



THINKING PRECAST?
THINK FP MCCANN



PRECAST CONCRETE STADIA





PRECAST TERRACING

Precast terracing from FP McCann has been developed to offer a 'one-stop' terracing solution for customers working within the stadia sector.

Precast terracing components are factory engineered, minimising cost, time and health and safety implications on site. Designed under bs8110 principles, each section is cast from high quality timber and steel moulds to a type a finish.

FP McCann's concrete designs provide stadia terraces with imposed loadings, seating, raker beams, terrace units and vomitory walls. Produced to exist under exposed conditions, precast terracing is fire resistant and aims to accommodate the requirements of dynamic performance.

FLEXIBLE DESIGN, VARIETY AND A SOLUTION FOR ALL OCCASIONS

FP McCann offers a wide range of moulds to suit the demands of all stadia projects. Individual moulds can be modified to create standing terraces with varying tread and riser dimensions. Spans can vary considerably depending whether they are simple precast or designed as pre-stressed units.

Offering a complete bespoke solution that varies according to scale and design, FP McCann continues to invest in research and development programmes that enable existing moulds to be adapted and meet the ever-evolving needs of this sector. FP McCann's innovative in house design solutions have proven to be cost effective, whilst product development has reduced the component weight and erection time to a minimum.

RELIABLE DELIVERY AND INSTALLATION

Providing a full design, manufacture, delivery and installation service means FP McCann can provide a valuable service at every stage of the contract. Close attention to detail and precision production control ensure FP McCann meets the strict quality and programming requirements of stadia projects.

Just in time delivery assists sites where space and access is limited and has the added benefit of significantly reducing construction programmes as well as the associated health and safety risks.

The streamlined delivery and off-site production remove unnecessary work activities from the congested site environment.

PROJECT LIST

STADIA

	Capacity
Tottenham Hotspur Stadium	62,000
Ricoh Arena, Coventry	38,500
Brighton & Hove Albion FC	30,750
Bristol City FC Ashton Gate Stadium	27,000
Leicester Tigers RFC Stadium	25,000
Co-op Live Arena, Manchester	23,500
MK Dons FC Stadium	22,000
Brentford FC Community Stadium	17,250
Doncaster Rovers FC Stadium	15,000
Northampton Saints RFC Stadium	15,000
Salford City RLFC Stadium	12,000
Tallaght Stadium, Dublin	10,500
AFC Wimbeldon Plough Lane Stadium	9,200
Liverpool FC Anfield Rd extension	8,500
Wolves FC, Stan Cullis Stand	8,000
Preston North End FC	6,000
Alexander Stadium, Birmingham	5,300
Cardiff City FC, Upper Tier	5,000
Fulham FC Riverside Stand	4,000
Swansea Indoor Arena	3,500
Manchester United FC Old Trafford Stadium	3,000
Cardiff Ice Arena	3,000
Lords Cricket Ground, London	2,600
Raeburn Place Stadium, Edinburgh	2,500
Kia Oval Cricket Ground, London	2,300
Finn Harps FC Stadium	2,200
Aughrim GAA Stadium	2,000
Cliftonville FC Stand	1,600
Derry City FC, Main Stand	1,000

Total No. of Seats **368,200**

TOTTENHAM HOTSPUR STADIUM

Site: Tottenham Hotspur Stadium, London

Main Contractor: Mace

Products Supplied: Straight and Curved Terrace Seating Units;
Base Slabs, Double Step Blocks; Vomitory and Lift Shaft Walls;
Stair Flights and Landings and Balcony Units

FP McCann was contracted to manufacture and deliver precast concrete units for the construction of the New White Hart Lane Stadium.

The project scope entailed the construction of a completely new structure on a brownfield site directly adjacent to their existing stadium, consisting of an entirely precast concrete main stadium bowl with a steel and glass canopy structure mounted above the seating area.

