintenance activities and tracking of all work activity and costs related to assets throughout an organisation.

Panel or Bay

All the apparatus in the same circuit situated in live chambers, prohibited or restricted areas, from and including the bus bar isolators.

Power System

The power stations, feeders, stations and apparatus whereby electrical energy is made available to the customers' points of supply.

Precision Approach Path Indicator

A precision approach path indicator (PAPI) is a visual aid that provides guidance information to help a pilot acquire and maintain the correct approach (in the vertical plane) to an airport or an aerodrome. It is generally located beside the runway approximately 300 meters beyond the landing threshold of the runway.

Prohibited Area

An enclosed area in which live conductors or live parts of electrical apparatus working at high voltage are accessible, but situated in such a position that inadvertent human contact therewith is not possible from ground/floor level.

Rapid Exit Taxiway

A taxiway connected to a runway at an acute angle and designated to allow landing aeroplanes to turn off at higher speeds than are achieved on other exit taxiways thereby minimizing runway occupancy times.

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Responsible Person

A person, who has been authorised to be responsible for ensuring that the work on the apparatus covered by a work permit can be, carried out with safety and within the terms of these regulations.

Regional Airports

Consist of all regional airports namely: FABL, FAEL, FAGG, FAKM, FAPE and FAUP managed by the Regional Office

Runway

Runway is a defined rectangular area on a land aerodrome prepared for the landing and take off of aircraft.

Runway End Safety Area (RESA)

Runway End Safety area is an area symmetrical about the extended runway centre line and adjacent to the end of the strip primarily intended to reduce the risk of damage to an aeroplane undershooting or overrunning the runway.

Semi-Annually

Occurring twice a year, same as six monthly

Site

Refers to any Airport, Regional and Corporate Office and can be used interchangeably.

South African Civil Aviation Authority (SACAA)

Civil Aviation Authority responsible for the promoting, regulating and enforcing civil aviation safety and security in South Africa.

Substation

A site on which any transforming, switching or linking apparatus forming part of the power system is situated and on which no active power-generating equipment other than auxiliary generating sets is situated. The term 'substation' includes distribution stations and switching stations.

Switch

A device, other than a breaker, designed for making or breaking a rated flow of electric current. The term includes air break switches or weight-operated disconnects and similar devices

Switching

The opening and closing of breakers or switches.

Take Off

Take off is from the application of take off power of the aircraft, through rotation and to when an aircraft reaches an altitude of 35 feet above the runway elevation.

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Taxiway

A defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the Aerodrome and another, including: aircraft stand taxilane, apron taxilane, Rapid Exit Taxiway (RET)

Threshold

Threshold is the beginning of that portion of the runway usable for landing.

Unscheduled Maintenance

Refers to maintenance activities which arise on an infrastructure due to unforeseen weather conditions or natural phenomenon and require inspections on the infrastructure to be undertaken

Work Permit

A written declaration on the work permit form, signed by the appointed operator or authorised person and issued to the responsible person.

Work Permit Form

A printed form containing the application, work permit and clearance for the authorisation of all work to be done on apparatus in terms of these regulations.

3.2 Abbreviations

Abbreviation	Description
AGL	Airfield Ground Lighting
ACEM	Approved Contractor: Electrical Maintenance
ATC	Air Traffic Control
ATNS	Air Traffic Navigation Services
BUIL	Building and Facilities Maintenance on Oracle eAM
CIVL	Civil Maintenance on Oracle eAM
COE	Centre of Excellence
CMMS	Computerized Maintenance Management System
D	Daily Maintenance Frequency on Oracle eAM
EEM	Electrician: Electrical Maintenance
ENEM	Engineer: Electrical Maintenance
eAM	Enterprise Asset Management
ENG	Engine, used as an Asset Group on Oracle eAM
FABL	Bram Fischer International Airport
FACT	Cape Town International Airport
FAEL	East London Airport
FAGG	George Airport
FAKM	Kimberley Airport
FALE	King Shaka International Airport
FAOR	O.R. Tambo International Airport
FAUP	Upington International Airport

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FOD	Foreign Object Debris
ICAO	International Civil Aviation Association
M	Monthly Maintenance Frequency on Oracle eAM
MALMS	Mobile Airfield Lighting Measuring System
ME	Maintenance Engineering
MECH	Mechanical Maintenance on Oracle eAM
MME	Manager: Maintenance Engineering
MEM	Manager: Electrical Maintenance
NOTAM	Notice to Airmen
NOT REQD	Abbreviation to define when a Power Outage is Not Required on Oracle eAM
OHM	The SI unit of electrical resistance, transmitting a current of one ampere when subjected to a potential difference of one volt
PAPI	Precision Approach Path Indicator
PPE	Personal Protective Equipment
RET	Rapid Exit Taxiway
REQD	Definition used when a Power Outage is required on Oracle eAM
SACAA	South African Civil Aviation Authority
SEEM	Senior Electrician: Electrical Maintenance
W	Weekly Maintenance Frequency on Oracle eAM
Y	Yearly Maintenance Frequency on Oracle eAM

4. Procedure General

The following activities shall be carried out by both Airports Company South Africa SOC Limited Maintenance Engineering Staff and the relevant Approved Contractor:

4.1 Safety Precautions

4.1.1 Lock-outs and Cautions

- An Approved Contractor shall ensure that a lock-out procedure is incorporated into their submitted Safety Plan. Where a lock-out is conducted by Maintenance Engineering personnel, the Line Manager shall ensure that documented lock-out SOP is in place;
- The documented safety instructions, included the Safety Plan submitted by the Approved Contractor, shall be used before commencing work. Any maintenance work completed in a building shall be performed by a person who is authorised to complete this work;
- Where applicable, lockouts shall be used to ensure that it is safe for maintenance to be done and that it is not possible for it to be inadvertently switched on;
- Maintenance work on airport electrical back-up systems shall be assigned a person who is knowledgeable and familiar with operations thereof

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- Work required in medium voltage areas shall be authorised by the Manager: Electrical Maintenance/Manager: Maintenance Engineering

4.2 Work Approved by a Contractor

Any maintenance work completed by an Approved Contractor. Electrical/Mechanical Maintenance or the Maintenance Engineering personnel shall comply with the following conditions:

4.2.1 Approved Contractor Compliance

The Manager: Electrical Maintenance/Manager: Maintenance or designated Company Maintenance Engineering personnel shall ensure that monthly audits is completed on the work undertaken by the Approved Contractor using the [Contractor Compliance and Quality Assurance Audit – ME 031](#).

