

BUILDING FOR THE FUTURE

Project Fact Sheet

Sports Science, Health & Research Building, TUD (Tallaght Campus)

Technological University Dublin





PROJECT: Sports Science Health & Research Building (SSHRB)

CLIENT: Technological University Dublin
TUD (Tallaght Campus)

VALUE: €14 million

STAGE: Completed November 2022

DESCRIPTION:

The project consisted of:

(1) a Sport Science, Health and Recreation Building containing a single storey sports hall and teaching accommodation and associated facilities arranged over two storeys plus roof plant areas, total floor area 3,175 sq.m, a grass playing pitch 140 x 90 m with a 1 m high spectator barrier, 12 m high x 25 m wide ball catch nets behind goal posts.

(2) A new external landscaped quadrangle, pedestrian areas, footpaths and landscaping, linking existing facilities with the development. Building signage, 56 no covered bicycle parking spaces, covered walkways and demolition of 46 no existing car parking spaces and associated site works.

(3) Enhanced pedestrian crossing facilities at Greenhills Road access, comprising new raised entry treatment across access and pedestrian refuge island on Greenhills Road with associated road markings and traffic signs. The application site is centrally located within the TU Dublin campus, which is bounded by Belgard Road to the west, industrial buildings accessed off Airton Road to the north, Greenhills Road to the east and to the south by Old Blessington Road and the grounds of the Old Priory, Tallaght.



METHOD OF CONSTRUCTION:

ABM's role in the project was as Main Contractor and Project Supervisor for the Construction Stage (PSCS).

Precast concrete construction of 1 & 2 storey school on strip foundations. Structural screed on precast hollowcore slabs. The building frame was constructed using precast concrete wall panels and hollowcore concrete floor slabs topped with concrete screed. Some structural steel was incorporated into the concrete frame design and installation to facilitate cantilevered slab areas and the roof terrace construction where it was necessary to achieve level thresholds at doors.

Offsite techniques used for the building included panelised metal frame external wall panels insulated off site and delivered to site in addition to precast hollow core slabs, so as to fit within the hot rolled steel frame.

The building frame was constructed using precast concrete wall panels and hollowcore concrete floor slabs topped with concrete screed. Some structural steel was incorporated into the concrete frame design and installation to facilitate cantilevered slab areas, balconies and the roof terrace construction where it was necessary to achieve level thresholds at doors.

Risk to the programme is reduced through off-site manufacture. Increased on-site installation speed of the internal walls and floors in conjunction with one and other results in the Mechanical and Electrical services works commencing earlier than when using the steel frame construction. The extent of plastering required is reduced to small areas of studwork walls. Consequently, mist coat decorations can commence as soon as areas are weathered. Using a complete precast structure has now become a popular choice for many construction projects throughout Ireland. Precast concrete combines the benefits of rapid construction and high-quality materials with the advantages of factory-controlled production lines and quality assurance.

Pre-Cast Concrete Floor Slabs, Precast Stairs & Landings and permanent metal deck floor slabs were utilised on the first floor to reduce concrete curing times associated with traditional shuttered floor slabs.

TUD (TALLAGHT CAMPUS) SSHRB



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