The concrete mix used was designed to minimize the finishing work required to the units and to ensure a consistent unit quality. The mix has sustainability credentials to reduce its carbon footprint. In total, approximately 15,000m³ of concrete were used in the project, equating to 2,500 lorry loads. We also employ renewable energy sources to power our production facilities as a means of offsetting the carbon produced in the manufacturing process.

The result of this mix design was to create a material with the correct flow, working time and robustness that allowed for next day de-moulding and minimal finishing work, resulting in a blow hole free finish to the external faces of the units. The mix also met the aesthetic requirements for the new stadium, as it produced a lighter coloured concrete rather than the traditional grey mix.

The terracing units were designed to be both robust and relatively light, aiding both manufacturing and installation. This was achieved by increasing the unit steel content to allow the depth to be reduced, thus reducing the concrete volume. Terracing units were installed onto large precast raker beams, which presented challenges in terms of steel fixing, mould work, production and transport. The design had to be robust enough to support rows of terracing units, but light enough to be transported to London by road and installed using tower cranes. This was again achieved with a slight increase in reinforcement density resulting in reduced depth and overall volume.



BRENTFORD COMMUNITY STADIUM

Site: Brentford Community Stadium

Main Contractor: Buckingham Construction Group

Products Supplied: Precast Concrete Terracing units

As Brentford Football Club unveiled its state-of-the-art Community Stadium, one of the most striking features underpinning the 17,250-seat venue's construction was the use of high-quality precast concrete terracing, supplied by leading infrastructure manufacturer FP McCann.

Situated in the heart of a major urban regeneration area, the stadium is not only home to Brentford FC but also accommodates London Irish Rugby Club and serves as a modern events venue. Delivered under a tight programme and spatial constraints, the project called for innovative construction solutions—and precast concrete was pivotal.

FP McCann was selected to manufacture and deliver the full suite of precast terracing units, forming the primary spectator tier structure. With components engineered at FP McCann's dedicated precast facility, the project benefited from factory-controlled quality and precision, as well as reduced on-site labour and installation time.

"Our precast systems are ideal for fast-track stadium construction," said a spokesperson for FP McCann. "The Brentford Community Stadium project demonstrates how off-site manufacturing can align with modern construction needs—efficiency, safety, and performance."

The constrained site—bordered by railway lines and major roads—required a just-in-time delivery schedule. FP McCann worked closely with the main contractor to ensure seamless logistics, providing units to match the build programme without disrupting local infrastructure.

The durability and consistency of precast concrete also offered long-term performance advantages, ensuring compliance with both structural and aesthetic requirements laid out by the club and architects.

Since opening in 2020, Brentford Community Stadium has drawn praise for its fan-friendly design and future-ready construction. FP McCann's terracing forms the backbone of the fan experience, providing safe, stable, and visually impressive viewing platforms that will serve thousands for decades to come.

"The use of FP McCann's precast terracing was instrumental in meeting our timeline and quality standards," said the Project Manager for the main contractor. "Their collaborative approach and technical expertise were a key asset on this complex build."

As one of the UK's most trusted precast specialists, FP McCann continues to support major construction projects nationwide, delivering robust and sustainable solutions in infrastructure, housing, and commercial sectors.



COMMONWEALTH GAMES STADIUM

Site: Alexander Stadium, Birmingham

Main Contractor: McLaughlin & Harvey

Products Supplied: Straight and Curved Terrace Seating Units; Base Slabs, Double Step Blocks; Vomitory and Lift Shaft Walls; Stair Flights and Landings and Balcony Units

FP McCann has achieved the notable accolade of supplying the precast concrete terracing and complementary stadia structural units to both the 2022 Commonwealth Games stadium in Birmingham and the 2002 City of Manchester Stadium, which twenty years ago held the last Games to be hosted in England.

The redevelopment of Birmingham's Alexander Stadium for the 2022 Commonwealth Games starting on 28th July, was completed earlier this year. The main focal point of the £72 million stadium is the impressive new West Stand. Designed by Arup in conjunction with Associated Architects, the appointed project management group Mace, awarded the main contract to redevelop the stadium to Northern Ireland construction company McLaughlin & Harvey.

