Abacus®
Leaders in Lighting

Inspection Plan

Inspection Type	Visual Inspection	Detailed Condition Report	Optional Extras
Structural	▶ Site location ▶ Mast type ▶ Obstructions ▶ Headload ▶ Damage ▶ Protection ▶ Corrosion ▶ Bolts ▶ Hinges / locks ▶ Weld condition ▶ Interpretive report	▶ Full height inspection ▶ Pulley / ropes / latching system report ▶ Paint / galvanising thickness ▶ Internal examination ▶ Interpretive condition report ▶ Material thickness testing	☐ Asset mapping ☐ Complete size survey ☐ Structural analysis of configuration ☐ Column load testing ☐ Ultrasonic testing of bolts
Electrical	▶ Site details ▶ General condition assesment ▶ Indentification of modifications ▶ Operation test of isolation devices ▶ Operation tests of mechanical maintenance switching ▶ Operation tests of functional switching ▶ Observations on non-conformities ▶ Declaration of visual satisfaction ▶ Capacitor check	▶ Detail of inspection and testing works ▶ 25% sample inspection ▶ 'Dead' and 'live' electrical testing ▶ Issue of NICEIC condition report	☐ Asset list ☐ As fitted drawings ☐ Energy audit ☐ 50% or 100% sampling upgrade ☐ Remote luminaire monitoring *(available on selected luminaires)*
Luminaires	▶ Ground-based check *(e.g. Front glass / no. lamps out)*	▶ Check fitting condition ▶ Visual inspection of seals for IP integrity ▶ Visual inspection of reflector for signs of deterioration ▶ Visual inspection of lamp/lampholders (for discharge luminaires) and replacement of lamp as necessary ▶ Check ignitor & ignitor box	☐ Lamp replacement ☐ Aiming check ☐ Light checks / re-aim ☐ Front glass cleaning ☐ Floodlight replacement

Recommended Structural Inspection Frequency (table 1)

Age	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Visual																																									
Detail																																								

Inspection frequency should be as per ILP PLG07 guidance; Masts with specific features may require inspection on a different frequency. This can be assessed on a case-by-case basis.

Recommended Electrical Inspection Frequency

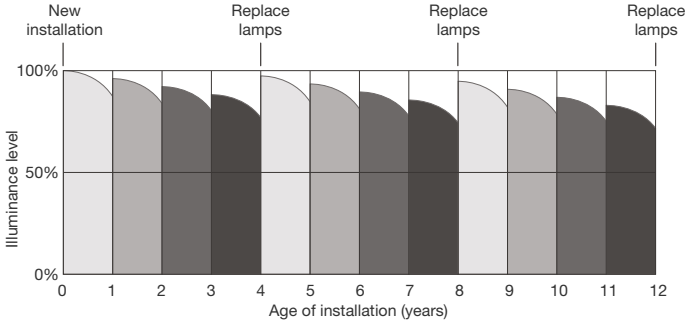
Recommended frequency to be offered by Abacus Lighting Ltd for a 'Visual Inspection' has been identified as every 12 months.
The recommended frequency to be offered by Abacus Lighting Ltd for an 'Electrical Installation Detailed Condition Report' has been based on the recommendations of BS7671 Wiring Regulations 2018: Guidance Note 3, and noted as follows;

- ▶ Educational Establishments – 5 year intervals
- ▶ Leisure Complexes – 3 year intervals

Note: Where an Electrical Installation Detailed Condition Report has been identified for completion then a Detailed Visual Inspection for the floodlighting installation will form part of that report.

Note: For non-Abacus equipment, current electrical test certificates must be available on commencement of contract otherwise a full detailed inspection must be carried out.

