THINKING PRECAST?
THINK FP MCCANN

PRECAST OFF-SITE BUILDING SOLUTIONS

v1.0

HOTELS / APARTMENT BUILDINGS

CUSTODIAL BUILDINGS

BUILT TO RENT ACCOMMODATION

STUDENT RESIDENCE

SPORTS STADIUMS

SCHOOLS / UNIVERSITIES

MULTI STOREY CAR PARKS

ARCHITECTURAL FACADES & STRUCTURAL PRECAST

ARCHITECTURAL PRECAST SOLUTIONS

STRUCTURAL PRECAST SOLUTIONS

OUR COMPANY

FP McCann is the UK's largest manufacturer and supplier of precast concrete solutions. We are committed to high quality, cost-effective and sustainable solutions tailored to meet clients' requirements.

From our thirteen UK manufacturing facilities, FP McCann offers solutions that include architectural and structural solutions, rooms, flooring, fencing, walling, shafts, tunnels, drainage, rail, power and agricultural products. FP McCann has worked on a large range of Design for Manufacture and Assembly (DfMA) projects across the UK. Our in-house Digital Engineering capability has grown in line with government and client expectations.

OUR COMPREHENSIVE PRECAST CONCRETE BUSINESS EXTENDS TO INCLUDE:

AGRICULTURE | BOX CULVERTS | BUILDING PRODUCTS | CONCRETE ROOF TILES
DOCK LEVELLER PITS | DRAINAGE | FENCING | FILTER BED SYSTEMS
FLOORING | POWER & INFRASTRUCTURE | PRECAST OFF-SITE BUILDING SOLUTIONS
RAIL | SPECIALIST PRECAST | TANKS & CHAMBERS | TUNNELS & SHAFTS | WALLING

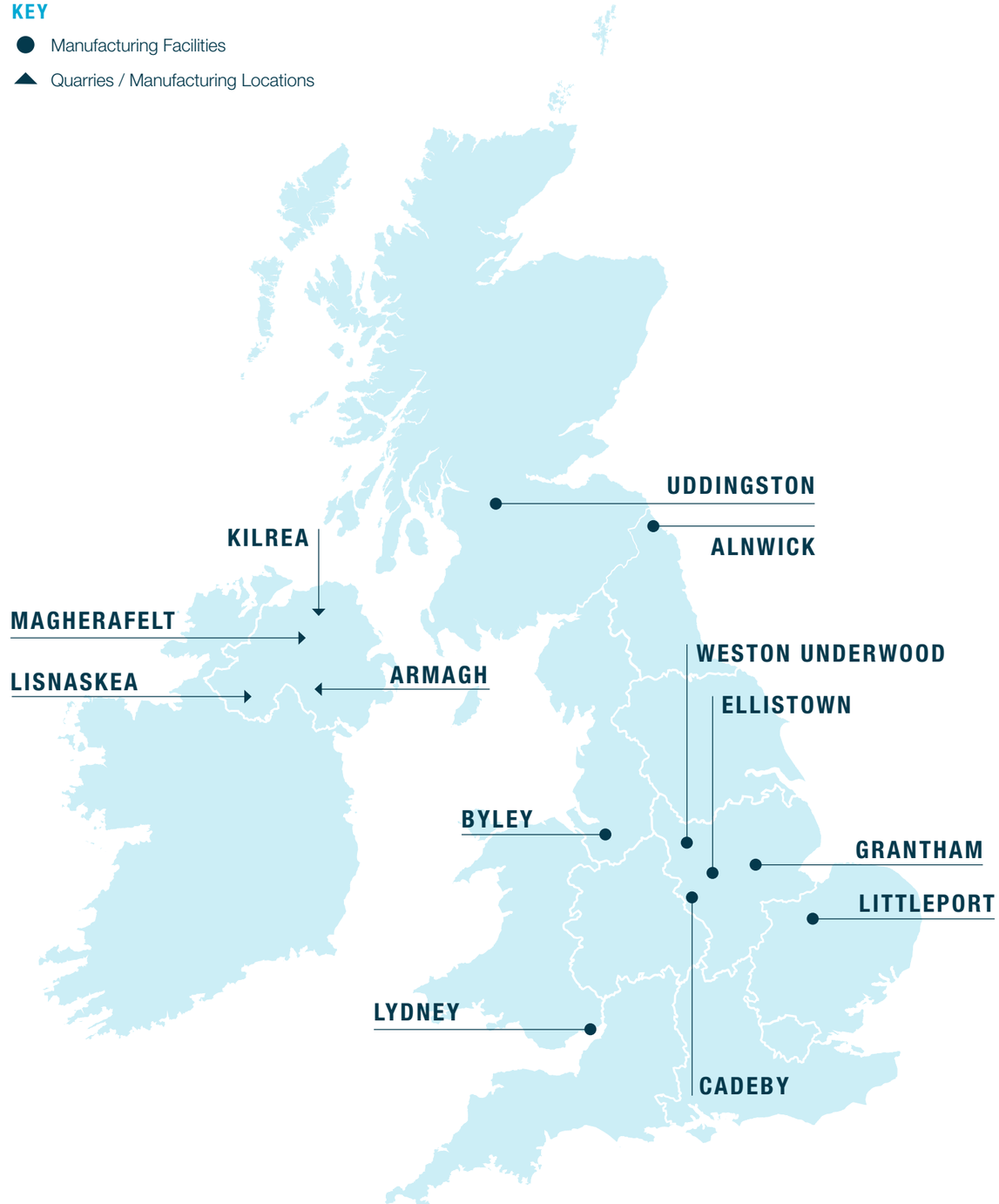
Modern manufacturing plants at Alnwick (Northumberland), Armagh (Northern Ireland), Byley (Cheshire), Cadeby (Leicestershire), Ellistown (Leicestershire), Grantham (Lincolnshire), Lisnaskea (Northern Ireland), Littleport (Cambridgeshire), Lydney (Gloucestershire), Magherafelt (Northern Ireland), Uddingston (Lanarkshire) and Weston Underwood (Derbyshire) incorporate the latest computerised batching, distribution, casting, curing and handling systems and are operated by skilled and experienced workforces to ensure consistency of quality. Their geographical spread gives us an unrivalled ability to serve the construction industry throughout the UK and Ireland.

By applying the DFMA principles, FP McCann's design engineers can evaluate individual precast concrete products part by part, in addition to documenting the assembly process step by step. This allows them to generate the cost, part count and assembly time to provide a benchmark to measure its success and identify the parts and process improvement opportunities. In turn, this has allowed FP McCann to design and manufacture more cost-effective and efficient high-quality precast concrete products with less wastage and greater on-site recycling. As a result, increased productivity, combined with a reduction in production time and costs, allows FP McCann to be more competitive within the marketplace.

OUR COMPANY

KEY

- Manufacturing Facilities
- Quarries / Manufacturing Locations



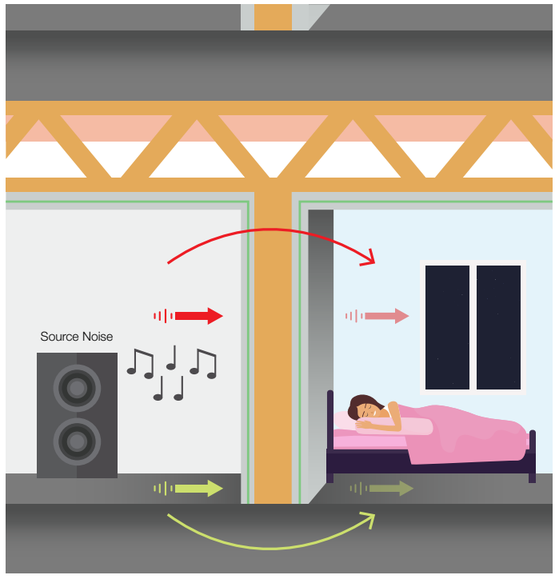
BENEFITS OF PRECAST CONCRETE

ACOUSTIC INSULATION PERFORMANCE

The sound insulation and acoustic performance of buildings has grown in importance over the past decades due to the trend for inner-city apartment living and multi-unit housing complexes. The proliferation of high-powered entertainment systems has also placed unprecedented demands on housing in terms of its acoustic performance.

Precast concrete has excellent acoustic performance. It has the inherent mass, stiffness, and damping properties necessary to effectively reduce the transmission of both airborne and impact sound. In fact, concrete has the highest damping properties of any structural material, reducing the reliance on additional finishes and simplifies design and detailing. This leads to a reduction in the labour, time and costs associated with these finishes and detailing.

The overall sustainability implications of concrete's acoustic absorption properties lie in the potential to enhance building occupants' productivity, health, and well-being.



HILTON HOTELS ACOUSTIC TESTING

FP McCann designed, manufactured, and erected the precast concrete crosswall frame, which consisted of 236 external and 432 internal panels, each 150mm thick. In addition, approximately 761 floor and roof units.

24 Acoustics Ltd were requested to produce a summary information sheet to assist with the design of Hilton branded hotels. A matrix was developed which details various construction types against the sound insulation criteria for both the Building Regulations and Hilton Hotels' own requirements.