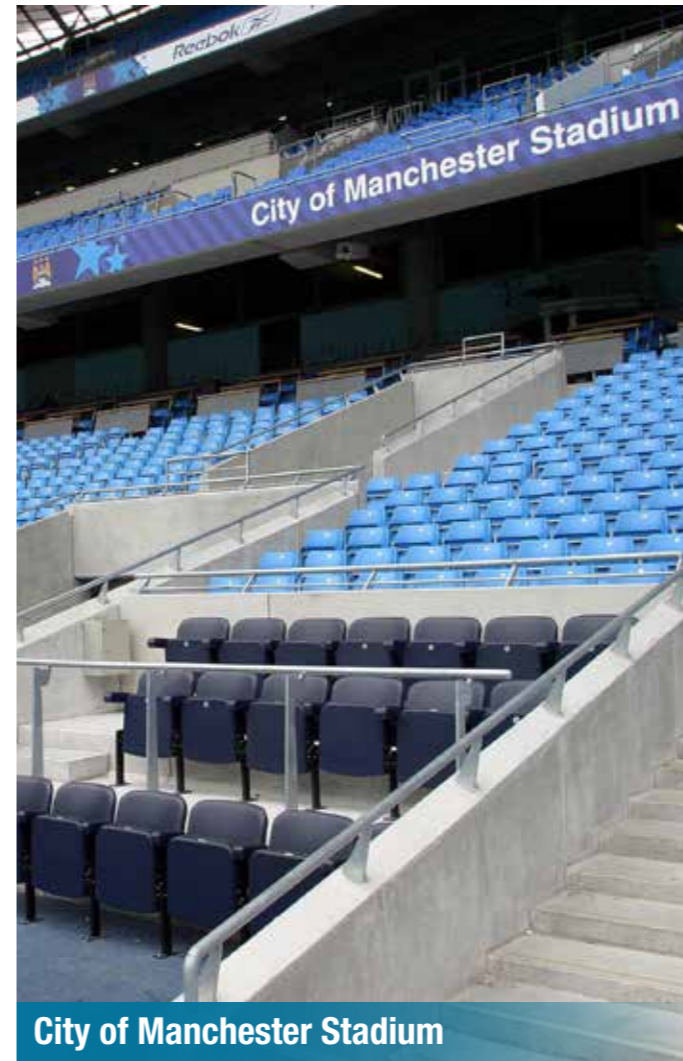
FP McCann successfully tendered for the supply of the precast concrete structural stadia units and working alongside the McLaughlin & Harvey team and structural steelwork specialist BHC Installations, the build was successfully completed with all product specifications and delivery schedules being met.

The West Stand measuring 153 metres long with a maximum height of 28.5 metres was erected using some 1,450 tonnes of steel in the main frame. In total, FP McCann supplied an excess of 1500 individual precast concrete units, comprising curved and straight terrace seating units, base slabs, and double step blocks. Additional items included precast vomitory and lift shaft walls, precast concrete stair flights and landings and precast balcony units. All products were manufactured and supplied from the Company's specialist precast facilities at Grantham and Littleport.