4.3 Mandatory Procedures, Standards and Regulations

4.3.1 Regulatory and Standards

When carrying out work on Fire Fighting Systems, the following Regulatory Standards shall be adhered to, where applicable by the Maintenance Engineering personnel:

4.3.2 Environmental Compliance

Cognizance shall be made to the following procedures which form part of the airports Environmental Management System when carrying out any maintenance work on the people movers:

- [Waste Management – T050 002M](#)
- [Handling and Storage of Hazardous Chemical Substances – T050 003M](#)
- [Spillage and Oil Management – T050 004M](#)
- [Waste Water Management – T050 005M](#)
- [Washing, Servicing, Refueling and Maintenance of Equipment and Vehicles – T050 006M](#)
- [Service Maintenance Contractors – T050 009M](#)
- [Environmental Principles for Projects, Planning and EIA – T050 010M](#)

4.3.3 Occupational Health and Safety

When carrying out any maintenance work Airfield Ground Lighting, Guidance signages and Ancillary equipment the following procedures Standards shall be adhered to, where applicable by the Approved Contractor, Company Maintenance and Engineering personnel:

- [Smoking Policy – S010P](#)

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- [Legislative Appointments – S010 001M](#)
- [Identification of Safe Work Procedures – S010 005M](#)
- [Hot Works Permit – S010 014M](#)
- [Hazardous Chemical Substances – S010 006M](#)
- [Hearing Conservation – S010 009M](#)

4.3.4 Aviation Compliance

When carrying out any maintenance work on the aerodrome the following Aviation Compliance Procedures shall be adhered to, where applicable by the Maintenance Engineering personnel:

- [Notification of Aerodrome Data and Information \(CAA & ATNS\) – V010 001M;](#)
- [Works on Aerodrome – V010 005M](#)

4.4 Operational Requirements

Any maintenance work completed by Approved Contractor or Maintenance Engineering personnel; shall comply with the following conditions:

4.4.1 Work on Runways/Taxiways

Where maintenance work is carried out on a runway or taxiway and closure is required, this shall be done in accordance with the [Construction During Operations – D030 006M](#) and [Runway and Taxiway Closure – D030 007M](#).

4.4.2 Work on the Aerodrome

Where work is carried out by an Approved Contractor the Maintenance Engineering personnel shall ensure that the contractor complies with the approved Safety Plan. The preparation of paint area shall be such that there is no environmental contamination. Work undertaken on the aerodrome shall be aligned with the requirements defined in the [Works on Aerodrome – V010 005M](#).

4.4.3 Vehicle/Equipment Operations on the Aerodrome

Any requirements to access the aerodrome with vehicle or equipment, the Maintenance Engineering personnel or Approved Contractor shall ensure that they have completed the airside induction training, as per the [Airside Induction Training – B100 001M](#) and [Airside Vehicle Operator Permit – B150 001M](#).

4.4.4 Low Visibility Operations

No grass cutting is allowed when fog, bad weather or LVP is experienced. When there is low visibility on the aerodrome, the requirements defined in the [Low Visibility Operations – D070 006M](#) shall be adhered to.

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4.4.5 FOD Management

The Electrical/Civil Maintenance/Maintenance Engineering Department personnel shall conduct a runway inspection to ensure that the runway surface is free of FOD and safe for aircraft operations. Refer [Runway and Taxiway Inspections Procedure - C010 008M](#). Where FOD has been identified, the contents of the [Prevention and Removal of FOD on Airside – B130 001M](#) and [FOD Management – Sweeping and Cleaning – D060 007M](#) shall be implemented.

4.4.6 Reporting of Occurrences

The [Reporting of Occurrences – D070 003M](#) shall be adhered to when reporting of an occurrence at an airport.

4.4.7 Reporting of Infrastructure Faults

Where faults have been identified on a paved runway surface, following an inspection, the [Management of IMC Procedure – D060 016M](#) shall be followed to deal with the infrastructure fault.

4.4.8 Runway Inspections

The Civil/Electrical Maintenance/Maintenance Engineering Department personnel shall conduct a runway inspection to ensure that the runway surface is free of FOD and safe for aircraft operations. Refer [Runway and Taxiway Inspections Procedure - C010 008M](#) and where FOD has been identified, the contents of the [Prevention and Removal of FOD on Airside Procedure - B130 001M](#) and [FOD Management – Sweeping and Cleaning Procedure – D060 007M](#) shall be applied.

The Electrical Maintenance/Maintenance Engineering Department shall ensure that a customized inspection sheet is in place to identify aerodrome lighting and AGL Systems.

FACT Specific:

The following personalized forms for inspections by Electrical Maintenance shall be used:

- [Electrical Maintenance & Inspection \(Day/Night\) Substation \(FACT\) - M&E 046](#)
- [Electrical Maintenance Runway Inspection Form \(FACT\) - M&E 047](#)
- [Electrical Maintenance Inspection of Obstruction Lighting \(FACT\) - M&E 048](#)
- [Planned AGL Maintenance Program – \(FACT\) – M&E 072](#)

FAGG Specific:

The following personalized form for inspections by Electrical Maintenance shall be used:

- [Electrical Maintenance Runway Inspection Form \(FAGG\) - M&E 049](#)
- [Planned AGL Maintenance Program – \(FAGG\) – M&E 078](#)

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FAOR Specific:

The following personalized form for inspections by Electrical Maintenance shall be used:

- [Runway And Taxiway & Area Lighting Daily Inspection Form \(FAOR\) - M&E 050](#)
- [Planned AGL Maintenance program – \(FAOR\) – M&E 071](#)

FALE Specific:

The following personalized form for inspections by Electrical Maintenance shall be used:

- MALMS Engineer system inspection (Electronical generated)
- [Planned AGL Maintenance program – \(FALE\) – M&E 077](#) (Back up form shall MALMS Engineer System fails)

FABL Specific:

The following personalized form for inspections by Electrical Maintenance shall be used:

- [Planned AGL Maintenance program – \(FABL\) – M&E 076](#)

FAUP Specific:

The following personalized form for inspections by Electrical Maintenance shall be used:

- [Planned AGL Maintenance program – \(FAUP\) – M&E 073](#)

FAKM Specific:

The following personalized form for inspections by Electrical Maintenance shall be used:

- [Planned AGL Maintenance program – \(FAKM\) – M&E 075](#)

FAEL Specific:

The following personalized form for inspections by Electrical Maintenance shall be used:

- [Planned AGL Maintenance program – \(FAEL\) – M&E 074](#)

FAPE Specific:

The following personalized form for inspections by Electrical Maintenance shall be used:

- [Planned AGL Maintenance program – \(FAEL\) M&E 079](#)

4.5 Training Requirements

The Manager: Electrical Maintenance and/or the Senior designated Maintenance Engineering personnel shall ensure that all Maintenance Engineering personnel, have been trained to complete the relevant tasks which they are required to fulfil their job functions. Where an Airports Company South Africa SOC Limited employee is required to perform work on any operating equipment, they shall be adequately trained on the use of the operating equipment, tools or any other elements associated with the task required to perform their duties.