MINIMUM SOUND INSULATION CRITERIA – HAMPTON BY HILTON

INTERFACE	BUILDING REGULATIONS PART E	HAMPTON BY HILTON
Airborne		
Bedroom to Bedroom (wall - airborne)	43 dB $D_{nTw}+C_{tr}$	50 dB STC
Bedroom to Lift, Plantroom etc (wall - airborne)	43 dB $D_{nTw}+C_{tr}$	54 dB STC
Bedroom to Bedroom (floor - airborne)	45 dB $D_{nTw}+C_{tr}$	50 dB STC
Bedroom to Lift, Plantroom etc (floor - airborne)	45 dB $D_{nTw}+C_{tr}$	54 dB STC
Impact		
Bedroom to Bedroom (floor - impact)	62 dB L_{nTw}	55 dB IIC
Bedroom to Lift, Plantroom etc (floor - impact)	62 dB L_{nTw}	55 dB IIC

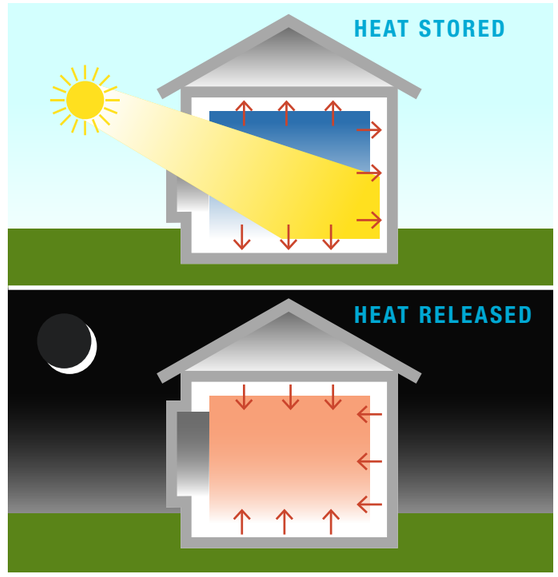
BENEFITS OF PRECAST CONCRETE

THERMAL MASS

Thermal mass is a concept in building design that describes how the mass of the building provides inertia against internal temperature fluctuations.

This is typically achieved through its ability to absorb unwanted heat during the day and then release it at night with the help of ventilation from cool night air. For a material to provide a useful level of thermal mass, a combination of three basic characteristics is required:

1. A high specific heat capacity: so the heat squeezed into every kilogramme is maximised.
2. A high density: the heavier the material, the more heat it can store by volume.
3. Moderate thermal conductivity – so the rate heat flows in and out of the material is roughly in step with the daily heating and cooling cycle of the building.



Heavyweight construction materials such as masonry and concrete have these characteristics. They combine a high storage capacity with moderate thermal conductivity. This means that heat moves between the material's surface and its interior at a rate that roughly matches the building's daily heating and cooling cycle.

Some materials, like wood, have a high heat capacity, but their thermal conductivity is relatively low, limiting the rate at which heat can be absorbed during the day and released at night. Steel can a store a lot of heat, but conducts it too rapidly to be particularly useful, plus comparatively little is used in buildings. However, a modest amount of thermal mass may still be provided if concrete floors are used in steel frame construction, although these are usually limited to a depth of only 100mm and are usually covered by a false ceiling, limiting their ability to absorb and release heat.

CONCRETE IN MODERN CONSTRUCTION

Ideally modern buildings should be constructed in such a manner as to minimise temperature build up in the room space during warm weather and yet prevent the loss of this excess heat in cold periods. To achieve this, a combination of insulation to exterior walls is required for colder weather and a high thermal mass to act as a heat sink for hot weather. Concrete has a high thermal mass with properties like brick and stone. It is possible to absorb heat from the atmosphere in warm weather and release it during cooler periods, e.g., overnight. This is known as the 'thermal flywheel' effect. In a passive concrete design, the cooling capacity of concrete can be up to 25W/m^2 and with an active system, e.g. by ducting of air through a concrete slab, up to 40W/m^2 can be absorbed.

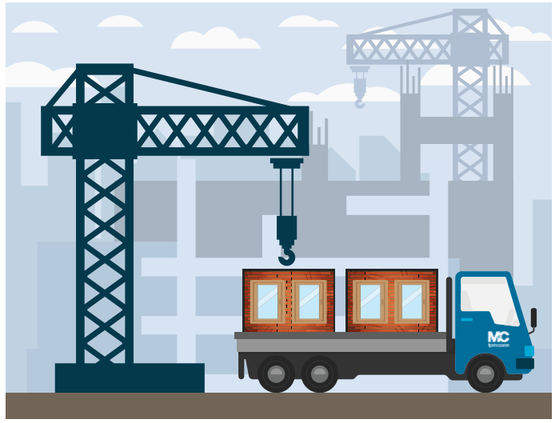
As well as being able to act as a passive air conditioning system for buildings, concrete and cementitious-based products have good sound insulation and deadening properties.

BENEFITS OF PRECAST CONCRETE

SPEED OF CONSTRUCTION

The nature of off-site construction methods ensures buildings can be erected quickly, even in adverse weather conditions, drastically reducing construction time and associated costs.

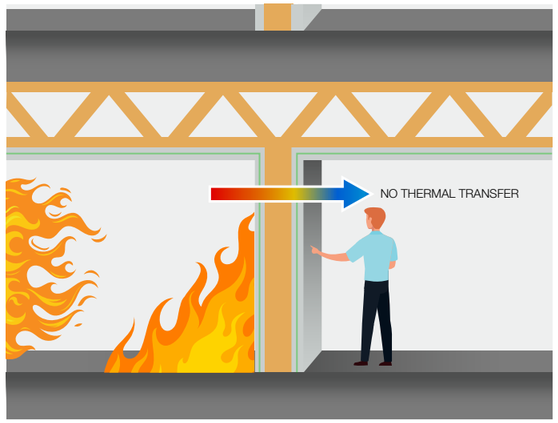
Precast elements are designed by specialists with experience in ensuring that the structure can be erected quickly and efficiently, often using standard lifting equipment. These offsite manufactured elements can be delivered with integrated services, ready clad, insulated and glazed if required, to save time on site and reduce further the number of following trades and save costs. Speed of construction and tight construction programmes are primary considerations in most building projects.



FIRE RESISTANCE

Concrete structural elements are known to have good inherent fire performance. Concrete is non-flammable, non-combustible, and more robust in fire than other structural systems as it can absorb a greater amount of heat before reaching critical overload.

Concrete simply cannot be set on fire. As it does not burn, concrete does not emit any environmentally hazardous smoke, gases, or toxic fumes. In addition, unlike some plastics and metals, concrete will not drip dangerous molten particles. Concrete also acts as an effective fire shield as its mass confers a high heat storage capacity while its porous structure provides a low rate of temperature rise.



ROBUSTNESS / SECURITY

The use of precast concrete creates a robust structure that reduces the risk of damage to finishes and gives a sense of security not necessarily felt in a lightweight building. Couple this with the reduced use of plaster board, we create a living space that can resist the wear and tear of everyday life, keeping repair and maintenance costs down, year after year.

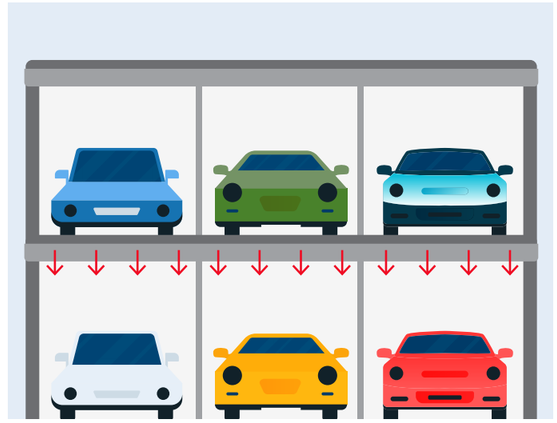
In the path of unpredictable and violent climatic conditions, concrete buildings offer their inhabitants added security from debris. Concrete's virtual impenetrability also contributes to community and personal safety, as it can withstand wilful damage and resist arson.

BENEFITS OF PRECAST CONCRETE

DURABILITY

Precast concrete offers exceptional durability and long life in any structure. Concrete structures built over 100 years ago are still in active service today, which results in the timescale for replacing a precast concrete building being up to twice that of other forms of construction; this durability, coupled with the energy efficiencies that thermal mass brings, means that pre-cast concrete has low whole-life cycle costs when compared to other forms of construction.

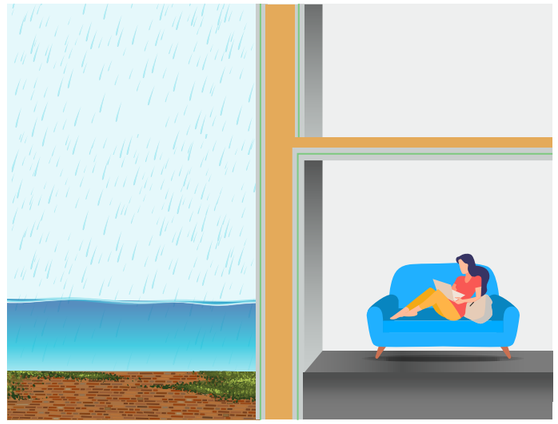
This longevity reduces disruption to the occupants and minimises breaks in any rental income stream for the building owners.