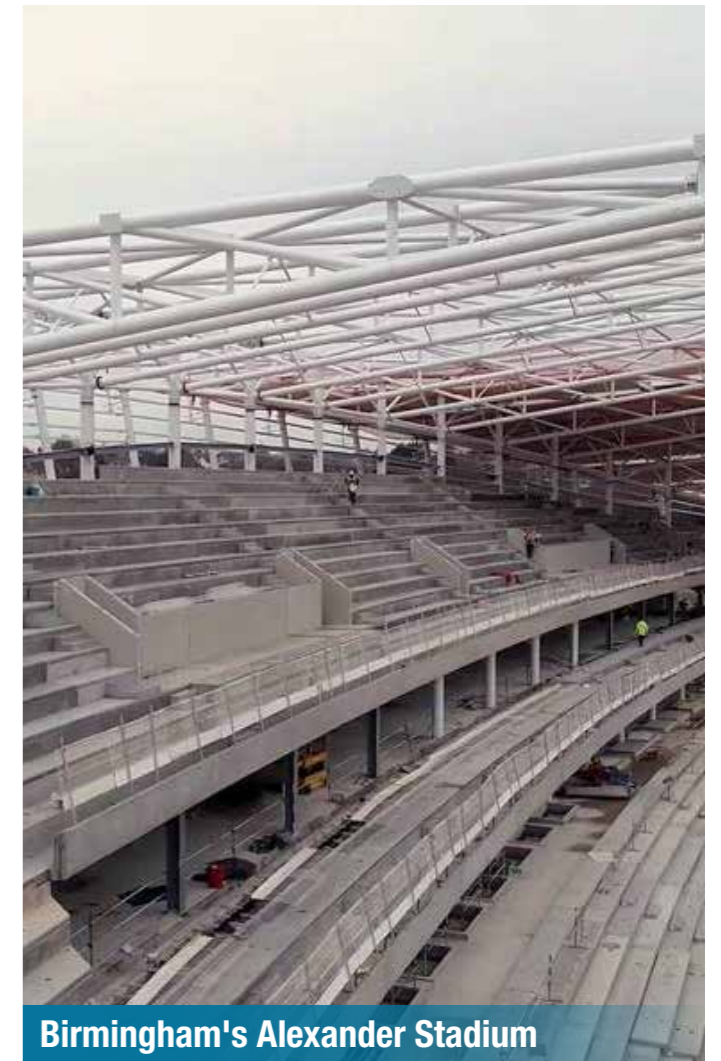
It was a similar story in 2002 with the City of Manchester Stadium being the centrepiece for the last Commonwealth Games hosted in England. The site, a former industrial area of East Manchester was transformed into a multi-sports and hospitality facility for the Games, later to become the home of Manchester City Football Club and renamed the Etihad Stadium.

Main contractor Laing Ltd was tasked with the build and recognising the architectural and structural complexity of the bowl shape stadium, employed the services of the FP McCann team in Byley, Cheshire to design, manufacture and deliver the many precast concrete elements required.

Of the 3,876 individual precast units supplied, over 50% were represented by standard terrace seating units. However due to the complex nature of the project, a number of specialist non-standard terracing sections were manufactured, the most demanding being a front balcony unit; a one piece double terrace unit with an integral upstand wall and cast in handrail provision. Other items included step blocks, stair flights and landings and vomitory wall sections.



