

Commendation

Structural Steel
Design Awards 2024

Clarice Pears Building, Institute of Health and Wellbeing, Glasgow

PROJECT TEAM

Architect: **AtkinsRéalis**

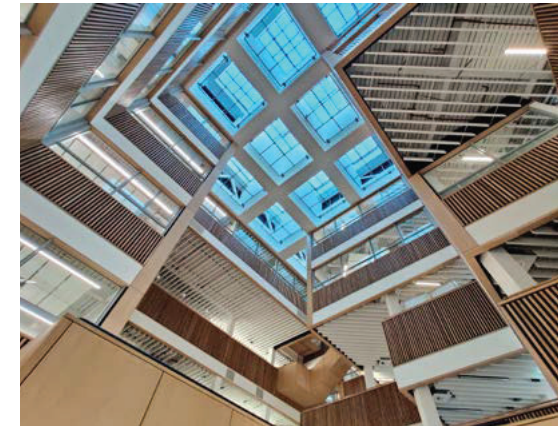
Structural Engineer: **AtkinsRéalis**

Main Contractor: **Multiplex**

Client: **University of Glasgow**

Judges' comment

The building encourages open community engagement concerning health inequalities at street level, while the triangular gridded form generates connections between floor levels around an attractive and welcoming atrium. Team collaboration led to efficient design, fabrication and erection where sustainability, potential adaptability and design for end of life was a central consideration.



The Institute of Health and Wellbeing (IHW) develops ground-breaking research on disease prevention, improving health & wellbeing and reducing health inequalities. The new Clarice Pears building brings together five research groups, transforming the Institute's ability to develop interdisciplinary research and fulfil the client's ambition. In support of this new way of working, the building solution is flexible and adaptable to allow for these clusters to grow and contract over time.

Community engagement is critical to the IHW's success. The building's street level is designed as a marketplace, featuring social, learning and gathering spaces that create informal work zones interlaced with teaching hubs, fostering a community-focused celebration of human activity.

The building's external skin draws inspiration from Glasgow's tenements, transforming the traditional Glasgow tri-part bay window into a repeatable module of metal and glass. The façade delivers natural ventilation and high levels of natural light. Distinctive riven-stone horizontals are incorporated to deliver material contrasts and passive shading to the smooth metals and glass, while replicating the stone string courses of Byres Road tenements.

The design emphasises sustainability and energy conservation. Low and zero carbon technologies were implemented, including fabric and form optimised to maximise the potential for natural ventilation, heating via

the University's CHP led district heating network, low energy LED lighting, and large-scale roof mounted photovoltaic to assist with offsetting electricity demand.

Long-spanning structural solutions with minimum internal columns, alongside complex projecting cantilevering balconies around the atrium, were achieved using high strength steel to realise the architectural vision. The layered terrace of informal settings around the atrium acts as a promenade to the upper levels and a destination for social and informal exchanges.

The building is formed with a steel frame with steel cross-bracings to achieve stability. The steel frame allows for a reduction in weight (in comparison to a concrete frame) and an efficient foundation design with piles tied together with reinforced concrete pile caps and ground beams.

Detailed connections and junctions between cantilevers and supporting internal columns allow the steel frame to be utilised. The top of steel levels varied to present the thinnest expression of floors at the edge of the building façade.

Embodied carbon calculations for the building structure and modules A1-A5 (excluding sequestration) amount to 4,003 TCO₂ which equates to 516kg CO₂e/m² GIA. Additionally, the Clarice Pears Building achieves an EPC 'A' rating and BREEAM 'Excellent' accolade.