FLOOD RESILIENCE

Precast concrete has excellent flood resilience, maintaining its structural integrity during a flood event. Its density resists water penetration, reducing the impact of a flood on the fabric of the building, providing building owners and insurance companies with reduced repair time and costs associated with repairing flood damage.

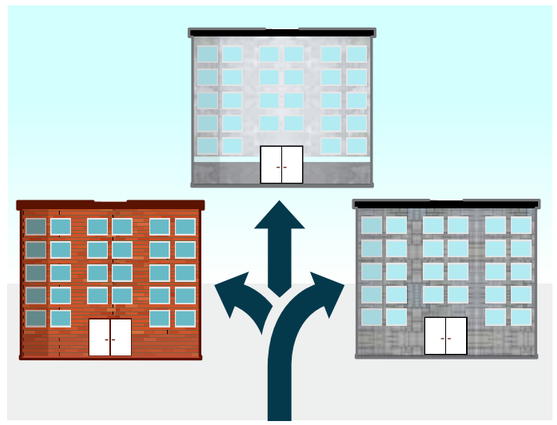
For occupiers, time away from the property is reduced. Precast concrete is the ideal solution when building in areas identified as being at risk from flooding.



FLEXIBILITY OF DESIGN

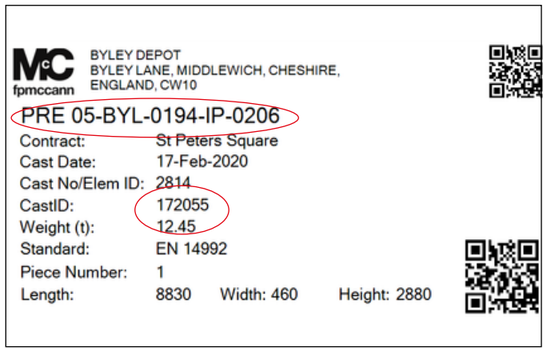
Architectural precast offers a wide range of colours and textures, often with mixes developed to resemble stone – hence the term "reconstituted stone" or "recon". Specialist manufacturers offer samples for reference, using a wide range of combinations of aggregates, pigments and finishing techniques (such as acid-etched, grit-blasted, polished etc) as well as embedded surface materials such as stone, terracotta/ ceramic tiles and brick.

Concrete can be formed into almost any shape. Precast concrete offers great scope for design, creativity, and material efficiency. Repetition of elements can make even complex shapes more affordable



PRODUCT TRACEABILITY APP

FP McCann's product traceability app is seamlessly embedded into our core manufacturing and quality systems enabling us to verify quality adherence live in the process. This enables us to provide our customers with electronic copies of all quality documentation. The foundation of the FP McCann product traceability app is a unique serial number for every piece cast: (Cast No/Element ID and computer generated 6-digit Cast ID).


BYLEY DEPOT
BYLEY LANE, MIDDLEWICH, CHESHIRE,
ENGLAND, CW10

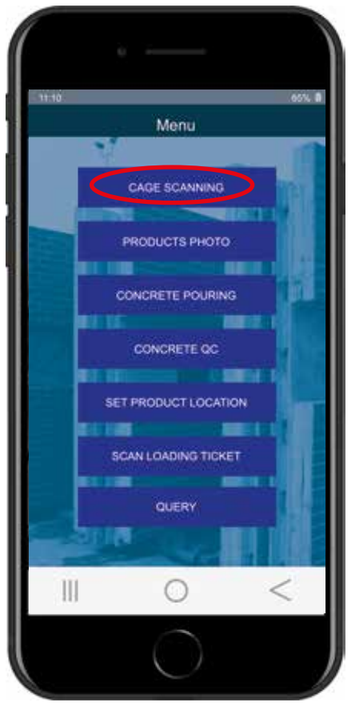
PRE 05-BYL-0194-IP-0206

Contract:	St Peters Square
Cast Date:	17-Feb-2020
Cast No/Elem ID:	2814
CastID:	172055
Weight (t):	12.45
Standard:	EN 14992
Piece Number:	1
Length:	8830 Width: 460 Height: 2880

Every product has its own totally unique serial number, and all quality and production records are captured at this unique serial number as it progresses through the business.

- The required documents are validated to have been uploaded daily at our morning meetings.
- Customer Packs are run straight from our main database containing all quality records captured from live electronic records as the product has moved through production - including pre-pour photographs.
- We record the batch(s) of concrete used in every product which link to the exact materials used and relevant concrete tests.

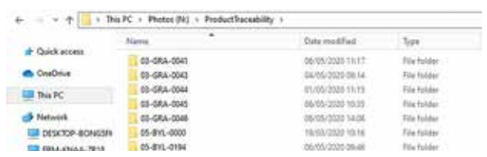
PRODUCT DOCUMENTS AND PHOTOS AUTOMATICALLY NAMED AND FILED ON NETWORK DRIVE



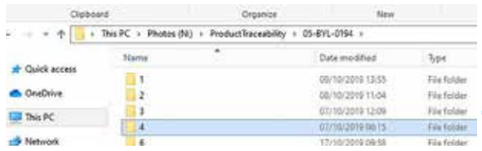
E.G. PRE-POUR PHOTOS

E.G. CHECK SHEETS

BY CONTRACT



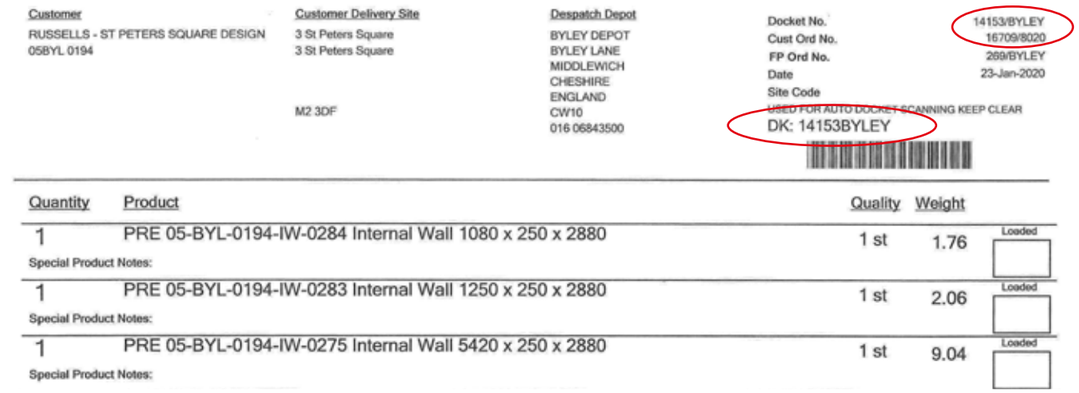
BY ELEMENT



BY DOCUMENT CATEGORY

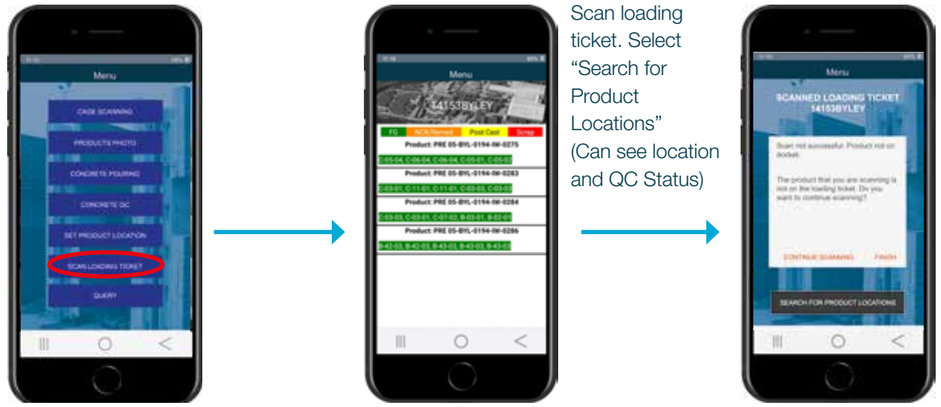
PRODUCT TRACEABILITY APP

Every serialised item is scanned onto the loading ticket to verify that only quality approved product and the correct quantity of product is scanned. Only then can the dispatch ticket be printed.



Customer	Customer Delivery Site	Despatch Depot	
RUSSELLS - ST PETERS SQUARE DESIGN 05BYL 0194	3 St Peters Square 3 St Peters Square M2 3DF	BYLEY DEPOT BYLEY LANE MIDDLEWICH CHESHIRE ENGLAND CW10 016 06843500	Docket No. 14153/BYLEY Cust Ord No. 16709/8020 FP Ord No. 269/BYLEY Date 23-Jan-2020 Site Code USED FOR AUTO DOCKET SCANNING KEEP CLEAR DK: 14153BYLEY

Quantity	Product	Quality	Weight	
1	PRE 05-BYL-0194-IW-0284 Internal Wall 1080 x 250 x 2880	1 st	1.76	Loaded
Special Product Notes:				
1	PRE 05-BYL-0194-IW-0283 Internal Wall 1250 x 250 x 2880	1 st	2.06	Loaded
Special Product Notes:				
1	PRE 05-BYL-0194-IW-0275 Internal Wall 5420 x 250 x 2880	1 st	9.04	Loaded
Special Product Notes:				



Scan loading ticket. Select "Search for Product Locations" (Can see location and QC Status)

Will not allow you to scan Products that are not in "Finished Goods", wrong Products or too many of a product.