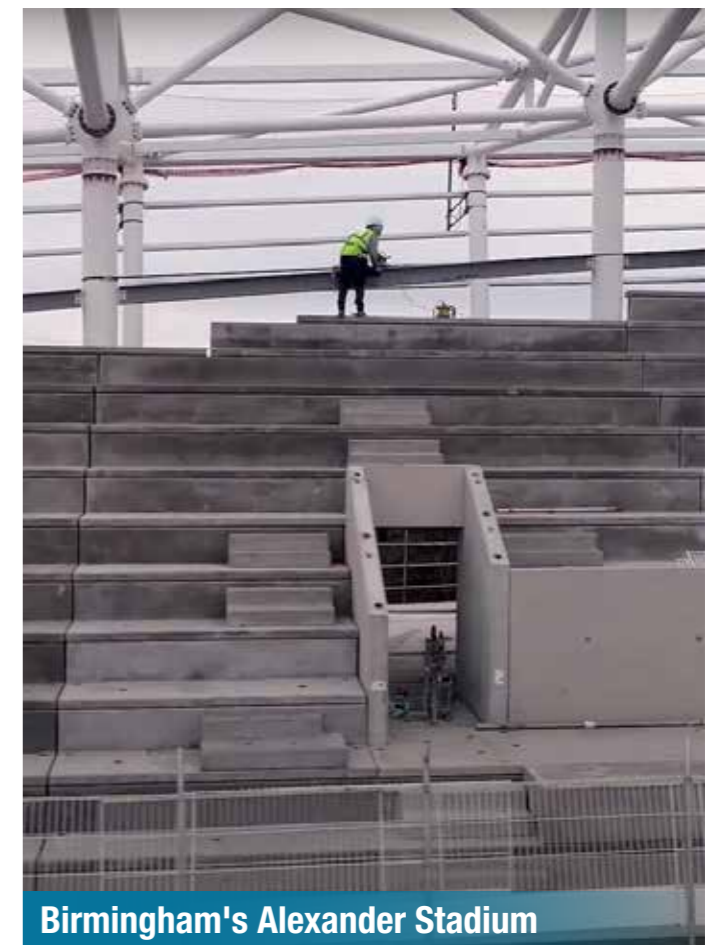
City of Manchester Stadium



Birmingham's Alexander Stadium



City of Manchester Stadium



Birmingham's Alexander Stadium

LIVERPOOL FC STADIUM EXTENSION

Site: Liverpool Football Club

Main Contractor: Rayner Rowen Construction

Products Supplied: Terracing, Steps, Walls, Stairs, Slabs, Lift Shafts and Internal Stability Cores

FP McCann were appointed in August 2021 to carry out the design, manufacture, and delivery of the precast components for the expansion of the Anfield Road Stand at Liverpool FC. When the stand opened in December 2023 the overall stadium capacity increased by 8,500 to a total of 54,000.

With over 2,000 individual unit pieces including terracing, steps, walls, stairs, slabs, lift shafts and internal stability cores delivered to site on a just-in-time basis we are proud of our association with this iconic stadium refurbishment.



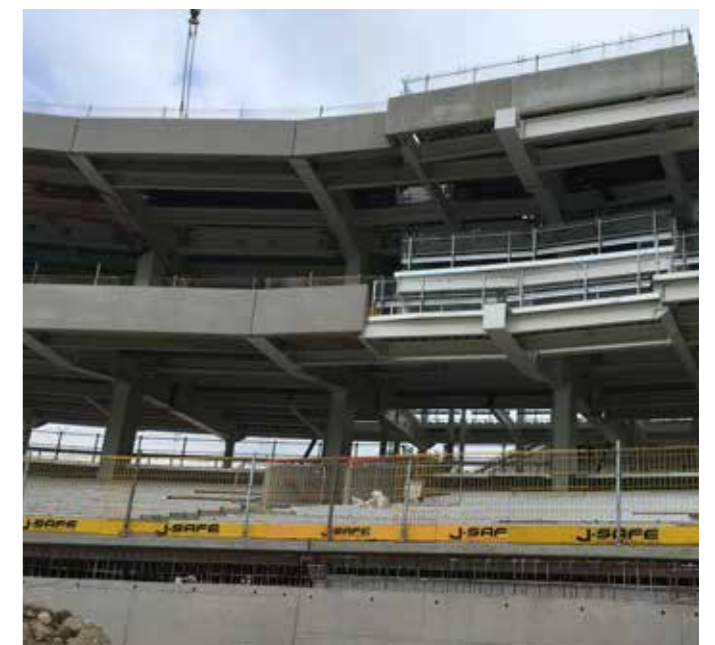
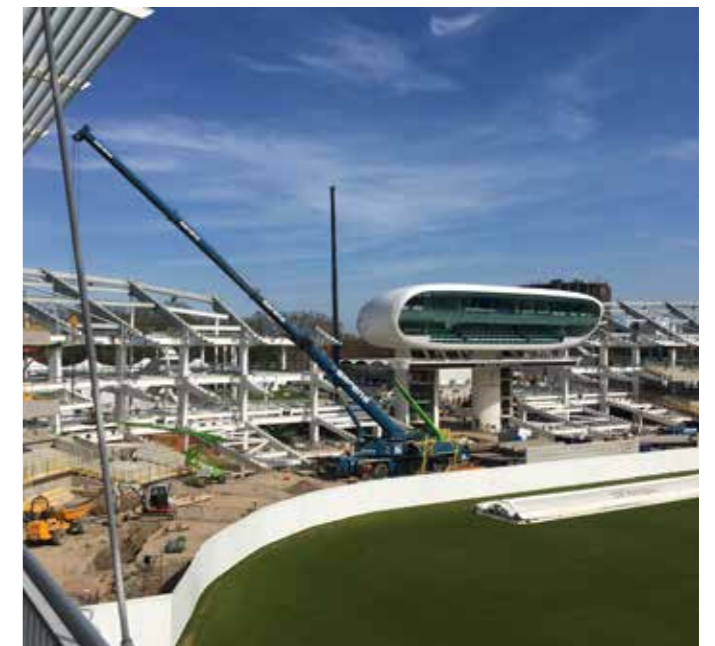
LORDS CRICKET GROUND LONDON

