Commendation

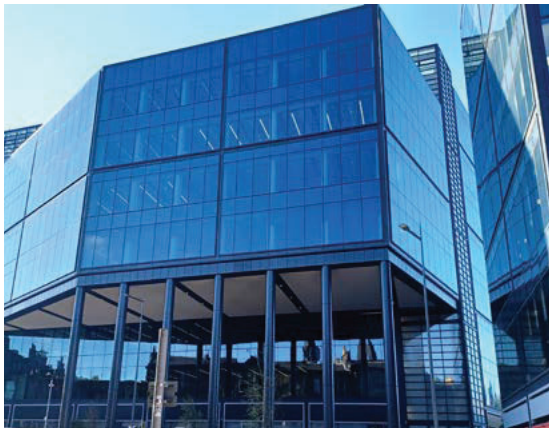
Haymarket, Edinburgh

PROJECT TEAM

Architect: **Foster + Partners**
Structural Engineer: **Arup**
Steelwork Contractor: **BHC Ltd**
Main Contractor: **Sir Robert McAlpine Ltd**
Clients: **Qmile Group, M&G Real Estate**

Judges' comment

The largest office building in Edinburgh has been constructed above two historic rail tunnels, while providing a colonnaded connection to a new public square. This has been achieved by an intelligent engineering solution that balances a steel frame calculated from the capacity of piles that could be 'threaded' in between the two tunnels.



Haymarket is Edinburgh's latest high-profile development, creating a new place to be in the west end of the capital. The development includes three Grade A office buildings totalling around 32,500m^2, a 190-room hotel and a 172-room aparthotel, alongside provision for approximately 3,700m^2 of retail and leisure space.

The buildings that comprise Haymarket surround a large landscaped public square designed to be both intimate and spacious.

The office buildings embrace large areas of floorplate that spans over the mainline Network Rail tunnels. The transfer structure was avoided through the adaptation of early structural concepts with the use of inclined columns and a façade Vierendeel truss. The steel framed cellular composite beam superstructure expands over eight-storeys, with a full height glazed atrium in between. Additionally, a reinforced concrete basement under the eastern half of the building provides car parking spaces and cycle storage.

The design approach aimed to maximise the building volume over the tunnel, ensuring a suitable and buildable design solution that controlled any possible risks to the railways during construction, and the building's lifespan.

The primary frame for both buildings consists of 750mm deep cellular beams, situated at a maximum of 3m centres, which support a 150mm composite deck slab enabling longer span beams of 16m on a 9m typical bay spacing. The overall structural zone is 900mm with services passing through the cellular beams. The northeastern façade, parallel with Morrison Street, spans approximately 30m over the Haymarket South tunnel.

A Vierendeel truss from level 3 to 7 was utilised to span the 30m over the tunnels. To construct the Vierendeel truss, a 9m temporary truss was designed and fabricated to support the steelwork that formed the main girder above.

The atrium stairs were designed and constructed in steel. The cross pattern of flights offers a prime view of the full-height atrium and beyond the development. Steel was the obvious choice for the feature stairs, due to the span the flights had to achieve, with hollow sections used to allow finishes to be fixed easily.

Haymarket has been designed to deliver sustainable commercial and societal benefits for the city, as well as providing residents and visitors a new public space, fostering community and connectivity.