Delivery Ticket
Page 1 of 1

Customer	Customer Delivery Site	Despatch Depot	
RUSSELLS - ST PETERS SQUARE DESIGN 05BYL 0194	3 St Peters Square 3 St Peters Square MANCHESTER GREATER MANCHESTER M2 3DF Contact :	BYLEY DEPOT BYLEY LANE MIDDLEWICH CHESHIRE ENGLAND CW10 016 06843500	Docket No. 14153/BYLEY Cust Ord No. 16709/8020 FP Ord No. 269/BYLEY Date 23-Jan-2020 USED FOR AUTO DOCKET SCANNING KEEP CLEAR DK: 14153BYLEY

Quantity	Product	Weight	CE Cat. No.	Always Ensure Your Load Is Secure
1	PRE 05-BYL-0194-IW-0284 Internal Wall 1080 x 250 x 2880 Elem ID: 2775 *EN 14992			
1	PRE 05-BYL-0194-IW-0283 Internal Wall 1250 x 250 x 2880 Elem ID: 115 *EN 14992			

Unique element ID's captured on the Dispatch ticket. Cannot print Dispatch ticket until all the products are scanned onto it.

REAL LIFE FIRE TESTING

Real life scenario fire tests conducted by Ulster University and FP McCann documenting the robustness, Sustainability, and fire resisting qualities of precast concrete sandwich panels as a construction method. FP McCann's Insulated Precast Sandwich Panels are a fire-resistant non-combustible solution for robust and sustainable external Facades.

FIRE PERFORMANCE & FUTURE WORK

The insulated precast sandwich panels contained the fire while maintaining their structural integrity despite being exposed to multiple fire scenarios. Although explosive spalling on the exposed surface of concrete was observed during the tests, this spalling was relatively small and would have required limited remedial work. During the tests, the PIR insulation core of the sandwich panels remained encased within the layers of the precast concrete. The outer concrete layers, due to their low thermal conductivity, protected the PIR insulation core from direct exposure to heat and flames.

As a result, the PIR insulation core remained unharmed. FP McCann has initiated an intensive study to realise the behaviour of insulated precast sandwich panels exposed to fire. Furthermore, a successful KTP project between FP McCann and FireSERT at Ulster University provided a scientifically fire rated precast solution with the aim to ensure the safety of occupants and properties where the insulated precast sandwich panels are used for building and construction purposes. FP McCann aim to build a better, safer future and would encourage other manufacturers to follow a similar testing schedule incorporating real life scenario fire testing.

THE FIRE TEST

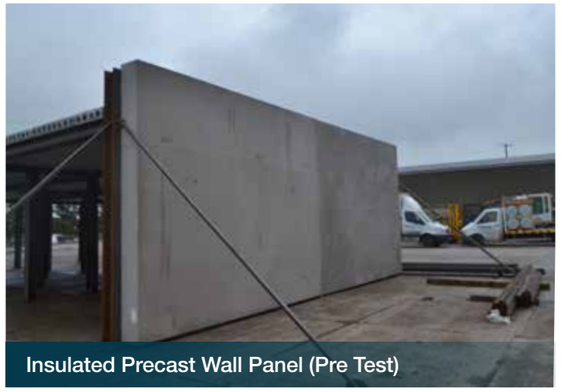
As a part of a major international research initiative dealing with the influence of travelling fire in a large open compartment, three large fire tests were conducted by Ulster University sponsored by the Research Fund for Coal and Steel (RFCS) under the TRAFIR project. In this project FP McCann was a local sponsor with a research interest to investigate the behaviour of FP McCann's insulated sandwich panels exposed to fire used as essential precast wall element in the compartment fire tests.

These panels were installed along one side of the test compartment and detailed instrumentation was applied to monitor the temperatures in the wall panels and in the test compartment. The instrumentation consisted of thermocouples, which were provided to record the temperatures in the inner and outer concrete layers as well as in the insulation layer of the precast sandwich panels.

The insulated precast sandwich panels were exposed to three fire scenarios and their behaviour was monitored. Timber was used as fuel due to its excellent combustibility. During the fire tests, temperatures in excess of 1000°C were recorded in the compartment. Also, special attention was paid to the fire resistance in terms of the fire exposure from the outside to the inside of the insulated precast wall panels. This was achieved by exposing the outer concrete layer with lower thickness to the elevated temperatures.

SCAN ME!

SCAN THE QR CODE TO VIEW OUR FIRE TEST VIDEO



Insulated Precast Wall Panel (Pre Test)

Insulated Precast Wall Panel (Post Test)

REAL LIFE FIRE TESTING

Post Test Core Samples

Post Test Core Samples

ARCHITECTURAL PRECAST SOLUTIONS

Precast concrete is the perfect material to link the practical with the desirable. The technical benefits and aesthetic possibilities appeal to both clients and designers alike.

ARCHITECTURAL PRECAST SOLUTIONS

ARCHITECTURAL PRECAST

FP McCann offers all forms of architectural precast components, either as structural load-bearing members, built as part of the primary frame such as an external sandwich panel or structural columns; or as a decorative cladding element to the facades like spandrels, mullions or fully storey high panels.

Precast concrete is ideal as a cladding material, especially where complex geometry on the facades have to be achieved, access is restricted, or the project programme demands fast on-site construction. Our in-house design and technical department provide reassurance that the structural and aesthetical requirements of your scheme are met. In order to achieve the best solution and to ensure the most cost-effective approach, we recommend contacting us at an early stage of your project so that we can provide the maximum technical input.

KEY ADVANTAGES

- Precast concrete can be provided in a variety of colours and finishes, utilising a large choice of aggregates and pigments
- Architectural concrete can be either structural load-bearing or non-structural such as cladding. All of our architectural projects are designed and manufactured in a completely bespoke manner
- Concrete is durable, strong, and resistant to impact. It also has excellent fire-resistant and acoustic properties
- Designed and manufactured off-site ensures consistent quality and lower construction costs
- Units can be manufactured to suit different building structures
- Brick, stone or tile faced units can be supplied fully pointed

FINISHES AVAILABLE INCLUDE:

Acid Etched, Grit Blasted, Polished, Exposed Aggregate, Brick-Faced, Stone-Faced, and Tile-Faced precast cladding can all be provided.

INSTALLATION AS EASY AS....

1. Units delivered on our specialist trailers on a just-in-time basis to suit your construction project
2. Craned into position and fully installed, all undertaken by fully trained specialist precast installers
3. Complete all finishing works, as required, such as jointing, insulation, firestop, etc

INSULATED PRECAST SANDWICH PANELS

FP McCann's insulated precast sandwich panels provide a ready-made external envelope with a variety of finishes. This eliminates many of the pitfalls associated with traditional building methods utilising wet trades.

The panels are constructed off-site and comprise of an outer leaf of precast concrete, an insulating layer, and a structural inner leaf of plain grey concrete with a power floated internal finish.

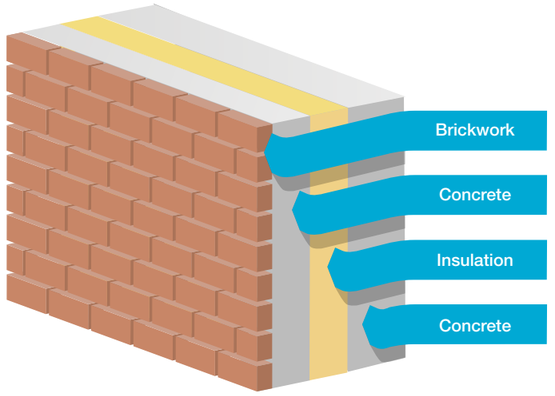
The external skin is connected to and supported by the internal skin using proprietary plastic ties. The ties have a low thermal conductivity which eliminates potential cold bridging.

We can modify the thickness of the insulation to accommodate the required U-value. Shape, thickness, and size of the concrete can also be made to meet the requirements of the project.

Insulated sandwich panels can be used to drastically reduce erection periods and on-site safety hazards for any crosswall project. The ability to fit various facades, windows and insulation during manufacture reduces the need for numerous follow-on trades and eliminates the need for scaffolding.

FP McCann provides a free sampling service to ensure we get the exact colour and texture required, including mortar pointing colours and finishes.

SANDWICH PANEL CROSS-SECTION



FINISHES AVAILABLE INCLUDE:

- Brick Faced
- Natural Stone Faced
- Pattern Moulds
- Acid Etched
- Exposed Aggregate

PRECAST CLADDING

FP McCann offers a wide range of bespoke precast cladding solutions in a variety of finishes. These include brick clad, acid etched, exposed aggregate and polished. Our versatile production facilities give us the ability to utilise various aggregates, sands, pigments, and cements to realise architectural aspirations.

We can provide our bespoke architectural precast cladding in varying shapes, sizes, and finishes. Precast cladding is a favoured facade material where complex geometry has to be achieved, access is restricted, or the project programme demands accelerated on-site construction.

Our in-house design, engineering and technical department provide reassurance that the structural and aesthetic requirements of your scheme are met. We encourage early engagement with our team to enable us to give you the full design, supply and install experience. As a result, we can achieve the best solution to meet your needs and ensure a cost-effective approach is used.