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4.6 Issuance of PPE

The issuance of PPE shall comply with the [Airside Personal Protective Equipment – B080 001M](#) and the [Personal Protective Equipment Procedure – S010 004M](#).

4.7 Maintenance Programme

Each Electrical Maintenance Department shall ensure that they have a Maintenance Program in place which is aligned to the latest Technical Guidance Manual for Maintenance of Runway and Taxiway Lighting Systems as published by the SACAA.

4.8 Electrical Maintenance/Maintenance Engineering Personnel

The Electrical Maintenance/Engineering Maintenance personnel or approved contractor carrying out maintenance activities on the aerodrome shall ensure that all unserviceable equipment is replaced according to ICAO recommendations. Preventative and corrective maintenance activities shall be recorded on the applicable airfield maintenance report.

Any driving on the airside shall comply with the requirements laid out in Section 4.4.3. A vehicle shall be driven at a speed that shall allow thorough visual inspection of the equipment. In order to facilitate quick movement away from manoeuvring area, vehicle engines shall not be switched off during an inspection.

These are maintenance inspections are in addition to the daily aerodrome inspections carried out by the Fire and Rescue Department to determine the safety and serviceability of the runways and taxiways. These are more technical in nature and do not necessarily have to be conducted at the same time as Fire and Rescue inspections.

4.9 Oracle eAM - Preventative Maintenance on CMMS

A CMMS is in place to generate preventative maintenance for Aerodrome Lighting and AGL Systems. Any changes made to a Preventative Maintenance schedule, the [Management of IMC Procedure – D060 016M](#) shall be adhered to and the following forms used (where applicable), when making changes to any asset information on CMMS:

- [Asset Information Update Request – ME 038](#);
- [Asset Update Request – ME 039](#);
- [Activity Information Update Request – ME 040](#); and
- [Asset Preventative Maintenance Request – ME 041](#).

4.9.1 Aerodrome Lighting and AGL Systems Asset Group

The Aerodrome Lighting and AGL Systems consists of the following main asset group(s):

- System - Aeronautical Ground Lighting (AGL)
- Field Systems (includes Micro Processor Current Regulator (MCR))

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- System - MALMS (MLM)
- Signage (SES)
- Windsock (WSK)

Asset Group	Activity	Frequency
Approach Lights	Inspection	Daily (D)
	Maintenance	Six Monthly (6M)
	Maintenance	Yearly (Y)
Threshold Lights	Inspection	Daily (D)
	Maintenance	Two-Weekly (2W)
Runway Centre Line Lights	Inspection	Daily (D)
	Maintenance	Two-Weekly (2W)
	Maintenance	Tri-Monthly (3M)
	Maintenance	Six Monthly (6M)
	Maintenance	Yearly (Y)
Runway Edge Lights	Inspection	Daily (D)
	Maintenance	Tri-Monthly (3M)
	Maintenance	Six Monthly (6M)
	Maintenance	Yearly (Y)
Touch Down Zone Lights	Inspection	Daily (D)
	Maintenance	Two-Weekly (2W)
	Maintenance	Tri-Monthly (3M)
	Maintenance	Six Monthly (6M)
	Maintenance	Yearly (Y)
Runway End Lights	Inspection	Daily (D)
	Maintenance	Two-Weekly (2W)
Rapid Exit Taxiway Indicator Lighting System	Inspection	Daily (D)
	Maintenance	Six Monthly (6M)
Rapid Exit Taxiway Lights	Inspection	Daily (D)
	Maintenance	Six Monthly (6M)
	Maintenance	Yearly (Y)
Stop Bar Lights	Inspection	Daily (D)
	Maintenance	Six Monthly (6M)
	Maintenance	Yearly (Y)
Runway Guard Lights	Inspection	Daily (D)
Taxiway Centre Line Lights	Inspection	Daily (D)
	Maintenance	Tri-Monthly (3M)
	Maintenance	Yearly (Y)
Taxiway Edge Lights	Inspection	Daily (D)
	Maintenance	Yearly (Y)
Precision Approach Path Indicators	Maintenance	Daily (D)
	Maintenance	Two-Monthly (2M)
	Calibration	Yearly (Y)
Lead in/Off Lights	Inspection	Daily (D)

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D060 001M

Version: 8

Effective Date: 14th February 2025

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Asset Group	Activity	Frequency
	Maintenance	Tri-Monthly (3M)
	Maintenance	Yearly (Y)
Obstruction Lights	Inspection	Daily (D)
	Maintenance	Yearly (Y)
Primary Cables, Plugs, Connectors and Isolating Transformers	Maintenance	Monthly (M)
	Functional Test and Inspection Testing	Six Monthly (6M)
		Yearly (Y)
Field System (Transformers, Cables, Earth Cables, MCR)	Functional Test (MCR/CCR)	Monthly (M)
	Maintenance	Six Monthly (6M)
Controls including Mimic Panels	Inspection	Daily (D)
Asset Group	Activity	Frequency
Photometric Mobile Tester	Calibration	Yearly (Y)
Photometric Workshop Bench		
Windssocks (WSK)	Maintenance	Daily
Signage (SES)	Inspection	Daily (D)
CRE/MCR	Inspection	Daily
	Maintenance	Monthly/quarterly

Applicable Airports:

Asset Group	FABL	FACT	FAEL	FAGG	FAKM	FALE	FAOR	FAPE	FAUP
Approach Lights	N/A	Y	Y	Y	N/A	Y	Y	Y	N/A
Threshold Lights	Y	Y	Y	Y	Y	Y	Y	Y	Y
Runway Centre Line Lights	N/A	Y	N/A	Y	N/A	Y	Y	Y	N/A
Runway Edge Lights	Y	Y	Y	Y	Y	Y	Y	Y	Y
Touch Down Zone Lights	N/A	Y	N/A	Y	N/A	Y	Y	Y	N/A
Runway End Lights	Y	Y	Y	Y	Y	Y	Y	Y	Y
Rapid Exit Taxiway Indicator Lighting System	N/A	N/A	N/A	N/A	N/A	Y	Y	N/A	N/A

