

# QUALITY DELIVERY CHECKLISTS



## **LIGHTING**

Quality Delivery guidance on Lighting and what to check for.



WILLMOTT DIXON

SINCE 1852



## CONTENTS

Introduction	1
Pre Installation	2
First Fix	3
Second Fix	4
General Lighting	5
Emergency Lighting	6
External Lighting	7
Commissioning	8
Key Learning Points	9
Resources	10

## Introduction

---

It is very rare that any of us would be involved on a construction project without a lighting installation. The benefits that a good lighting system bring to a client are obvious. We are fortunate that the installation of lighting is always carried out by competent and qualified tradesmen. However, there are a few key checks that we need to carry out to satisfy ourselves that the lighting installation is perfect.



## Pre Installation

---

Before installation begins, check all the materials, including luminaires, trunking, trays and fixings, are as specified.

Check all the materials have legislative markings, such as CE or BSEN where required.

Ensure that the environmental conditions are suitable for the installation of first fix materials.



## First Fix

---

Whilst the containment is being installed, check that the position and height match the drawings.

Following installation, check that all the baskets, trays and trunking have been fitted securely and are not loose.

Ensure that all the installed trunking has lids fitted , paying particular attention to future access requirements where the trunking passes through a wall.

Check that any containment through fire walls has an approved fire stopping detail. In particular, check that the intumescent sealant used is suitable.

Check that trunking is not at full capacity. Ideally, about 40% should be left available.



## Second Fix

---

Check that the cabling is suitably fixed, secure and tidy

Check that all cables are installed within suitable containment. For example, Twin and Earth cables should be within baskets or trays, and single cables within trunking or conduits.

Confirm with the electrical contractor that the cabling installation complies with the current version of the Institution of Electrical Engineers' Wiring Regulations.

Check that the luminaires have been installed as detailed on the reflected ceiling plans and the room data sheets.

Finally, check that all luminaires are correctly supported and fixed in position.

Ensure that arrangements are in place to check that the Lux levels meet the specified requirements, and that the inspection is witnessed.



## General Lighting

---

Check that all of the switches operate and the faceplates are not cracked or scratched.

Check that all faceplates and lighting controls are in the right position, have been securely fixed and, most importantly, that they are level.

Check that any pull switches are complete, with a break joint and nylon cord.



## Emergency Lighting

---

For Emergency lighting, check that all the batteries have been charged. All emergency LEDs need to be working and visible.

Check that the emergency lighting test has been carried out and the LUX levels taken during the specified period, typically 3 hours.

A key switch function test must be carried out

If a static inverter is installed, check that the room is conditioned as per the manufactures requirements.

If a central battery system is installed, check that the room is adequately conditioned and that the correct fire resistant cabling has been used.

Finally check that the escape route signage has been installed where required.



## External Lighting

---

For external lighting, check that the lighting column bases, and wall mounted fittings, are positioned correctly in accordance with the layout drawings.

Check that any lighting columns are not damaged and have been installed plumb.

Ensure that all cable entries, exits, ducts and sleeves, in the lighting column base are clear of any obstructions.

Ensure that all cables and fittings have the correct I.P. rating, and that cable entry points are correctly sealed. Visually check all fittings for any ingress of water or condensation.

Finally, check that any time clocks or photocells have been set up and demonstrated to the clients requirements.





## Commissioning

---

Ensure that arrangements are in place to check that the Lux levels meet the specified requirements, and that this work is witnessed.

The Lighting control strategy also needs to be validated.



## Key Learning Points

---

In order to successfully deliver a building, and meet the needs of our clients, we have to carefully manage the installation of the lighting systems.

Lighting systems fall into 3 categories, general, emergency and external lighting.

To get these lighting systems correct we first need to make sure that we are using the right components.

We then need to ensure everything is installed correctly and in the right place.

And finally, we need to make sure that these three lighting systems are working correctly before project handover.

1. There are 3 types of lighting with specific requirements
2. Make sure you use the right materials, and they are installed properly, in the right place
3. Take time to check that the lighting system is working properly before handing the project over



## Resources

---

No-one can know everything there is to know about every construction activity, and neither are you expected to. It is preferable for you to seek or ask for help, rather than attempt to hand over a product that is not perfect.

Having watched this, if there are any further questions, there are other resources available to you.

Internally, the Quality Delivery Homepage can be accessed via the Hub. This contains the Quality Best Practice Guide, which you may find useful. Additionally, feel free to phone or email the Quality Delivery Team using the details shown.

07870568449 / 07976377471

[quality.delivery@willmottdixon.co.uk](mailto:quality.delivery@willmottdixon.co.uk)

Externally, there are a range of resources available:

IEE wiring regulations

Willmott Dixon - Quality Alert 47

CIBSE - Commissioning code L

BS5266-1 - Emergency lighting. Code of practice for emergency escape lighting of premises.