With architectural manufacturing capabilities at a number of sites across the UK we incorporate an 'Open Door' policy. Clients are welcome to come visit and experience FP McCann delivering high standards of project management from concept to completion. As a result, this makes us one of the market leaders and a supplier of choice.

KEY ADVANTAGES

- Cladding can be provided in a variety of colours and finishes. We utilise a large choice of aggregates and pigments including: acid etched, grit blasted, polished, exposed aggregate, brick-faced, stone-faced and tile faced
- We design and manufacture all our architectural solutions in a completely bespoke manner to suit your specific building structure
- Concrete is durable, strong and resistant to impact. It also has excellent fire-resistant properties
- Brick, stone or tile faced units can be supplied fully pointed
- Cladding is ideal for use in both new builds and refurbishments as its weight is supported by the frame of the building
- Quality finish and speedy installation make precast cladding an ideal choice for an external facade

LINTELS & SOFFITS

Recessed openings and deep reveals have become increasingly popular design features, creating depth within an elevation, and giving additional visual flare to a facade. These areas have been perceived as difficult to treat - until now.

Precast concrete panels with bricks cast-in are often used as a cladding material, especially in areas that can be perceived as difficult or complex to treat. Features may range from the more traditional flat gauged arch to a contemporary stretcher bond lintel or deep brickwork returned soffits which give extra depth to an opening.

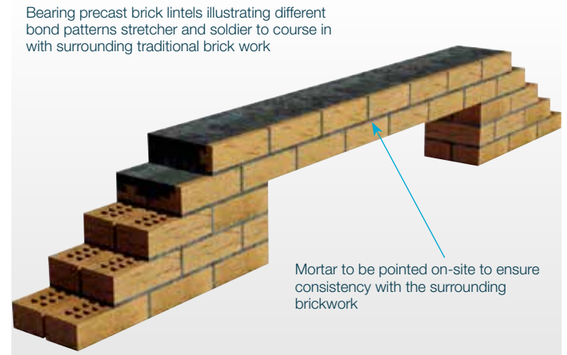
FP McCann's brick support solutions provide structural reassurance that meet the required aesthetics. This gives the impression of unsupported brickwork, whether it's a bearing lintel or a supported soffit.

Precast concrete brick-faced lintels provide an excellent robust masonry support solution around door and window openings, whilst maintaining the effect of brick bonding throughout a facade.

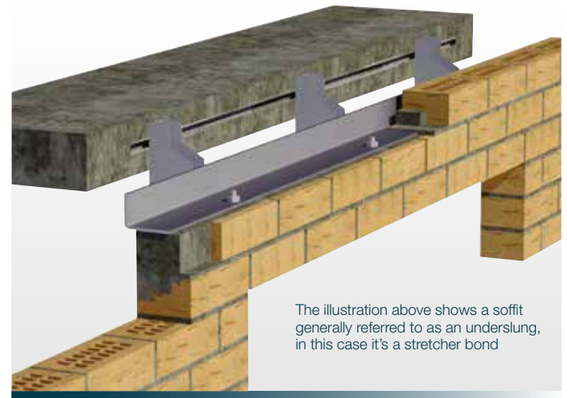
KEY ADVANTAGES

- Brick-faced lintels are structural bearing units that add stability to the masonry around an opening
- Using a brickwork support angle, brick-faced soffits / underslung units can be supplied in small component lengths, giving the appearance of a continuous span over an opening
- Components can be pointed on-site to ensure mortar colour consistency with the surrounding brickwork
- Designed and manufactured off-site ensures consistent quality and lower construction costs
- Units can be manufactured to suit different brick dims and bond patterns
- Brick-faced lintels do not interrupt brickwork aesthetics

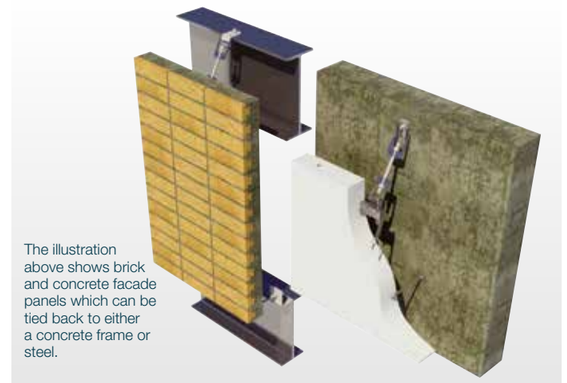
*** Most brick and masonry types, bond patterns and styles can be catered for.**



Bearing Lintels



Underslung brick-faced soffits



Facade panels

PRECAST BALCONIES

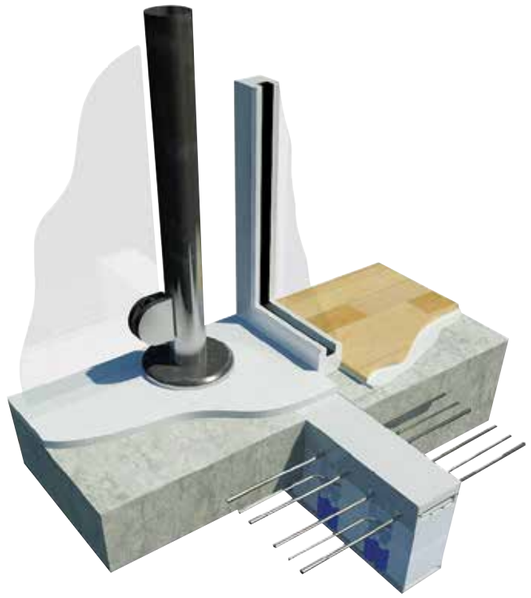
FP McCann offers a range of precast concrete balconies to suit all specifications. All our products are designed and manufactured to meet client requirements including additional features and fittings.

BALCONIES

Balconies not only provide extra outside space but also create a visual feature to a facade.

BENEFITS OF PRECAST BALCONIES

- Balconies are erected as part of the primary superstructure, cast-in with the in-situ concrete floors
- Balconies can be manufactured to suit any architectural and/or structural design
- Time saved on-site
- Fire Resilience
- Benefits Health & Safety including social distancing measures
- Designed and manufactured off-site ensures consistent quality and lower construction costs
- Cold bridging can be overcome by incorporating an insulated balcony connector (thermal break) as part of the balcony connection
- Precast concrete balconies are Non-Combustible



CAST IN ITEMS

- Lighting
- Drainage Gullies
- Fixing Channels / Sockets
- Outlets
- Fixing Points for Balustrade

PRECAST BALCONY CONNECTIONS

Precast Balcony Connections, prevent heat loss, and avoids a ‘cold bridge’ between the external balcony areas and the internal areas of the building. The structural stability of the balcony, is achieved by a specially designed projecting rebar connection that comes as part of the precast element, and is cast-in with the floor slab.

BENEFITS OF PRECAST BALCONY CONNECTIONS

- Reduces cold bridges - thereby reducing condensation and the associated mould formation
- Continuous stainless steel reinforcement maximises strength, thermal efficiency and corrosion protection
- Compression studs reduce rebar congestion and simplify installation
- Inherently fire-resistant mineral wool insulation
- Supplied as a complete unit providing rigidity and dimensional stability

PRECAST COLUMNS

FP McCann offers a range of precast concrete balconies to suit all specifications. All our products are designed and manufactured to meet client requirements including additional features and fittings.

KEY BENEFITS OF COLUMNS

- Precast columns can be circular, square, rectangular or oval. A range of standard columns are available
- Precast concrete columns may be single or double storey height
- Connections may be made via a base plate to the column or by reinforcing bars projecting from the cast, or set into a preformed hole in a foundation block and grouted into position