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Asset Group	FABL	FACT	FAEL	FAGG	FAKM	FALE	FAOR	FAPE	FAUP
Rapid Exit Taxiway Lights	N/A	Y	N/A	N/A	N/A	Y	Y	N/A	N/A
Stop Bar Lights	Y	Y	Y	Y	Y	Y	Y	Y	N/A
Runway Guard Lights	Y	Y	Y	Y	Y	Y	Y	Y	N/A
Taxiway Centre Line Lights	N/A	Y	N/A	N/A	N/A	N/A	Y	N/A	N/A
Taxiway Edge Lights	Y	Y	Y	Y	Y	Y	Y	Y	Y
Precision Approach Path Indicators	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lead in/Off Lights	N/A	Y	Y	Y	N/A	Y	Y	Y	N/A
Obstruction Lights	Y	Y	Y	Y	Y	Y	Y	Y	Y
Primary Cables, Plugs, Connectors and Isolating Transformers	Y	Y	Y	Y	Y	Y	Y	Y	Y
Field System (Transformers, Cables, Earth Cables, MCR)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Controls including Mimic Panels	Y	Y	Y	Y	Y	Y	Y	Y	N/A
Photometric Mobile Tester	N/A	Y	Y	Y	N/A	Y	Y	Y	N/A
Photometric Workshop Bench	Y	Y	Y	Y	N/A	Y	Y	Y	N/A
Windsock (WSK)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Signage (SES)	Y	Y	Y	Y	Y	Y	Y	Y	Y

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4.9.2 Maintenance Tasks and Activities

The column headings and the conventions used in the table below have the following meaning:

Column Heading	Meaning
Asset Group	Aerodrome Lighting and AGL Systems asset groups as defined above.
Activity	A short description of the maintenance activity to be performed.
Task Description	A detailed description of the maintenance tasks to be performed.
Frequency	The code used to reflect the intervals between which maintenance activities shall be performed. The convention used is: M = Monthly, Y = Yearly
Trade	The trade code specifies the type of lead trade required to perform the maintenance activity. The convention used is: ELEC = Electrical, MECH = Mechanical, CIVL = CIVL or BUIL = Building and Facilities Maintenance.
Outage	REQD = Outage is required, as normal airport operations shall be impacted NOT REQD = Outage is not required, as normal airport operations shall not be impacted

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4.9.3 Maintenance Tasks for Approach Lights

The Electrical Maintenance or Maintenance Engineering personnel shall inspect runway lighting – approach lighting system every day prior to the hours of darkness to identify any unserviceable equipment.

Activity	Activity Description	Frequency	Trade	Outage
Inspection	1) Check and replace burned out lamps 2) Check for gross misalignment and notify the company 1 st Electrician/Senior Maintenance Engineering personnel, if misalignment is identified 3) Check and replace broken glass, where applicable	Daily (D)	ELEC	NOT REQD
Maintenance	1) Clean all lights 2) Change gaskets (if required) 3) Check lights and bases 4) Remove moisture and dry lights and bases 5) Align lights fixtures and bases (if applicable)	Six Monthly (6M)	ELEC	REQD
Inspection	1) Align and torque 2) Check for corrosion, worn out parts and replace where required 3) Perform Approach Lighting Elevation angle settings (only applicable to elevated approach lights) and keep record of results 4) Clean or replace prisms and filters on insert fittings (applicable to halogen light fittings) 5) Check elevated light fitting support structures for damage, rust, tighten and spray paint where applicable (condition based)	Yearly (Y)	ELEC	REQD

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4.9.4 Maintenance Tasks for Runway Threshold Lights

The Electrical Maintenance or Maintenance Engineering personnel shall inspect threshold lighting every day prior to the hours of darkness to identify any unserviceable equipment.

Activity	Activity Description	Frequency	Trade	Outage
Inspection	1) Check and replace burned out lamps 2) Check for gross misalignment and notify the company 1 st Electrician/Senior Maintenance Engineering personnel, if misalignment is identified 3) Check and replace broken glass, where applicable	Daily (D)	ELEC	NOT REQD
Maintenance	1) Check for wear and tear and replace if necessary 2) Torque all light fittings	Two Weekly (2W)	ELEC	REQD

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4.9.5 Maintenance Tasks for Runway Centre Line Lights

The Electrical Maintenance or Maintenance Engineering personnel shall inspect runway centre line lighting every day prior to the hours of darkness to identify any unserviceable equipment.

Activity	Activity Description	Frequency	Trade	Outage
Inspection	1) Check and replace burned out lamps 2) Check for gross misalignment and notify the company 1 st Electrician/Senior Maintenance Engineering personnel, if misalignment is identified 3) Check and replace broken glass, where applicable	Daily (D)	ELEC	NOT REQD
Maintenance	1) Clean and perform photometric testing on Runway Centre Line for all lights. 2) Check and interpret the results	Two Weekly (2W)	ELEC	REQD
Maintenance	1) Check lights and bases - Align lights fixtures and bases (if applicable) 2) Remove moisture and dry lights and bases 3) Torque each light fitting	Six Monthly (6M)	ELEC	REQD
Maintenance	1) Check for corrosion, worn out parts and replace where required.	Yearly (Y)	ELEC	REQD

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4.9.6 Maintenance Tasks for Runway Edge Lights

The Electrical Maintenance or Maintenance Engineering personnel shall inspect runway edge lighting daily to identify any unserviceable equipment.

Activity	Activity Description	Frequency	Trade	Outage
Inspection	1) Check and replace burned out lamps 2) Check for gross misalignment and notify the company 1 st Electrician or Senior Maintenance Engineering personnel, if misalignment is identified 3) Check and replace broken glass, where applicable	Daily (D)	ELEC	NOT REQD
Maintenance	1) Clean and perform Photometric Testing 2) Assess and analyse the results	Tri-Monthly (3M)	ELEC	REQD
Maintenance	1) For inset halogen fittings, apply resealing compound 2) Check lights and bases - Align lights fixtures and bases (if applicable) 3) Remove moisture and dry lights and bases	Six Monthly (6M)	ELEC	REQD
Maintenance	1) Torque each light fitting 2) Check for corrosion, worn out parts and replace where required	Yearly (Y)	ELEC	REQD

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4.9.7 Maintenance Tasks for Touch Down Zone Lights

The Electrical Maintenance or Maintenance Engineering personnel shall inspect runway touch down zone lighting daily to identify any unserviceable equipment.

