
SECTOR CASE STUDY

Data Centres



Data Centre — Austria

VIENNA, AUSTRIA

Situated in the Austrian capital, Vienna, the 9,750 square metre, 4.8 megawatt data centre was designed for a leading software provider. Our highly skilled team provided structural and civil design services, structural and civil site support, and temporary works design for the technologically advanced centre.

Working under the lead MEP consultant and with the wider design team, a detailed 3D Building model was developed for both the civil and structural elements by BG&E at LOD350. Cloud based BIM coordination sessions with the design team throughout the design period ensured a smooth construction phase with no clashes on site ahead of schedule and in accordance with local Austrian design codes and regulations.



Data Centre — Spain

MADRID, SPAIN



Working with a dynamic team of technical specialists, BG&E designed a state-of-the-art, 7,400 square metre, 4.8 megawatt rapid deployment data centre in Madrid for a major technology company.

BG&E provided structural and civil design services, structural and civil site support, and temporary works design for the project.



Data Centre — England

LONDON, ENGLAND

BG&E showcased its expertise with temporary works design for a cutting-edge 120 megawatt data centre in London, England, commissioned by one of the world's largest technology giants. As of 2023, works are in full swing.

Our scope of temporary works services comprises:

- Structural analysis and design to ensure global stability during construction, utilising a 3D FEA staged analysis model for both structures.
- Checking and designing to ensure sufficient stiffness and strength of structure for anticipated construction loads (including self-weight, wet concrete, live loads, wind, notional horizontal and thermal).
- Permanent structure checks for the temporary works design in line with the proposed construction sequence.
- Structural adequacy checks for members, foundations and connections.
- Review of steel fabrication drawings for all temporary works design items.

Data Centre — Germany

BERLIN, GERMANY



Situated in Berlin in Germany, the 16 megawatt data centre was designed for a leading technology company. Our highly skilled team provided structural and civil design services, value engineering and temporary works design for the centre.

Our team from London and other consultants created a data centre that is protected from natural hazards and is scalable for growth. It was delivered in accordance with local development regulations.

Data Centre — Australia

NSW, AUSTRALIA

Situated in New South Wales (NSW), Australia, the three storey, 48 megawatt data centre was designed for a leading software provider. Our highly skilled team provided structural and civil design services, structural and civil site support, and temporary works design for the technologically-advanced centre.

BG&E and other consultants developed a data centre that is safeguarded against natural hazards and attacks and is scalable for future growth. It was finished ahead of schedule and is compliant with local development regulations.





Data Centre — Dubai

DUBAI, UNITED ARAB EMIRATES

A leading data centre and cloud computing provider with 220 data centres across five continents engaged a technical team, which included BG&E, to design and deliver a new data centre in the Middle East.

The 7.2 megawatt facility is located in the thriving metropolis of Dubai on a 12,460 square metre site and has a data hall of approximately 4,400 square metres.

Our team provided structural and civil design services, Architect of Record, structural and civil site support, and temporary works design for the new centre.

Our clients seek technical professionals that understand their business, industry and their customers — and can design data centres and mission critical facilities that are secure, operationally resilient (providing continuity 24/7, including during crisis), energy efficiency and scalability.

The SYSTRA Group — a global engineering and consultancy leader with 11,000 people worldwide — is now strengthened by BG&E’s international buildings capability, complementing SYSTRA’s long-established expertise in transport and mobility infrastructure.

Building on BG&E’s reputation as a leading structural engineering practice delivering iconic, award-winning projects, the Group provides building solutions across complex and commercial developments, healthcare, education, data centres, adaptive reuse, and transport-related facilities worldwide.