

Design Services

Emeg's design 'centre of excellence' is based out of our Manchester office. The team consists of professional engineers, system architects and designers with skill sets encompassing various electrical and mechanical disciplines.

With the experience gained from our rail, engineering and construction industry background, we have the ability to resolve design problems with viable, cost-effective solutions for clients within all branches of rail engineering.

The team's extensive experience in building services design from the conceptual stage to site installation, include the following services:

- Electrical
- Mechanical
- Telecoms

Through Emeg's proactive and strategic approach to rail and building engineering services and design, we produce solutions that are highly sustainable while representing exceptional value for money.

We pride ourselves on developing and producing design strategies, in conjunction with structural engineers and architects, to provide energy-efficient, cost-effective multi-service designs where required.

Construction based knowledge for practical design solutions

Our electrical design engineers have experience in designing and implementing all electrical services within Network Rail facilities, including service and accommodation supplies, design and modelling of complete electrical infrastructure (from private HV networks to LV supplies), mains power distribution, lighting (general, emergency and external), small power, fire alarm and security.

Mechanical design engineers are also an integral part of our integrated design team, offering design solutions for all mechanical services.

Our mechanical design services mainly focus on heating, ventilation and air conditioning applications for aspects of the built environment.

Our building services design engineers specialise in sustainability and low-cost, low-carbon building solutions, incorporating the latest energy-efficient technology to achieve the required BREEAM rating. Low and Zero Carbon (LZC) technologies are also available.

BIM (Building Information Modelling)

Emeg has the ability and experience to take a Bentley Microstation or Autodesk Revit Dynamic Modelling approach to M&E solutions. We are fully BIM ready in terms of policy, processes and compliance. We deliver valuable modelled data and design outputs for all our projects.

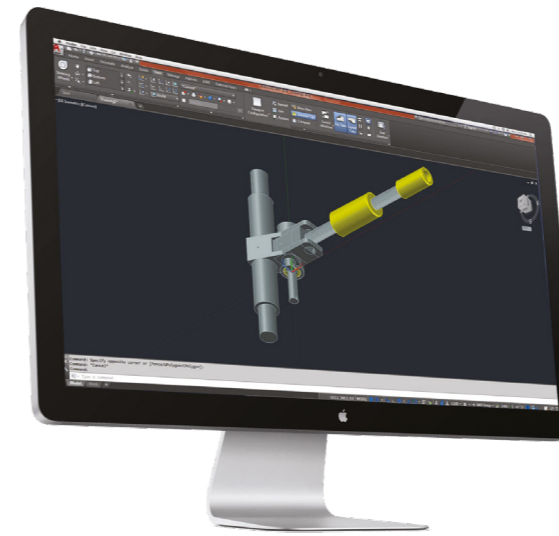
Design Software



Electrical Design Services

Emeg has the in-house capability to design electrical systems from 110V and below through to 33kV. The more usual electrical systems that Emeg design are HV, MV and LV distribution, traction power distribution, internal / external lighting and emergency lighting, platform and car park lighting, depot and high-mast lighting, general power and the like, i.e. all aspects of electrical works found in stations, depots and the general rail infrastructure.

In addition, Emeg's designers provide the electrical designs associated with Emeg's products, such as shore supplies, carriage wash machines, CET and Depot Protection System (DPS).



Mechanical Design Services

Our main focal points of mechanical design are heating, ventilation and air conditioning applications. We can provide bespoke heating solutions to cater for the exact requirements of the client and end-users. This is typically coupled with a strategic ventilation system, resulting in a fully-automated scheme controlling heat and air distribution through the building.

On the other end of the scale, we offer solutions for the more user-orientated commercial facilities, i.e. office blocks, station buildings and depot management suites. Occupational comfort tends to be the primary focus for these developments, where our detailed assessments enable an appropriate design solution to be installed.

Telecom Design Services

Our telecoms design engineers can offer the complete package from design conception to approved-for-construction detailed design and CAD drawings. Emeg also has expertise in IT and telecommunications hardware, software and networking services.

We specialise in the design and installation of a variety of telecom voice and data system solutions. Certified technicians work directly with clients and end-users on complex requirements relating to the design of new installations and initial implementations. Emeg is committed to providing a dedicated, efficient and reliable design service without compromising on quality.

Depot System Design

Emeg has the in-house ability to provide complete turnkey packages for all depot systems, including all accompanying M&E works depot-wide and within the various system plant rooms. Emeg's design and construction teams have extensive experience in:

- Depot Protection Systems (DPS)
- Carriage Wash Machines (CWM)
- Controlled Emission Toilets (CET)
- Fuel dispensing systems
- Oil dispensing systems
- Coolant dispensing systems
- AdBlue dispensing systems
- Automated sand dispensing systems
- Tanking water dispensing systems
- Hot and cold water systems
- Shore Supplies

All of Emeg's systems can be tailored to meet client requirements, Network Rail standards and the specific constraints of the site or location. Emeg has been involved in various Network Rail services roll-out programmes, such as the Northern Hub electrification programme, to deliver fully operational train maintenance depots to service new and upgraded rolling stock and assets. Our design team is involved from the initial concept stages through to depot handover and they'll ensure the original quality, safety, programme timescales and budget aspirations are maintained.

Design Accreditations

IET The Institution of Engineering and Technology



Business Techniques