Activity	Activity Description	Frequency	Trade	Outage
Inspection	1) Check and replace burned out lamps 2) Check for gross misalignment and notify the company 1 st Electrician or Senior Maintenance Engineering personnel, if misalignment is identified 3) Check and replace broken, glass where applicable	Daily (D)	ELEC	NOT REQD
Maintenance	1) Clean and perform photometric testing on Runway Touch Down Zone Lighting for all the lights within 900m of each threshold. 2) Check and interpret the results	Two Weekly (2W)	ELEC	REQD
Maintenance	Torque each light fitting (International Airports)	Tri Monthly (3M)	ELEC	REQD
Maintenance	1) Change gaskets (if required) 2) Check lights and bases - Align lights fixtures and bases (if applicable) 3) Remove moisture and dry lights and bases 4) Check electrical connections for tightness.	Six Monthly (6M)	ELEC	REQD
Maintenance	1) Cleaning or replacing of prism & filters. 2) Apply sealing compound 3) Torque each light fitting 4) Check for corrosion, worn out parts and replace where required	Yearly (Y)		

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4.9.8 Maintenance Tasks for Runway End Lights

The Electrical Maintenance or Maintenance Engineering personnel shall inspect runway end lights daily to identify any unserviceable equipment for replacement immediately.

Activity	Activity Description	Frequency	Trade	Outage
Inspection	1) Check and replace burned out lamps. 2) Check for gross misalignment and notify the company 1 st Electrician/Manager: Maintenance Engineering, if misalignment is identified 3) Check and replace broken glass, where applicable	Daily (D)	ELEC	NOT REQD
Maintenance	1) Check for wear and tear and replace if necessary 2) Torque all light fittings	Two Weekly (2W)	ELEC	REQD
Maintenance	1) Torque each light fitting. 2) Check for corrosion, worn out parts and replace where required	Yearly (Y)	ELEC	REQD

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4.9.9 Maintenance Tasks for Rapid Exit Taxiway Indicator Lighting System

The Electrical Maintenance or Maintenance Engineering personnel shall inspect rapid exit taxiway indicator lighting system daily to identify any unserviceable equipment for replacement immediately.

Activity	Activity Description	Frequency	Trade	Outage
Inspection	1) Check and replace burned out lamps 2) Check for gross misalignment and notify the company 1 st Electrician or Senior Maintenance Engineering personnel if misalignment is identified 3) Check and replace broken glass, where applicable	Daily (D)	ELEC	NOT REQD
Maintenance	1) Clean all lights 2) Apply resealing compound on all insert fittings 3) Remove moisture and dry lights and bases 4) Torque each light fitting	Six Monthly (6M)	ELEC	REQD

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4.9.10 Maintenance Tasks for Rapid Exit Taxiway Lights

The Electrical Maintenance or Maintenance Engineering personnel shall inspect rapid exit taxiway lighting daily to identify any unserviceable equipment for replacement immediately.

Activity	Activity Description	Frequency	Trade	Outage
Inspection	1) Check and replace burned out lamps 2) Check for gross misalignment and notify the company 1 st Electrician or Senior Maintenance Engineering personnel, if misalignment is identified 3) Check and replace broken glass, where applicable	Daily (D)	ELEC	NOT REQD
Maintenance	1) Clean all lights 2) Check lights and bases 3) Remove moisture, dry lights and bases	Six Monthly (6M)	ELEC	REQD
Maintenance	1) Torque each light fitting 2) Check for corrosion, worn out parts and replace where required. 3) Replace prisms and filters on insert fittings	Yearly (Y)	ELEC	REQD

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4.9.11 Maintenance Tasks for Stop Bar Lights

The Electrical Maintenance or Maintenance Engineering personnel shall inspect stop bar lighting daily to identify any unserviceable equipment.

Activity	Activity Description	Frequency	Trade	Outage
Inspection	1) Check and replace burned out lamps 2) Check for gross misalignment and notify the company 1 st Electrician or Senior Maintenance Engineering personnel, if misalignment is identified 3) Check and replace broken glass, where applicable	Daily (D)	ELEC	NOT REQD
Maintenance	1) Apply resealing compound on all fittings where applicable 2) Check lights and bases 3) Remove moisture, dry lights and bases 4) Align lights fixtures and bases (if applicable)	Six Monthly (6M)	ELEC	REQD
Maintenance	1) Torque each light fitting 2) Check for corrosion, worn out parts and replace where required 3) Clean or replace prisms and filters on insert fittings		ELEC	REQD

4.9.12 Maintenance Tasks for Runway Guard Lights

The Electrical Maintenance or Maintenance Engineering personnel shall inspect runway guard lighting daily to identify any unserviceable equipment.

Activity	Activity Description	Frequency	Trade	Outage
Inspection	1) Check and replace burned out lamps 2) Check for gross misalignment and notify first electrician if misalignment is identified 3) Check and replace broken glass where applicable	Daily (D)	ELEC	NOT REQD

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4.9.13 Maintenance Tasks for Taxiway Centre Line Lights

The Electrical Maintenance or Maintenance Engineering personnel shall inspect taxiway centre line lighting every day prior to the hours of darkness to identify any unserviceable equipment.

Cognisance of the [Construction During Operations Procedure - D030 006M](#) and [Runway and Taxiway Closure Procedure - D030 007M](#) shall be adhered to shall any maintenance work be required to be undertaken which requires the closure of a taxiway. Should a NOTAM be required to be instituted, the [Notification of Aerodrome Data and Information \(CAA & ATNS\) Procedure - V010 001M](#) shall be adhered followed.

These inspections shall include the following:

Activity	Task Description	Frequency	Trade	Outage
Inspection	1) Check and replace burned out lamps 2) Check for gross misalignment and notify the company 1 st Electrician/Manager: Electrical Maintenance/Maintenance Engineering Manager if misalignment is identified 3) Check and replace broken glass where applicable	Daily (D)	ELEC	NOT REQD
Maintenance	1) Torque each inset lighting	Tri-Monthly (3M)	ELEC	REQD
Maintenance	1) Check for corrosion, worn out parts and replace where required 2) Clean or replace prisms and filters on insert fittings 3) Change gaskets (if required)	Yearly (Y)	ELEC	REQD

4.9.14 Maintenance Tasks for Taxiway Edge Lights

The Electrical Maintenance or Maintenance Engineering personnel shall inspect taxiway edge lighting every day prior to the hours of darkness to identify any unserviceable equipment.

