

INDUSTRIAL M&E; FIT OUT SERVICES

UK Compliance Guide | Electrical & Mechanical Building Services

A practical overview of the principal compliance considerations when delivering coordinated mechanical and electrical fit-out works in industrial and commercial buildings.

01 | COMPLIANCE STARTS WITH COORDINATION

An M&E; fit out brings multiple building services together within one project. Compliance therefore depends not only on individual electrical or mechanical systems, but on how the services are designed, installed, coordinated, commissioned and handed over as a complete installation.

The applicable requirements depend on the building, use, project scope and whether the works are new-build, refurbishment, extension or alteration.

02 | CDM 2015 & PROJECT RESPONSIBILITIES

Industrial fit-out works are construction work for the purposes of the Construction (Design and Management) Regulations 2015. Clients, designers, principal designers, principal contractors and contractors have defined duties. The project should be planned and coordinated so risks are managed from design through construction, use and maintenance.

Typical controls include:

- Suitable project management and competent dutyholders
- Pre-construction information and design coordination
- Construction phase planning and site controls
- RAMS, permits and safe systems of work
- Coordination between electrical, mechanical, fire and building trades
- Provision of relevant health and safety information at handover

03 | ELECTRICAL INSTALLATIONS

Electrical work should comply with the current edition of BS 7671 and the Electricity at Work Regulations 1989. Design should consider supply characteristics, maximum demand, fault levels, protective devices, earthing, cable sizing, voltage drop, containment, isolation, accessibility and future loads.

Typical electrical fit-out scope can include LV distribution, section boards, distribution boards, submains, power circuits, lighting, emergency lighting, machinery supplies, containment, data infrastructure, metering and controls.

04 | MECHANICAL BUILDING SERVICES

Mechanical systems should be designed and installed to the applicable Building Regulations, relevant standards and manufacturer requirements. The exact requirements depend on the services provided.

Typical systems can include ventilation, heating, cooling, domestic water services, drainage, pumps, controls and associated plant.

05 | BUILDING REGULATIONS

Where the fit-out constitutes building work, relevant Building Regulations and Approved Documents must be considered. For industrial and commercial projects these may include fire safety, ventilation, sanitation and hot water, drainage, energy performance, access and material/workmanship requirements.

Building-control involvement and the applicable edition of the guidance should be established for the specific project.

06 | FIRE SAFETY & SERVICE PENETRATIONS

M&E services must be coordinated with the building's fire strategy. Cable routes, ducts, pipework and containment passing through fire-resisting construction should not compromise the required fire performance.

Fire stopping should be suitable for the penetration and supporting construction, installed to the relevant tested system and recorded where required. Fire alarm, emergency lighting, smoke control, dampers and interfaces with mechanical plant should be coordinated with the fire strategy.

07 | VENTILATION & INDOOR AIR QUALITY

Ventilation systems should be designed around the occupancy and use of the space and, where applicable, the current requirements of Approved Document F. Airflow rates, supply and extract locations, ductwork, controls, commissioning and access for maintenance should be considered.

Industrial processes can introduce additional extraction or specialist ventilation requirements outside normal comfort ventilation and these should be assessed for the actual process.

08 | ENERGY PERFORMANCE & CONTROLS

Where applicable, the fit-out should address current Part L energy requirements for buildings other than dwellings. Efficient lighting, HVAC plant, controls, zoning, metering and commissioning can all contribute to compliant building-services performance.

Projects subject to the 2026 standards should use the applicable 2026 Approved Document L; transitional arrangements can mean earlier guidance remains relevant to some projects.

09 | ACCESS, MAINTENANCE & ISOLATION

Plant and equipment should be positioned so it can be operated, isolated, inspected and maintained safely. Electrical isolators, valves, filters, control panels, dampers and serviceable equipment should remain accessible after the fit-out is complete.

Design coordination should consider maintenance clearances, safe access, replacement routes for major plant and the interaction between services.