Rectangular Column

Circular Column

Type	Size (mm) / Details	Max. Height (mm)
Circular	475 Diameter, with NO Flares	2940
Circular	475 Diameter with 900 dia Head & 700 dia Base Flare	3690
Circular	475 Diameter with 1300 dia Head & 700 dia Base Flare	3690
Circular	600 Diameter with 1200 dia Top & 1200 dia Bottom Flare	3690
Circular	650 Diameter with 900 dia Head & 900 dia Base Flare	3690
Circular	700 Diameter with 1200 Top & 1200 dia Bottom Flare	3630
Circular	725 Diameter with 1025 dia Head & 1025 dia Base Flare	3690
Circular	800 Diameter with 1200 dia Top & 1200 dia Bottom Flare	3640
Circular	825 Diameter with 1150 dia Head & 1150 dia Base Flare	4290
Circular	875 Diameter with 1200 dia Head & 1200 dia Base Flare	3575
Circular	900 Diameter with 1400 Top & 1050 Bottom Flare	3100
Circular	900 Diameter with 1200 dia Top & 1200 dia Bottom Flare	3640
Circular	1000 Diameter with 1200 dia Top & 1200 dia Bottom Flare	3640
Circular	1000 Diameter with 1400 Top & 1150 Bottom Flare	7490
Circular	1100 Diameter with 1300 Top & 1250 Bottom Flare	2800
Circular	1100 Diameter with 1300 dia Top & 1300 dia Bottom Flare	3640
Circular	1200 Diameter with 1400 Top & 1350 Bottom Flare	4830
Circular	1200 Diameter with 1400 dia Top & 1400 dia Bottom Flare	3640
Circular	1300 Diameter with 1500 Top & 1450 Bottom Flare	2800
Circular	1300 Diameter with 1500 dia Top & 1500 dia Bottom Flare	3640
Circular	1400 Diameter with 1600 dia Top & 1600 dia Bottom Flare	4240
Circular	1400 Diameter with 1600 Top & 1550mm Bottom Flare	2900
Bullet Shaped	950x350 with 1050x550 Head & Base Flare 3-Faces	3690
Bullet Shaped	1400x450 with 1500x650 Head & Base Flare 3-Sides	7840
Bullet Shaped	1470x500 with 1570x700 Head & Base Flare 3-Sides	11840
Bullet Shaped	950x350 with 1350x1150 Head & 1050x550 Base Flare 3-Sides	3690
Square	450x450 with 650 Top & 650 Bottom Flare along 2-Sides	2800
Rectangular	600x400 with 600 Top & 600 Bottom Flare along 2-Sides	3690
Rectangular	700x400 with 600 Top & 600 Bottom Flare along 2-Sides	3690
Rectangular	900x400 with 600 Top & 600 Bottom Flare along 2-Sides	3690
Rectangular	1000x350 with 800 Top & 800 Bottom Flare along 2-Sides	3690
Rectangular	1000x400 with 800 Top & 800 Bottom Flare along 2-Sides	3690
Rectangular	1000x450 with 800 Top & 800 Bottom Flare along 2-Sides	3690
Rectangular	1000x500 with 800 Top & 800 Bottom Flare along 2-Sides	3640
Rectangular	1000x550 with 800 Top & 800 Bottom Flare along 2-Sides	3690
Rectangular	1100x400 with 800 Top & 800 Bottom Flare along 2-Sides	3690
Rectangular	1100x500 with 800 Top & 800 Bottom Flare along 2-Sides	3690
Rectangular	1100x550 with 800 Top & 800 Bottom Flare along 2-Sides	3690
Rectangular	1100x600 with 800 Top & 800 Bottom Flare along 2-Sides	3690
Rectangular	1200x400 with 800 Top & 800 Bottom Flare along 2-Sides	3690
Rectangular	1200x500 with 800 Top & 800 Bottom Flare along 2-Sides	6190
Rectangular	1200x600 with 800 Top & 800 Bottom Flare along 2-Sides	3640
Rectangular	1200x650 with 800 Top & 800 Bottom Flare along 2-Sides	3640
Rectangular	1200x400 with 800 Top & 550 Bottom Flare along 2-Sides	3100
Rectangular	1200x500 with 800 Top & 650 Bottom Flare along 2-Sides	3100
Rectangular	1200x600 with 800 Top & 750 Bottom Flare along 2-Sides	3100
Rectangular	1200x650 with 850 Top & 800 Bottom Flare along 2-Sides	7690
Rectangular	1200x550 with 800 Top & 800 Bottom Flare along 2-Sides	3690
Rectangular	1250x800 with NO FLARES	7490
Rectangular	1500x800 with NO FLARES	7490

WOLVERHAMPTON SCHOOL OF ARCHITECTURE CLADDING PANELS

Site: School of Architecture and the Built environment (SOABE)

Client: Wolverhampton University

Main Contractor: ISG

Architect: Associated Architects

Products Supplied: Portland Cement Precast Cladding Panels

FP McCann's structural precast concrete building and architectural facades division has recently supplied and installed a bespoke 3D cladding façade for the brand-new three-story School of Architecture and the Built Environment (SOABE), part of Wolverhampton University's multi-faceted engineering, building design and innovation centres on the site of a former brewery. The 12 acres, £100 million development once complete, will be Europe's largest built environment education campus.

The regeneration of the grade 2 listed Springfield brewery site noted for its historic red brick structures, is being undertaken by global construction specialist ISG. Fundamental to the design and build project is the reflection of the old buildings in the new architecture. Recognising FP McCann's experience in this field, ISG and principal designer Associated Architects, approached the Company to design, manufacture and install white Portland cement precast concrete cladding panels to complement the bronze metal façade and specialist glazing system on the 7,900m² SOABE. Additionally, and as part of the panel design to match key features on the one hundred years old building, unique and detailed 3D patterns have been created in a number of panels by using special moulds and form liners.

SHOREDITCH DEVELOPMENT ARCHITECTURE CLADDING PANELS

Site: Shoreditch High Street, London

Contractor: Montway

Client: Max Barney Development Ltd.

Architect: 21st Architecture

Products Supplied: Brick faced, and acid etched cladding panels, 'L' shaped precast concrete columns

FP McCann's structural precast concrete building and architectural façades division has supplied the complete package of architectural precast cladding components on a brand new office and retail development in Shoreditch High Street, London. Covering an area of 35,819 sq ft, the new building comprises 5 floors of offices spanning a ground floor and basement containing retail outlets including a restaurant/ cafe.

Undertaking the construction on behalf of client Max Barney Development Ltd, main building contractor Montway has recently completed the 525-day project designed by 21st Architecture, with the original design drawn as handset brickwork.

Working with an in-situ concrete frame, FP McCann was sent the design brief for the architectural façade panels, consisting of both grey brick and acid-etched finished concrete.

In total, 249 individual units were supplied from FP McCann's Littleport factory over a 10-week period and installed using a single tower crane, eliminating the use of any scaffolding on the building. Over 33,000 individual handmade bricks each measuring 528mm long x 40mm high were cast on at the factory, making 221 cladding panels totalling 623m^2 and pointed with mortar; colour as specified by the architect. The 28 acid etched panels (243m^2) for the side of the building facing the car park were colour matched to the brick façade.

UNIVERSITY LOCKS BIRMINGHAM STUDENT ACCOMMODATION

Site: University Locks, Curzon Street, Birmingham City Centre

Contractor: John Sisk & Son

Client: Birmingham City University

Products Supplied: Precast concrete modular room systems

One of the most prominent regeneration projects in Birmingham is the £48 million canal side prestigious student accommodation scheme at University Locks. The new site is part of the Birmingham City University (BCU) City Centre Campus.

The project carried out for Alumno Developments by main contractors John Sisk & Son was completed in autumn 2016. Structural engineers for the project were BWB Consulting and Architects, Glen Howells Associates.

The scheme to construct 659 student rooms (21,405m^2 of accommodation) in the form of cluster flats, with a main southern tower standing at 19 storeys high commenced installation mid 2015.

FP McCann commenced deliveries of the precast concrete modular room system to John Sisk early last year. Based on a process where walls, floor and ceiling slabs are linked together to form a unique crosswall construction, the precast panels were factory formed to suit design requirements.

In total, some 3,500 individual precast units were installed to form the structural frame and encompass the cladding envelope. The five panels framing each pair of bedrooms consist of walls 180mm thick, and floor slabs 175mm thick. Window and door openings have been accommodated and each bedroom has four conduits cast into the walls for electrics and communications networks.

THE OVAL CRICKET GROUND

Site: The Oval Cricket Ground

Contractor: Buckingham Group Contracting

Client: Surrey County Crlcket Club

Products Supplied: Acid Etched, Natural Stone and brick cladding with cricket bat patterned feature panels

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).

Designers of the Compton and Edrich stands Wilkinson Eyre have improved the sightlines and reduced the number of restricted view seats as well as including wheelchair enclosures and amenity seating available with lifts to all levels.

NOVOTEL HOTEL CAMBRIDGE

Site: Cambridge North

Contractor: McAleer & Rushe

Client: Novotel Hotel, Cambridge

Products Supplied: Brick cladding with feature acid etch reveals along with 2 storey red acid etched fluted panels

FP McCann's structural precast concrete building and architectural façades division has worked in close partnership with national construction group Graham on the construction of a 1480 bed student accommodation project, part of York University's "Campus for the Future" masterplan. The £130 million flagship scheme which will help transform the Heslington East Campus commenced in 2019 and is due for completion ahead of the 2022 academic year.

Architect on the project Sheppard Robson designed the residential development in a natural waterside setting which has been broken down into 18 blocks that step down from four to three storeys in height as they get closer to the waterfront. The strong, simple forms of the precast concrete modular blocks, characterised by striking architectural finishes, have been designed to be a modern interpretation of the character of the university's original 1960s campus.

Sub-contractor to FP McCann, Ulster based precast concrete installation specialist McVey Stone, has constructed the 18 block precast modular buildings in just 58 weeks. The off-site manufactured precast concrete crosswall/insulated sandwich panel system was specified on the build to enhance quality, safety and sustainability. Construction times were reduced by up to 60% and significant other benefits associated with MMC such as reduced wastage and all weather working were achieved.

FP McCann has manufactured and delivered a total of 7177 individual precast concrete units for the internal structural frames and the cladding envelopes, including walls, floor slabs and external architectural sandwich panels. Additionally and included in the supply contract, are precast stairs and landings, precast concrete columns and architectural cladding to support steels on all overhang areas.