Cognisance of the [Construction During Operations Procedure - D030 006M](#) and [Runway and Taxiway Closure Procedure - D030 007M](#) shall be adhered to shall any maintenance work be required to be undertaken which requires the closure of a

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taxiway. Should a NOTAM be required to be instituted, the [Notification of Aerodrome Data and Information \(CAA & ATNS\) Procedure - V010 001M](#) shall be adhered followed.

These inspections shall include the following:

Activity	Activity Description	Frequency	Trade	Outage
Inspection	1) Check and replace burned out lamps 2) Check for gross misalignment and notify first electrician if misalignment is identified 3) Check replace broken glass, where applicable	Daily (D)	ELEC	NOT REQD
Maintenance	Torque each light fitting	Six Monthly (6M)	ELEC	REQD
Maintenance	1) Check for corrosion, worn out parts and replace where required 2) Reseal all insert light fittings 3) Clean or replace prisms and filters on insert fittings	Yearly (Y)	ELEC	REQD

Note: Due to traffic volumes at certain sites, this may not be practical, however the person performing the inspection shall report to the company 1st Electrician or Manager: Maintenance Engineering to organize NOTAM, or alternative means to obtain access and repair the affected equipment.

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4.9.15 Maintenance Tasks for Precision Approach Path Indicators (PAPI) Lights

The Electrical Maintenance or Maintenance Engineering personnel shall inspect PAPI Lighting daily to identify any unserviceable equipment. When any lamps fail in a group, a group replacement shall be made immediately.

Activity	Activity Description	Frequency	Trade	Outage
Inspection	1) Check and replace burned out lamps. 2) Check for gross misalignment and notify the company 1 st Electrician or Senior Maintenance Engineering personnel, if misalignment is identified. 3) Check and replace broken glass, where applicable	Daily (D)	ELEC	NOT REQD
Maintenance	1) Clean spreader glasses, filters and replace unserviceable lamps. 2) Verify the angle settings on the PAPI units	Bi-Monthly (2M) Twice Monthly (TM)	ELEC	REQD

The Electrical Maintenance or Maintenance Engineering personnel shall perform PAPI flight calibrations once a year. For ILS equipped (instrument runway), care shall be taken to ensure that the PAPI settings are synchronised with the ILS glide path settings. (Refer [Maintenance of Instrument Landing System - D060 022M](#))

Activity	Activity Description	Frequency	Trade	Outage
Maintenance	Perform PAPI flight calibrations. NB: Only applicable to ILS equipped runways	Yearly (Y)	ELEC	REQD

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4.9.16 Maintenance Tasks for Lead In/Off Lights

The Electrical Maintenance or Maintenance Engineering personnel shall inspect Lead On/Off lighting daily to identify any unserviceable equipment.

Activity	Activity Description	Frequency	Trade	Outage
Inspection	1) Check and replace burned out lamps 2) Check for gross misalignment and notify the company 1 st Electrician or Senior Maintenance Engineering personnel, if misalignment is identified 3) Check and replace broken glass, where applicable	Daily (D)	ELEC	NOT REQD
Maintenance	1) Torque each light fitting 2) Re-seal all inset light fittings where applicable 3) Clean or replace prisms and filters on insert fittings	Yearly (Y)	ELEC	REQD

4.9.17 Maintenance Tasks for Obstruction Lights

The Electrical Maintenance or Maintenance Engineering personnel shall inspect obstruction lighting daily to identify any unserviceable equipment.

Activity	Activity Description	Frequency	Trade	Outage
Inspection	1) Check and replace burned out lamps/broken glasses 2) Check all obstruction lights for serviceability 3) Check that the obstruction lights are flashing 4) Replace the obstruction light if unserviceable	Daily (D)	ELEC	NOT REQD

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4.9.18 Maintenance Tasks for Primary Cables, Plugs, Connectors and Isolating Transformers

The Electrical Maintenance or Maintenance Engineering personnel shall carry out six monthly (semi-annually) Maintenance on AGL plugs, isolation transformers, primary and secondary cabling.

Activity	Activity Description	Frequency	Trade	Outage
Maintenance	1) Measure the Mega Ohm reading on all AGL Circuits 2) Improve mega Ohm readings when a circuit has reached the airport's recommended of minimum reading 50kOhm	Monthly (M)	ELEC	REQD
Maintenance	1) Check all connector plugs for cleanness, proper contact and replace where applicable (AGL Plugs, Isolation Transformers and Primary Cabling)	Six Monthly (6M)	ELEC	REQD

4.9.19 Maintenance Tasks for Controls including Mimic Panels

The Electrical Maintenance or Maintenance Engineering personnel shall daily test the control circuits (including mimic panel) to identify any problem circuits and repair immediately.

Activity	Activity Description	Frequency	Trade	Outage
Inspection	1) Inspection of all Airfield Ground Lighting control circuits mimic panels	Daily (D)	ELEC	NOT REQD

4.9.20 Maintenance Tasks for Photometric Mobile Tester

The Electrical Maintenance or Maintenance Engineering personnel shall ensure that an Annual Sensor Calibration on MALMS is conducted.

The Manager: Electrical Maintenance/Manager: Maintenance Engineering shall ensure that an exemption notice is sent to the SACAA when the MALMS Sensor is sent for calibration.

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Activity	Activity Description	Frequency	Trade	Outage
Maintenance	Calibrate sensors	Yearly (Y)	ELEC	REQD

4.9.21 Maintenance Tasks for Photometric Workshop Bench

Activity	Activity Description	Frequency	Trade	Outage
Maintenance	Calibrate sensors	Yearly (Y)	ELEC	REQD

4.9.22 Maintenance Tasks for Windsock

Activity	Activity Description	Frequency	Trade	Outage
Maintenance	Check over all functionality of the windsocks	Daily (D)	ELEC	NOT REQD

4.9.23 Maintenance Tasks for Signage (SES)

[\(Maintenance of Pavement & Associated Strips and Emergency Repairs – D060 014M\)](#)

Activity	Task Description	Frequency	Trade	Outage
Inspection	1) Inspect signage for damage and obstructions	Daily (D)	ELEC	NOT REQD

4.9.24 Maintenance Tasks for CRE's/MCR

Activity	Task Description	Frequency	Trade	Outage
Inspection	1) Inspect CRE/MCR for alarms and proper functionality. Always ensure the CRE/MCR is selected to remote position. 2)	Daily (D)	ELEC	NOT REQD
Maintenance	3) Lock out the CRE/MCR, open covers and blow dust 4) Check for loose connections and signs of excessive heat generation			

