

The logo for Compliance Engineering International (CEI) features the lowercase letters 'cei' in a white, sans-serif font on a teal background.

COMPLIANCE  
ENGINEERING  
INTERNATIONAL

A photograph of a modern, multi-story building with a glass facade, featuring a prominent triangular structure. The building is surrounded by greenery and a paved walkway. In the foreground, several people are walking, and a person is riding a bicycle. The sky is overcast.

# EMI BUILDING SOLUTIONS

CREDIT: VISMO

PROVIDING COMPREHENSIVE EMI MITIGATION AND SHIELDING SOLUTIONS  
FOR ARCHITECTS, ENGINEERS AND BUILDING OWNERS

ensure your laboratory is  
protected from  
electromagnetic interference

create a safe environment for  
scientists and confirm the accuracy  
of your research data

COMPREHENSIVE EMI MITIGATION AND SHIELDING SOLUTIONS

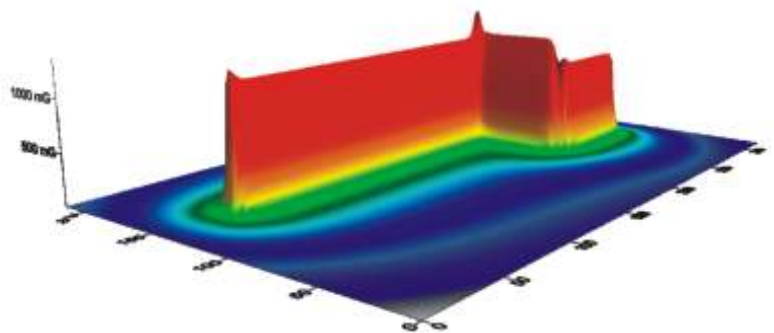
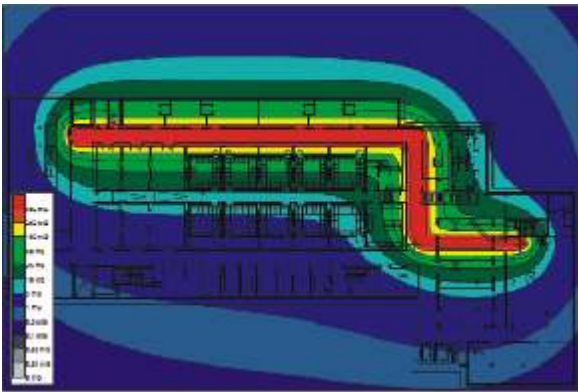
[WWW.CEI-COMPLIANCE.COM](http://WWW.CEI-COMPLIANCE.COM)

Compliance Engineering International work with design teams, engineers and property owners to mitigate electromagnetic (EMI) and radio frequency interference in and around research laboratories, medical facilities, commercial and education buildings.

As specialist research and medical instruments become more advanced and sensitive in their measurements, they become more vulnerable to all types of EMI, particularly DC, ELF (extra low frequency, also referred to as AC) and RF (radio frequency). All of which can be found in the external and internal environment.

The intensive and sensitive technology requirements of science, research and healthcare buildings pose complex challenges to ensure the quality of research data. Electron microscopes, for example, are susceptible to the smallest of magnetic fields. As our experienced team also tests this equipment for worldwide compliance approvals for manufacturers, we are uniquely positioned to recommend solutions for optimal performance. From 2016, there is increased legislation that highlights the importance of EMF in the workplace. All employers will have to ensure that their staff are not subjected to levels of electromagnetic fields that exceed the legal limits.

## **We understand the different applications in the diverse sciences and can assess the susceptibility of instruments in each particular environment**



2D AND 3D COMPUTER SIMULATION MODEL OF IDENTIFIED EMI SOURCES TO DETERMINE LEVELS IN ADJACENT AREAS. THIS EXAMPLE SHOWS THE MAGNETIC FIELDS PRODUCED FROM POWER CABLES IN A LABORATORY

the team provide a one stop shop for strategic and conceptual reviews of your future project, from site and building analysis to testing and shielding installations

our knowledgeable team will work  
with you through the complex  
process, designing cost effective  
proven solutions



CREDIT: REDCO

RESEARCH AND DEVELOPMENT COMPLEX, QATAR FOUNDATION

**Early involvement by the CEI team can ensure the most cost effective solution is reached providing a significant benefit to the client, and offering added value for the architects and design team**

We can advise at any stage of a new project development or refurbishment, from site selection through to assessments in occupied buildings. Mitigation techniques are many fold. These involve segregation, careful design of the in-building electrical systems to shielding using different materials and active cancellation. We understand that every client has individual priorities, and work collaboratively with you to provide the best solution for your project.

## Pre-design consultancy

- Masterplan review for early identification of potential EMI threat sources
- Greenfield / brownfield site survey and analysis to determine any existing EMI threat sources including; DC / ELF surveys and radio frequency (RF) assessments

## Design services

- Building design and layout review to identify potential EMI threat sources and planned areas containing sensitive equipment
- EMI risk analysis using 2D and 3D computer simulation modelling
- Building services design to minimise EMI

## Existing building surveys

- DC / ELF surveys
- RF assessments
- Wiring investigation
- Assessment of existing shielding effectiveness

## Mitigation solutions

- Building management plans
- Analysis of simulation and measurement data against manufacturer's immunity specifications to determine sensitive equipment at EMI risk
- EMI shielding installation services
- Active compensation / cancellation systems



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## CONTACT US

For further information regarding mitigation or shielding please contact

**John McAuley**

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To help you gain a better understanding of EMI, we also offer one-hour lunchtime CPDs, tailored for architects, engineers and building owners

To arrange a CPD please contact

**Louise Carroll**

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