ST PETER'S SQUARE HOTEL MANCHESTER

Site: Hotel One, St Peter's Square

Main Contractor: Russells Construction

Client: Motel One

Products Supplied: Acid etched cladding panels

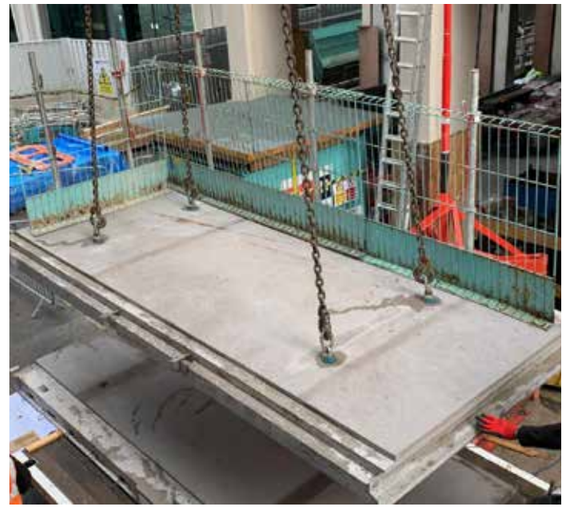
FP McCann's structural precast concrete building and architectural facades division has installed the complete package of modular precast components on a brand new £50 million hotel project in Manchester.

Client, Property Alliance Group has fronted the 3 St Peter's Square project that houses Motel One and a Staycity aparthotel. Working in partnership with Manchester based main contractor Russell WBHO, the building of the 20 storey, 584 bedroom/studio complex was handed over in February. The hotel has been designed by Stephenson Studio with Leach Rhodes Walker as delivery architect.

Work on the building frame started in 2019 after FP McCann successfully tendered to Russell WBHO for the supply and installation contract submitting the complete design package of precast concrete structural and architectural facade materials required for the build.

In total some 3460 individual precast units make up the precast structural frame including 1209 no. solid floor slabs; 372 no. pre-stressed floor slabs; 1208 no. cross walls; 13 no. columns; 45 no. cladding units and 535 no. architectural finish sandwich facade panels. Also included in the build are 78 precast concrete stair flights and stair landings.

All units were delivered on a 'just-in time' basis from the Company's Byley and Weston Underwood precast factories. The FP McCann contracting team RLH Construction, completed the work on the very tight city centre site. Once offloaded, the units were fixed into position, the single handling operation ensuring that all the components were safely installed with minimal risk of damage.



STRUCTURAL PRECAST SOLUTIONS

At FP McCann we believe in working with you as a partner from the start, offering our expertise in designing and manufacturing rooms to suit your every individual project.

Far from being an ‘off the shelf’ solution, our structural solutions are ‘made to measure’ whilst maintaining our design philosophies and standard details.

STRUCTURAL PRECAST SOLUTIONS

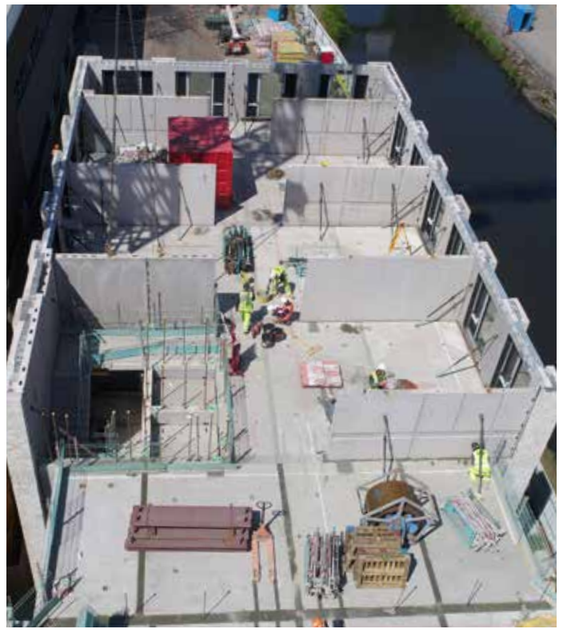
CROSSWALL CONSTRUCTION

Precast concrete crosswall construction is a fast, convenient way to produce multi-unit structures such as hotels, education, student, secure and health accommodation, private and social housing in a fraction of the time of traditionally built structures.

It has all the advantages of a factory engineered system, including ISO 9001 and ISO 14001 quality assured production and provides a highly flexible layout.

It can be tailored to meet the needs of the client, architect, engineer and builder.

All units are manufactured off-site at our Byley and Grantham depots and are delivered to site ready for final preparation and decoration. All sections are designed for ease of construction, fitting together to conform fully with building and structural regulations. Also, since the windows are fixed, internal trades can commence work far earlier than on a traditional-build site. All this to ensure peace of mind for you when you partner with us.



THE CONCEPT

The concept of crosswall is uncomplicated, unlike the conventional building process where one trade has to follow on after the other; this system allows the main structure to be completed very quickly. Once the foundations are laid, the speed of construction takes over.

FP McCann supplies the pre-formed units, including all walls and floors and a flat slab concrete roof to provide an enclosed weathertight working area.

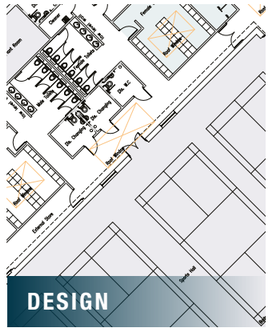
The main load-bearing structure is completed within weeks and protected from the weather. If required, fully fitted-out bathroom pods can be incorporated during this stage.

All follow-on trades can be scheduled to commence simultaneously. Roof, brickwork, window, services and floor screed subcontractors all work together to drastically reduce the time required to complete the final construction.

FP McCann can offer initial budgetary costs within a 3-5 working day period following receipt of full project drawings.

To avail of this free service, simply send your project details and drawings to sales@fpmccann.co.uk

ESTIMATE



DESIGN

MANUFACTURE

INSTALLATION

CROSSWALL CONSTRUCTION

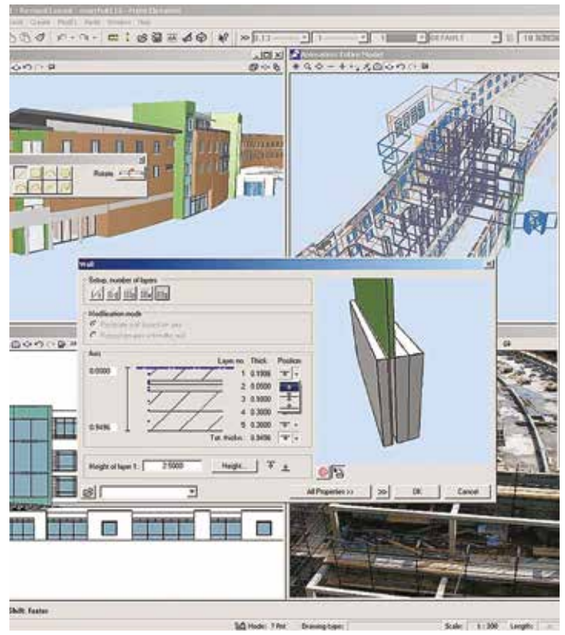
THE DESIGN

FP McCann has established a reputation for providing a wide range of concrete solutions for technically demanding projects that require a precision seldom associated with precast concrete. Client designs are progressed using the latest CAD and drafting systems, including 3D modelling, ensuring BIM compatibility, and providing optimum design and build solutions.

The crosswall system is designed in accordance with Building Regulation requirements and current British Standards, particularly BS EN 1992 (Eurocode 2).

Unless specified otherwise loadings are generally to the latest revision of BS EN 1991 (Eurocode 1).

Walls are generally designed as plain walls to Eurocode 2 and are reinforced locally over windows and at openings etc. Floors can be prestressed hollowcore planks, solid reinforced or prestressed concrete slabs.



THE PRODUCTION

Precast crosswall components are produced at FP McCann's modern factories, which are Quality and Environment Accredited to ISO 9001 QMS and ISO 14001 EMS. All aspects of the production cycle are carried out in strict accordance with British Standards and the clients' own requirements.

The manufacturing process is carried out by a highly skilled and experienced workforce. Concrete of the exact specifications is batched automatically by the automated mixing plants, then distributed by bullet skips to a precise location within the factory.

QUALITY ASSURANCE

FP McCann operates a quality management system which complies with the requirements of ISO 9001 for the design and manufacture of precast concrete products. FP McCann is committed to working closely with its customers, providing products and services to meet their construction and engineering needs. Each factory has its own independent Quality Inspector to ensure compliance with ISO standards.