Recommended Luminaire Inspection Frequency (table 2)



- ▶ Lighting scheme incorporates a maintenance factor. Desired lighting levels will not be achieved unless recommended maintenance regime is followed
- ▶ Lamp deterioration (table 2): Lumen output reduces over time and lamp outage frequency increases with time
- ▶ Reflectors deteriorate over time leading to a reduction in lamp output
- ▶ Ensure IP integrity with recommended regular checks of floodlight seals
- ▶ Clean periodically using a chemically neutral, water-based mild soap solution. Front glass may be cleaned with proprietary glass cleaner to remove any build-up of airborne pollutants to maintain optimum light transmission through the front glass

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Inspection Plan

Structural

Visual Inspection

Ground level visual only, excludes any operating of mechanisms and should record the following;

- Site location and individual column reference
- Mast type and height identification
- Make / model
- Tubular / multisided
- Hinged / fixed etc
- Flange plate / root
- Age (if possible)
- If hinged then note any obstructions to lowering
- Headload description
- Physical damage (approx location and size)
- Surface protection (external & internal)
- Corrosion
- Areas affected
- Grading system on 1-5 scale
- Bolt condition, washer distortion, base drainage and check on torque
- Presence / condition of hinge components and locking mechanisms etc
- Visual weld cracks indicated by corrosion
- Interpretive report with overall condition rating 1-5 or recommendation for detailed inspection

Detailed Condition Report

Detailed inspection includes all aspects of basic inspection plus the following;

- Full height visual inspection via climbing, cherry picker or base hinge
- Full inspection of pulley system, wire ropes & latching of RLW masts
- Ultrasonic measurement of paint / galvanising thickness. Sample around base area and up shaft
- Internal examination of column root via inspection camera to look for corrosion
- Interpretive report with overall condition rating 1-5

Optional Extras

- Asset mapping / numbering of structures on large sites
- Complete survey to determine principal sizes (shaft / member sizes, thicknesses, flange / bolt configuration etc)
- Structural analysis of existing / planned configuration
- Ultrasonic testing on bolts to check for cracking
- Light checks / Re-aim
- Column load testing
- Remote luminaire health monitoring *(available on selected luminaires)*

Electrical

Visual Inspection

Consists of the following items as noted below, and is to be used to supplement an Electrical Installation Condition Report; and maintain a continuous record of the condition of the floodlighting installation;

- Site details of the floodlighting installation
- Assessment of the general condition of the floodlighting installation, with visual checks completed for;
  - Breakages
  - Wear/Deterioration
  - Signs of Overheating
  - Missing Parts
  - Accessibility of Switchgear
  - Doors of Enclosures Secure
  - Adequate Labelling
  - Loose Fixings
- Identification of any alterations or additions to the installation.
- Operation tests of floodlighting installation isolation devices
- Operational tests of mechanical maintenance switching devices pertaining to the floodlighting installation
- Operational tests of functional switching devices pertaining to the floodlighting installation
- Identification of any observations and recommendations made during the visual inspection which do not conform to current regulations or which may be detrimental to the operation of the floodlighting installation
  - Code 1 defects
  - Code 2 defects
  - Code 3 defects
  - Areas considered for further investigation
- Declaration the installation visually satisfactory or unsatisfactory

Detailed Condition Report

An Electrical Installation Condition Report shall be completed as per the recommended intervals as noted in 3.2 Electrical Installations, and covers all items noted in 2.1 Visual Inspection; and the following additional items;

- Details of the inspection and testing works to be completed, including for applied limitations.
- 25% sampling inspection of the floodlighting installation
- Completion of electrical testing for both ‘Dead’ and ‘Live’ tests
- The issue of a NICEIC Electrical Installation Condition Report on completion of the works detailing if the floodlighting installation is either satisfactory or unsatisfactory in meeting the current standards

Optional Extras

- Asset list of the component parts which make up the floodlighting installation.
- As fitted drawings of the floodlighting installation including for duct and cable routes.
- Floodlighting Energy Audit detailing energy savings comparison between the existing floodlighting installation and a comparable LED floodlighting installation. This includes for energy cost savings and payback for the new floodlighting installation.
- Upgrade Electrical Installation Condition Report to cover 50% or 100% sampling of the inspection of the floodlighting installation