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	5) Measure the output voltage using a true RMS meter			
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4.9.25 Task Responsibility Matrix

TASKS	FABL	FACT	FAEL	FAGG	FAKM	FALE	FAPE	FAOR	FAUP
1) Responsible for execution and adherence to maintenance activities	MME	MEM/ ENEM	MME	MME	MME	MEM/ ENEM	MME	MEM/ ENEM	MME
2) Execution of maintenance	SEEM/ EEM/ ACEM	SEEM/ EEM/ ACEM	SEEM/ EEM/ ACEM	SEEM/ EEM/ ACEM	SEEM/ EEM/ ACEM	SEEM/ EEM/ ACEM	SEEM/ EEM/ ACEM	SEEM/ EEM/ ACEM	SEEM/ EEM/ ACEM

4.10 Unscheduled Maintenance

Where unscheduled maintenance, on any one of the following infrastructures occurs:

- AGL Systems
- Illuminable Signage
- Wind Direction Indicators
- Obstruction Lighting

Which arises due to unforeseen weather conditions or natural phenomenon. i.e. hailstorm, snow, hurricane etc., the following corrective activities shall be undertaken by the Electrical Maintenance or Maintenance Engineering personnel, where the conditions have been identified, through an inspection.

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Activity	Activity Description	Frequency	Trade	Outage
Inspection	AGL Systems 1) Check elevation settings of PAPI Lights and align, if required 2) Check transformer pits for excess water. Pump the water out, if required 3) Check all cable trenches on the AGL Substations for excess water, pump water if required	Unscheduled	ELEC	REQD
Inspection	Illuminable Signage 1) Check all illuminable signage for proper structural integrity and operation and replace broken covers where required	Unscheduled	ELEC	REQD
Inspection	Wind Direction Indicators 1) Check all wind direction indicators for proper functionality and replace the wind cone if turn apart or full of debris/dirt	Unscheduled	ELEC	REQD
Inspection	Obstruction Lights 1) Check obstruction on all lights i.e. snow, hail or grass 2) Check that the obstruction lights are flashing 3) Check all obstruction lights for serviceability, replace if unserviceable	Unscheduled	ELEC	REQD

4.11 Statutory Calibration Certificates

4.11.1 Calibration Certificate

Annual flight calibration certificates shall be obtained for PAPI lights. Keep the records for sensor calibration.

4.12 Spare Holding

Each airport should hold adequate stock of spare parts available. The required level of stock shall be based on the following criteria:

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- Rate of consumption of the items.
- Time required to get the resupply of the items.
- Shelf life of the items.

Alternatively, the spare holding should be based on the OEM proposed minimum spare holding requirements as per the maintenance manuals.

4.13 As-Built Drawing

- Each airport should have a set of as-built drawings kept readily available by the Electrical Maintenance department.
- The as-built drawings must be kept up to date and any changes should be reflected immediately on these drawings.
- The completeness and the accuracy of all circuit diagrams, drawings and descriptions shall be checked at least annually.

5. Process for Monitoring

The effective implementation and monitoring of this Maintenance of Aerodrome Lighting and AGL Systems procedure shall be done through relevant committees and reviews. Self-assessment by Maintenance Engineering and/or Operational Governance shall be conducted to determine compliance, implementation and effectiveness of this procedure. In order to ensure compliance to statutory requirements, audits on annual basis or per audit plan shall be conducted to determine compliance status.

MONITORING CONTROLS	PURPOSE	RESPONSIBLE	FREQUENCY
COE Oversight Compliance Matrix	Oversight compliance	Group Manager: ME (as delegated)	Real Time
Internal Audits	Determine the effectiveness of the procedure and test the outcome of the procedure.	Internal Audit	Annually
Operations Management Manco	Measure adequacy and implementation of the procedure	Operations Management	Planned Interval
CIAM Manco	Measure adequacy and implementation of the procedure	Group Executive: CIAM	Planned Interval

Note: This procedure shall be reviewed in three (3) years cycle and if there is a need to review the procedure before three (3) years cycle laps due to any circumstances being legal requirements, changes in the businesses, the need to reflect current practices or activities, the procedure will be unlocked for review accordingly.

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Disclaimer: In instances where document links are not accessible, directly access the documents on the Policy Management Document Store on the Airports Company South Africa SOC Limited intranet.

6. Accountabilities and Responsibilities

6.1 Accountability

The overall accountability for the development of this procedure lies with the Group Executive: Strategy and Sustainability with the support of the Group Manager: Maintenance and Engineering. However, in the absence the designated person the acting person shall assume responsibility as per delegation of authority. The overall accountability for the effective implementation and adherence of this procedure lies with the Group Executive: Operations Management with the support of the Senior Manager: Maintenance Engineering. However, in the absence the designated person the acting person shall assume responsibility as per delegation of authority.

Authorities	Group Manager: Maintenance Engineering	Regional General Manager	Group Executive: Strategy and Sustainability	Group Executive: Operations Management	Senior Site Manager: Maintenance Engineering	Employees (Procedure role players)
Has overall accountability for development of this procedure	<i>Responsible</i>	-	<i>Accountable</i>	-	<i>Consulted</i>	<i>Consulted</i>
Has overall responsibility for implementation and adherence of this procedure	<i>Responsible</i>	<i>Responsible</i>	<i>Responsible</i>	<i>Responsible</i>	<i>Responsible</i>	<i>Responsible</i>
Consulted at the time of an exception and adherence of this procedure.	<i>Consulted</i>	<i>Consulted</i>	<i>Consulted</i>	<i>Consulted</i>	<i>Accountable</i>	<i>Responsible</i>
Has overall responsibility for adherence, implementation and performance of a given task.	-	-	-	-	<i>Accountable</i>	<i>Responsible</i>

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Has responsibility for approval and authorisation	<i>Responsible</i>	<i>Informed</i>	<i>Accountable</i>	<i>Accountable</i>	<i>Informed</i>	-
Communicate the procedure to all impacted stakeholders or employees.	<i>Accountable</i>	<i>Responsible</i>	-	-	<i>Responsible</i>	<i>Informed</i>

6.2 Roles and Responsibilities

Approved Contractor

- Any maintenance work completed by an Approved Contractor shall comply with section 4. Procedure General
- Ensure that monthly audits are completed on the work undertaken

Senior Manager: Site Maintenance Engineering

- Ensure that all Maintenance Engineering personnel, have been trained to complete the relevant tasks which they are required to fulfil their job functions.
- Adequately train personnel on the use of the operating equipment, tools or any other elements associated with the task required to perform their duties.