Site: Ice Arena Wales, Cardiff Bay International Sports Village
Client: Greenbank Partnerships
Main Contractor: Kier Construction
Products Supplied: Bespoke Precast Concrete Terracing Units

Two brand new three tier stands are well underway at Lord's Cricket Ground the home of Marylebone Cricket Club (MCC). The £52 million phase 2 redevelopment is scheduled for completion for the start of the 2021 cricket season and will see capacity increased by an additional 2,600 spectators. Building of the Compton and Edrich stands commenced in summer 2019 with global construction specialist ISG the successful contract bidder.

FP McCann is playing a major part in the construction works supplying the total package of precast concrete seat terracing, walls and stair flights which are being installed within the steel frame stand structures. This prestigious contract is running in conjunction with the redevelopment of the Oval cricket ground onto which the FP McCann is supplying a precast façade system.

In total, FP McCann has delivered in excess of 1,350 individual precast concrete units with a combined weight of 3,700 tonnes. The order comprises terrace seating units, 'U' shaped balconies combining front facade, base slabs and step blocks. Additional items include precast concrete vomitory walls, precast stair flights and landings. All products have been manufactured at the Company's specialist precast facilities at Littleport (Cambs), Grantham (Lincs) and Byley (Cheshire).



THE KIA OVAL CRICKET GROUNDS LONDON

Site: One Oval Square (Stand Development – The Kia Oval)

Client: Surrey County Cricket Club

Main Contractor: Buckingham Group Contracting Ltd

Products Supplied: Precast Concrete Red Brick Face Walling
Façade; 3D Architectural Walling Panels; Precast Concrete Cills

FP McCann's architectural facades division has supplied and installed bespoke brick faced precast concrete panels, cills and a unique three dimensional decorative roof façade to envelope a brand new £26 million stand at the famous Kia Oval Cricket ground, home of Surrey County Cricket Club.

The three storey spectator stand named One Oval Square and designed by local architect Rolfe Judd curves around the perimeter of the ground and features two new roof terraces floating over the existing Peter May Stand. The capacity of the ground will increase to 28,000 after the addition of a further 2,300 seats. The new development will also contain hospitality suites, bars and restaurants.

Main contractor Buckingham Group Contracting Ltd commenced work on the stand in 2019 with part of the design brief to mirror some of the external architecture features of the existing main pavilion brick and stone portico constructed in 2013. Recognising FP McCann's experience in this field, Buckingham along with Rolfe Judd approached the Company to quote for the design, supply and installation of two key precast architectural elements; red brick clad precast structural wall columns and white Portland cement 3D patterned structural precast panels on the roof terrace.

On securing the contract FP McCann employed structural installation partner RLH Construction Ltd to undertake the build using a combination of mobile and tower cranes, eliminating the need for any scaffolding on the building.

In total some 45,000 'Deppe 60 WS bricks supplied by EH Smith Architectural Clay Products were cast onto the precast structural wall panels at FP McCann's Littleport factory and pointed with mortar, colour as specified by the architect Rolfe Judd. FP McCann also supplied a dusted mastic seal to match the specified mortar colour mimicking the aesthetical view of the pointed joints.