10 | WATER, DRAINAGE & MECHANICAL PIPEWORK

Domestic water, hot-water and drainage systems should comply with the applicable Building Regulations and relevant water requirements. Pipework should be adequately supported, identified, insulated where required and protected from damage.

Condensate, drainage falls, discharge locations, plant connections and access for cleaning or maintenance should be resolved before installation.

11 | CONTROLS & SYSTEM INTEGRATION

Modern fit-outs commonly require interfaces between electrical distribution, HVAC controls, fire alarm systems, BMS, metering, emergency stops and production equipment. Interfaces should be clearly defined so that safety functions and operational sequences work as intended.

Cause-and-effect requirements, interlocks and shutdown sequences should be agreed, documented and functionally tested.

12 | EXISTING BUILDINGS & ALTERATIONS

Before modifying an existing installation, the condition and capacity of the infrastructure should be established. Existing LV distribution, mechanical plant, incoming services, fire compartmentation and available space can all influence the final design.

Where new equipment increases electrical, heating, cooling, ventilation or water demand, the existing systems should be checked for suitability rather than assuming spare capacity.

13 | TESTING, COMMISSIONING & BALANCING

Individual systems should be inspected, tested and commissioned before handover. A coordinated commissioning plan is particularly important where systems interact.

Depending on the project, this can include:

- Electrical inspection, testing and certification
- Protective-device and control verification
- Lighting and emergency-lighting testing
- Ventilation airflow measurement and balancing
- Heating/cooling plant commissioning
- Controls, BMS and sensor checks
- Fire alarm and M&E; interface testing
- Emergency-stop and safety-interlock functional testing
- Metering verification and system demonstrations

14 | DOCUMENTATION & HANDOVER

A compliant fit-out should leave the client with sufficient information to safely operate and maintain the completed installation. The exact handover package depends on the project and contractual requirements.

Typical records include:

- Electrical certificates and test schedules
- Mechanical commissioning records
- As-installed drawings and schematics
- Distribution board and equipment schedules
- O&M; manuals and manufacturer information
- Control descriptions and set points
- Fire-stopping / penetration records where required
- Asset information, warranties and maintenance requirements

M&E; FIT OUT COMPLIANCE CHECKLIST

DESIGN	Electrical and mechanical requirements coordinated
CDM	Dutyholders, risks and construction controls established
ELECTRICAL	BS 7671 design, protection, earthing and testing addressed
MECHANICAL	Ventilation, HVAC, water and drainage requirements assessed
FIRE	Fire strategy, penetrations and system interfaces coordinated
ENERGY	Applicable Part L requirements and controls considered
ACCESS	Isolation, maintenance access and replacement routes provided
CONTROLS	Interlocks, BMS and cause-and-effect functions defined
TESTING	Systems tested, commissioned and balanced as applicable
HANDOVER	Certification, drawings and O&M; information provided

THE QUEST APPROACH

Coordinated Industrial M&E; Fit Outs - From Incoming Services to Final Commissioning

QUEST Electrical delivers industrial and commercial fit-out projects with the electrical and mechanical elements coordinated as one package. The scope can include LV distribution, power, lighting, containment, machinery supplies, controls and metering alongside mechanical building services, ventilation, heating/cooling and associated plant.

By considering the complete M&E; installation together, interfaces can be resolved earlier, shutdowns coordinated and the completed systems tested and commissioned around the operational requirements of the site.

QUEST ELECTRICAL | Industrial M&E; Fit Outs | LV Distribution | Lighting | Power | Controls | Mechanical Services | Testing & Commissioning

Important: This guide is a general overview and is not a substitute for project-specific design or statutory advice. Applicable requirements vary by building type, location, scope and transitional arrangements. Specialist systems may require additional standards, competent designers, approvals and commissioning procedures.
Reference basis checked September 2026: CDM 2015; Electricity at Work Regulations 1989; current BS 7671; Building Regulations and applicable Approved Documents including B, F and L; manufacturer requirements and project-specific standards.