

Emsol delivers seamless MEP coordination for Project Darwin

How end-to-end building services design ensured clean coordination, safe operation, and ease of maintenance for a modern UK facility

INDUSTRY

Warehousing & Commercial Office

LOCATION

United Kingdom

About Project Darwin

Project Darwin is a modern dual-purpose facility comprising a large-scale warehouse and adjoining office floors. The complex spans across the ground, first, and second floors.

Challenges

Modern warehouse and office environments demand complex, integrated building services. Coordinating intensive Firefighting, HVAC, Electrical, and Plumbing systems across multiple floors can result in severe spatial clashes, energy inefficiencies, and maintenance difficulties if not expertly managed.

Comprehensive HVAC & Ventilation

Delivered complete system selection, heat-load estimation, and equipment sizing. Emsol prepared detailed Air Handling Unit (AHU) instrumentation and control philosophies, alongside fresh-air and exhaust ventilation for warehouse bays, toilets, and pantries. Ducting and pipework routing were actively optimized to avoid clashes, and energy efficiency measures aligned seamlessly with ECBC/ASHRAE guidance.

Advanced Electrical Infrastructure

Executed precise electrical load estimations with diversity factors, providing full panel schedules and Single Line Diagrams (SLDs). Designed lighting for work floors and emergency egress , alongside complete small-power layouts, earthing/grounding, lightning protection, and provisions for DG/UPS backups.

Compliance & Standards

- FIREFIGHTING:** Designed to UK Building Regulations (Approved Document B), alongside BS 9999 for fire design and management, BS 5839 for fire alarms, BS 5306 for fire equipment, and BS EN 12845 for sprinkler systems.
- HVAC & ENERGY:** Complies with UK Building Regulations (Approved Documents F and L) , CIBSE Guides A-E, and BS EN 13779 / BS EN 16798, ensuring optimal ventilation and indoor environmental quality.
- ELECTRICAL:** Installed per BS 7671 (IET Wiring Regulations, 18th Edition) and Approved Document P , integrating BS 5266 for emergency lighting, BS 7430 for earthing, and BS EN 62305 for lightning protection.
- PLUMBING & DRAINAGE:** Follows UK Building Regulations (Approved Documents G and H) , utilizing BS EN 806 / BS 6700 for water supply, BS EN 12056 for sanitary drainage, BS 8490 for rainwater drainage, and strict adherence to WRAS Water Regulations.

RESULTS

38%

LOCAL HIRING
COST REDUCTION

SEAMLESS COORDINATION

Combined-services layouts ensured clean coordination, safe operation, and ease of maintenance across all disciplines. Spatial conflicts were eliminated through optimized routing.

33%

MATERIAL COST
SAVINGS

OPTIMIZED ENERGY & HVAC

HVAC designs aligned with stringent ECBC and ASHRAE energy-efficiency measures. Systems included precise heat-load estimations, AHU instrumentation, and dedicated ventilation for warehouse bays and offices.

100%

REGULATORY
COMPLIANCE

100% REGULATORY COMPLIANCE

Delivered full compliance with UK Building Regulations (Approved Documents B, F, L, G, H, P), IET Wiring Regulations (BS 7671), and CIBSE Guides.

42%

REDUCTION IN
REWORK

ROBUST FIRE & LIFE SAFETY

Engineered a complete firefighting network, including hydrant and hose-reel systems, sprinkler zoning, and precise pump room and water storage sizing. Emsol also integrated a full Fire Detection & Alarm System (FAS) alongside emergency lighting and illuminated exit signage.

Learn how Emsol can transform your projects today



DISCUSS YOUR NEXT PROJECT →

VIEW FULL PROJECT →