Additionally and as part of the feature roof structure, precast concrete panels have been installed with detailed and unique 3D patterns created by using special moulds and formliners. The white Portland cement panels were also manufactured at the Company's Littleport factory and along with the structural wall façade were delivered on a just-in-time basis.



CO-OP LIVE ARENA MANCHESTER

Site: Co-op Live Arena, Manchester

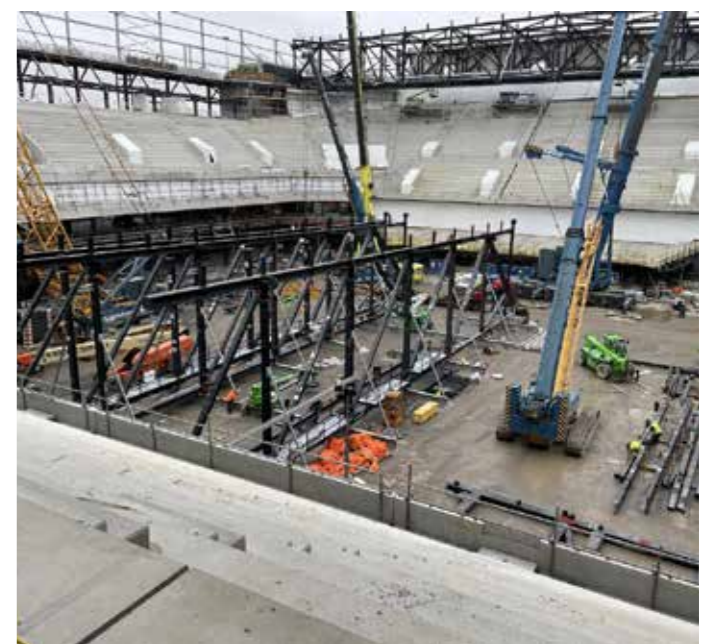
Main Contractor: BAM Construct UK

Products Supplied: Terracing, Slabs, Wall Units, Step Blocks, Wall Panels, Parapets and U-shaped units

The arena, due to open in April 2024, will have the largest maximum capacity of any indoor arena in the United Kingdom.

For two years between June 2021 and July 2023 FP McCann delivered over 2,800 individual precast components, including terracing, slabs, wall units, step blocks, wall panels, parapets and U-shaped units on a just in time basis direct to site. Along with the designers and main contractor, FP McCann worked to develop a bespoke precast solution to realise an exceptional architectural vision.

These innovative design solutions allowed for terracing spans of up to 11m in length being achieved. The precast components were also designed and manufactured to achieve the high level of performance required in relation to fire resistance and acoustics.



CARDIFF ICE ARENA

Site: Ice Arena Wales, Cardiff Bay International Sports Village
Client: Greenbank Partnerships
Main Contractor: Kier Construction
Products Supplied: Bespoke Precast Concrete Terracing Units

A £17.5 million 3,000 seat ice arena is nearing completion in Cardiff with FP McCann playing a major part in the construction by supplying the precast concrete terracing units onto which the spectator seating will be located.

The centre to be named 'Ice Arena Wales' is part of the £400 million Cardiff Bay International Sports Village and will become the new home of the Cardiff Devils ice hockey team. It is expected to open early next year.

The contract to build the new two-rink facility was awarded to Kier Construction early in 2014 by developer Greenbank Partnerships. FP McCann successfully tendered for the precast concrete special terracing units and steps and has worked closely with the Kier team throughout the 70 week build programme to ensure all product specifications and delivery requirements have been met.



RAEBURN PLACE STADIUM EDINBURGH

Site: Raeburn Place

Client: The Raeburn Place Foundation / Edinburgh Academicals

Main Contractor: Robertson Central East

Products Supplied: Precast Terracing, Structural Units

FP McCann is playing a major part in the construction by supplying the precast concrete terracing units onto which the spectator seating will be located.

The contract to build the retail outlets and the stadium was awarded to infrastructure and construction company Robertson Central East early in 2019 by The Raeburn Place Foundation, the charity responsible for the development.