Regional General Manager

- Ensure that all Maintenance Engineering personnel adhere to their responsibilities.

7. Reporting of Non-Conformance

Any deviation from this procedure shall be identified and registered with corrective and preventative measures for continual improvement in accordance with [Reporting of Non-Conformance Procedure Document - Z001 001M](#).

8. Related Policy Documents

Document Control Procedure - Z001 006M
Licensing Documents Review – Z001 007M
Record Keeping Requirements Procedure - Z001 008M

9. Related Legislation and Standard

Occupational Health & Safety Act, No.85 of 1993
Civil Aviation Act, No 13 of 2009

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COLTO - Section 4000: Asphalt Pavements and Seals; Section 5000: Ancillary Roadwork
 SACAA Civil Aviation Regulation (CAR) Part 139
 SACAA Civil Aviation Regulation (CAR) Part 140
 SACAA Civil Aviation Technical Standards (CATS) 139
 SACAA Civil Aviation Technical Standards (CATS) Part 140
 SACAA Civil Aviation Technical Guidance Material for Maintenance of Runway and Taxiway Lighting Systems (Latest Issue)
 ACI Apron Markings and Signs Handbook (Latest Issue)
 ICAO Annexure 14 Volume 1: Aerodrome Design and Operations (Latest Issue)
 ICAO Airport Services Manual - Part 9 Airport Maintenance Practices (Latest issue)
 IATA - Airport Handling Manual (Latest issue)

10. Change Control and Verification

This procedure shall only be changed with the authorization of the Group Executive: Strategy & Sustainability and in accordance with [Change Control and Verification Procedure - Z001 003M](#).

11. Records

Each Process Owner and manager as identified, is responsible for maintaining, storing, and protecting their respective documents/information. Records shall be identifiable, easily retrievable, and maintained as per the Retention schedule as regulated or required by the Organisation, statutory or regulatory requirements. Refer to [Record Keeping Requirements Procedure – Z001 008M](#)

Record Name	Storage Location	Record Number	Responsible Person	Retention Time
Contractor Compliance and Quality Assurance Audit	Electrical Maintenance Department/Maintenance Engineering Department (Regional Airports)	ME – 031	Manager: Electrical Maintenance/Manager: Maintenance or designated Maintenance Engineering personnel	Five (5) years
Maintenance Engineering Asset Strategy Form - Asset Information Update Request Form	IMC Department/Maintenance Engineering Department (Regional Airports)	ME – 038	Manager: Electrical Maintenance/Manager: Maintenance or designated Maintenance Engineering personnel	Five (5) years
Maintenance Engineering Asset Strategy Form - Asset Request Form	IMC Department/Maintenance Engineering Department (Regional Airports)	ME – 039	Manager: Electrical Maintenance/Manager: Maintenance or designated Maintenance Engineering personnel	Five (5) years
Maintenance Engineering Asset Strategy	IMC Department/Maintenance	ME – 040	Manager: Electrical Maintenance/Manager: Maintenance or	Five (5) years

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Form - Asset Preventative Maintenance Request Form	Engineering Department (Regional Airports)		designated Maintenance Engineering personnel	
Maintenance Engineering Asset Strategy Form - Asset Activity Update Request Form	IMC Department/Maintenance Engineering Department (Regional Airports)	ME – 041	Manager: Electrical Maintenance/Manager: Maintenance or designated Maintenance Engineering personnel	Five (5) years
Electrical Maintenance and Inspection-Day-Night-Sub-Stations (FACT)	Civil Maintenance Department/Maintenance Engineering Department (Regional Airports)	M&E – 046	Manager: Civil Maintenance/ Manager: Maintenance or designated Maintenance and Engineering personnel	Five (5) years
Electrical Maintenance Runway Inspection (FACT)	Civil Maintenance Department/Maintenance Engineering Department (Regional Airports)	M&E - 047	Manager: Civil Maintenance/ Manager: Maintenance or designated Maintenance and Engineering personnel	Five (5) years
Electrical Maintenance Inspection of Obstruction Lighting (FACT)	Civil Maintenance Department/Maintenance Engineering Department (Regional Airports)	M&E - 048	Manager: Civil Maintenance/ Manager: Maintenance or designated Maintenance and Engineering personnel	Five (5) years
RWY Inspection Form (FAGG)	Civil Maintenance Department/Maintenance Engineering Department (Regional Airports)	M&E - 049	Manager: Civil Maintenance/ Manager: Maintenance or designated Maintenance and Engineering personnel	Five (5) years
Maintenance Programme (FAOR)	Electrical Maintenance Department	TBC	Manager: Electrical Maintenance	Five (5) years
Maintenance of Aerodrome Lighting and AGL Systems	Master in Policy Management Storage Room	D080 002M	Policy Assurance Officer	Five (5) years
RWY Inspection Form (FAGG)	Electrical Maintenance Department/Maintenance	M&E - 062	Manager: Maintenance Engineering or designated Maintenance	Five (5) years

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FAEL & FAPE)	Engineering Department (Regional Airports)		and Engineering personnel	
RWY Inspection Form (FABL, FAKM & FAUP)	Electrical Maintenance Department/Maintenance Engineering Department (Regional Airports)	M&E - 063	Manager: Maintenance Engineering or designated Maintenance and Engineering personnel	Five (5) years

12. Revision History

Date last revised	Revision Status	Compiler	Summary of changes
13 th March 2017	Version: 6	Group Manager: Maintenance Engineering Name and Surname Russell Aschmann	Refer to track changes and change control form for detailed changes.
15 th August 2021	Version: 7	Engineer: Electrical Maintenance Name and Surname: Katlego Mohlala	All positions aligned to the GFMO. Inclusion of Table to indicate asset groups applicable to an airport. Including Asset Equipment Types applicable to airports. Standardizing of format for Oracle EAM Preventative Maintenance Activities tables. Alignment to SACAA TGM for Aerodrome Electrical Systems Addition of airport specific AGL Maintenance program

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24 th October 2024	Version: 7	Chief Electrical Engineer Name and Surname: Tabane Montwedi	Section 4.12: Include that the spares holding must align with the SACAA TGM on Maintenance of Runway and Taxiway Lighting Systems. Section 4.13: Include that the as-built drawings must align with the SACAA TGM on Maintenance of Runway and Taxiway Lighting Systems.
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13. Endorsement (See Master in Policy Management Storage Room)