FP McCann successfully tendered for the supply of precast concrete terracing and complementary structural units and has worked alongside the Robertson team throughout the build ensuring all product specifications and delivery schedules have been met.

In total, FP McCann has supplied in excess of 200 individual precast concrete units comprising mainly straight terrace seating units, base slabs, and double step blocks. Additional items include precast vomitory and tunnel walls, precast concrete stairs flights and landings and 200mm deep hollowcore flooring slabs. All products have been manufactured at the Company's specialist precast facility at Uddingston.

For further protection from the elements, all of the precast concrete products supplied have been waterproofed using the Sika Watertight Concrete System, an admixture designed to permanently seal the concrete against the penetration of water and other liquids.



TALLAGHT STADIUM DUBLIN

Site: Tallaght Stadium, Dublin

Main Contractor: ABM Contractors

Products Supplied: Terracing, Steps, Walls, Stairs and Slabs

FP McCann completed the design, manufacture, delivery & installation of the new North Stand at Tallaght Stadium Dublin, home to Shamrock Rovers FC. The company's pivotal role in this scheme was recognised with a "Highly Commended" award in the Concrete Society Northern Ireland Region Awards 2023.

Overcoming the challenge of fusing structural stability, aesthetics and commercial feasibility was achieved through innovative design and concealed connections via unique manufacturing solutions. This approach integrated precast elements, eco-friendly materials and innovative techniques, demonstrating a modern construction process that balances functionality, aesthetics and sustainability.

Employing these methods, we engineered, produced and installed a stand entirely composed of precast concrete components. Ingenious hidden connections, notably in raker beams, columns and rafter units, eliminated the necessity for a conventional steel frame, which is the standard method of stadium construction.

The Concrete Society Awards Judging Panel was "impressed by the stand's exclusive reliance on precast concrete. The project's clean visual appeal, coupled with concealed connections, delivered an aesthetically pleasing result. The company's dedication to sustainability was evident through the use of ground granulated blast-furnace slag (GGBS) in concrete mixes and employing steel reinforcement with high recycled content."



**MACRETE OFFICE:**

50 Creagh Rd
Toomebridge
Antrim
BT41 3SE
T 028 7965 0471
sales@fpmccann.co.uk

LITTLEPORT OFFICE:

Wisbech Road
Littleport
Ely, Cambridgeshire
CB6 1RA
T 01353 861416
sales@fpmccann.co.uk

AGRICULTURE

Lydney 01594 847500 Grantham 01476 562277 Toomebridge 028 7965 0471

ARCHITECTURAL PRECAST

Byley 01606 843500 Grantham 01476 562277 Littleport 01353 861416 Toomebridge 028 7965 0471

BOX CULVERTS

Byley 01606 843500 Toomebridge 028 7965 0471

BUILDING PRODUCTS

Cadeby 01455 290780

DOCK LEVELLER PITS

Weston Underwood 01335 361269

DRAINAGE

Ellistown 01530 240000 (England/Wales) Magherafelt 028 7954 9026 (Scotland) Toomebridge 028 7965 0471

FENCING

Cadeby 01455 290780

FILTER BED SYSTEMS

Littleport 01353 861416

FLOORING

Weston Underwood 01335 361269 Uddingston 01698 803300

POWER & INFRASTRUCTURE

Littleport 01353 861416 Toomebridge 028 7965 0471

RAIL

Littleport 01353 861416 Toomebridge 028 7965 0471

SPECIALIST PRECAST

Littleport 01353 861416 Toomebridge 028 7965 0471

STRUCTURAL PRECAST

Byley 01606 843500 Grantham 01476 562277 Littleport 01353 861416 Toomebridge 028 7965 0471

TANKS & CHAMBERS

Littleport 01353 861416 Toomebridge 028 7965 0471

TUNNELS & SHAFTS

Cadeby 01455 290780 Toomebridge 028 7965 0471

WALLING

Grantham 01476 562277 Lydney 01594 847500
Uddingston 01698 803 300 (Scotland) Toomebridge 028 7965 0471