CROSSWALL CONSTRUCTION

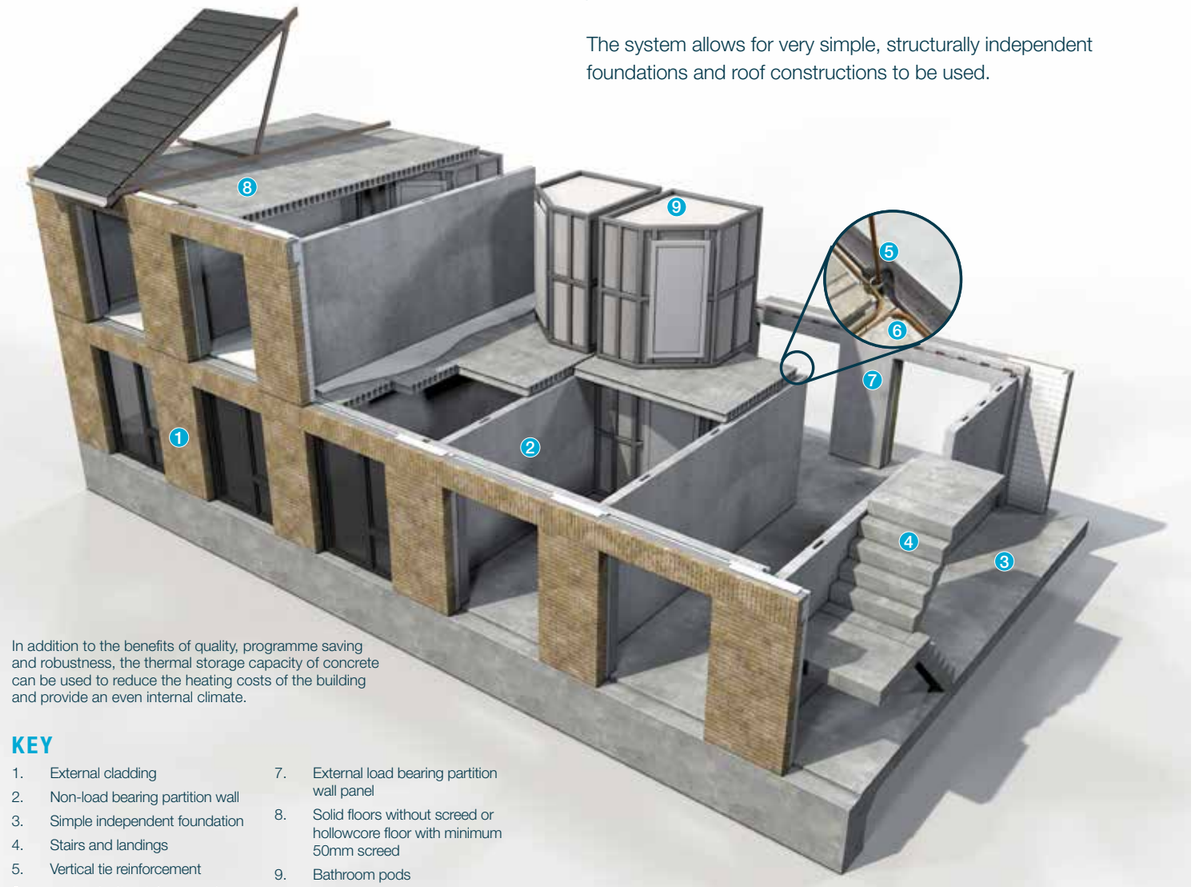
PRECAST CROSSWALL STRUCTURAL ENGINEERING SYSTEM

The precast crosswall structural engineering system comprises a series of concrete panels forming internal, structural load-bearing and partition walls, external walls and floor slabs. External walls can consist of just the inner leaf concrete finish or include the insulated precast sandwich panels.

Overall stability is achieved by the diaphragm action of the floor slabs, transforming horizontal loads between precast wall panels acting as shear walls. In common with all other wall units used in the system, the shear walls are structurally connected using in-situ concrete stitched joints, which are designed, detailed and constructed to ensure full transfer of all forces acting on the structure, and to ensure transfer of loads to the foundations.

Robustness of the structure is achieved through the provision of horizontal internal and peripheral ties, together with vertical ties. The provision of these ties ensures that disproportionate collapse of the structure is prevented in the event of an explosion or other localized accidental damage. The stairways and landings are formed in precast concrete and are supported by the wall panel system by hidden connections and grouted joints.

The system allows for very simple, structurally independent foundations and roof constructions to be used.



In addition to the benefits of quality, programme saving and robustness, the thermal storage capacity of concrete can be used to reduce the heating costs of the building and provide an even internal climate.

KEY

1. External cladding
2. Non-load bearing partition wall
3. Simple independent foundation
4. Stairs and landings
5. Vertical tie reinforcement
6. Horizontal tie reinforcement
7. External load bearing partition wall panel
8. Solid floors without screed or hollowcore floor with minimum 50mm screed
9. Bathroom pods

HOTELS

FP McCann has long-standing experience within the hotel sector, providing solutions to budget and luxury hotel chains including Ramada, Premier Inn, Holiday Inn, Hilton, Crowne Plaza and Malmaison Hotels.

HILTON HOTEL, T5 HEATHROW

The luxury seven-storey Hilton Hotel, adjacent to Heathrow Airport's Terminal 5, required a construction solution that would maximise off-site production processes, thus minimising the on-site programme. This resulted in a reduction in the number of site personnel and delivery vehicle movements that would have otherwise occurred.

FP McCann designed, manufactured and erected the precast concrete crosswall frame, which consisted of 236 external and 432 internal panels, each 150mm thick. In addition, approximately 761 floor and roof units, as well as stairs and landings, were installed. FP McCann's crosswall system is especially suitable for hotel construction, as each panel provides fire protection, acoustic insulation and stability within each unit without additional materials or treatment.

FP McCann utilised a total of three erection teams comprising of eight men per team, erecting an average of 45 units per day, finishing within the strict time constraints set by the client. The hotel consists of 350 bedrooms, including disabled bedrooms.

MOTEL ONE, MANCHESTER

Motel One is a 330-bed hotel situated in the busy Piccadilly area of Manchester. The hotel is fourteen and seven storeys respectively and wraps around the Monroes Public House.

Using our factory engineered precast concrete system, which included acid-etched composite panels in a Portland Hue colour, the façade comprised of large floor to ceiling glazed window panels for each bedroom, which were fitted and glazed at the factory before delivery to site.

FP McCann played a key role in delivering this contemporary hotel. Our meticulous planning enabled us to complete the project within 26 weeks, reducing normal build time by 50% whilst ensuring that our customer's key performance requirements were met. These included speed, quality, safety, programme, and budget.

HOTELS

HOLIDAY INN EXPRESS, BRIDGEWATER

The 138 room accommodation situated at Junction 24 of the M5 motorway is one of the Zeal Hotel group's new Gen 4 hotel schemes for Holiday Inn Express (HIEx) developments. Once complete in spring 2019, it is ideally located to part serve the local workforce and visitors to the new Hinkley Point C nuclear power station.

Architect on the project is Aros and the consultant structural engineer is Clegg Associates, who have also employed the design services of Practech Design Studio (PDS) for the detailing of the external façade.

RAMADA HOTEL, CREWE

FP McCann used its precast crosswall system to form four floors consisting of 112 bedrooms within a 10 week period. The structure took a modular approach to ensure time and cost efficiencies. Around 600 precast pieces were manufactured at our Byley factory, to ensure that on receipt of order the installation could be completed in as little time as possible without compromising quality.

Stability of the finished build was achieved by the diaphragm action of floor planks acting between precast crosswall panels in two directions.

STUDENT ACCOMMODATION

With the quality of campus life now a crucial factor in determining students' choice of educational establishments, many colleges and universities rely on superior residential provision as a vital means of attracting high-calibre scholars.

UNIVERSITY LOCKS, BIRMINGHAM

The University Locks building has achieved a Breeam 'Very Good' rating. This project involved the construction of 659 student rooms totalling 21,405m^2 in the form of cluster flats, with a main southern tower standing at 19 storeys high. FP McCann's precast concrete modular room system was utilised, using a process where walls, floor and ceiling slabs are linked together to form a unique crosswall construction.

In total, some 3,500 individual precast units were installed to form the structural frame and encompass the cladding envelope. The five panels framing each pair of bedrooms consist of walls 180mm thick and floor slabs 175mm thick. Window and door openings have been accommodated and each bedroom has four conduits cast into the walls for electrics and communications networks.

External facade panels are of sandwich panel construction, either 525mm or 725mm thick. The inner leaf is 195mm with an external thickness of 80mm. The insulation between the concrete faces is either 250mm or 450mm thick.

UNIVERSITY OF WORCESTER

The use of FP McCann's crosswall system in student accommodation gives significant benefits including robustness, fire resistance, flood resistance, exceptional acoustics, thermal mass, and excellent security, all of which are essential for student living.

The student accommodation at the St. John's campus comprises of 192 bedrooms, 16 disabled bedrooms, 12 kitchens and 3 living areas over its 3 storeys. FP McCann supplied the precast walls, floors, stairs, and landings. The external walls are 150mm thick and the internal walls 180mm thick, requiring a total of 1,885m^3 of precast concrete.

STUDENT ACCOMMODATION

SWANSEA UNIVERSITY BAY CAMPUS

St Modwen, the regeneration specialist behind the new £450 million. Swansea University Bay campus, signed another agreement to provide an additional £50m of student accommodation and student facilities at the site which opened its doors in September 2015.

The accommodation agreement will see 545 additional student apartments for occupation during the first quarter of 2016. Main building contractor Galliford Try was appointed to the contract in 2014 and work commenced on the land, formerly a BP distribution hub in autumn last year.

UNIVERSITY OF EAST LONDON

One of our most innovative projects has been the development of the University of East London's campus at Royal Albert Docks. The campus provides 788 student bed spaces and ancillary facilities on a previously vacant site adjacent to the University's existing Docklands campus.

Located opposite London City Airport, the site is bounded by the Royal Albert Dock, a publicly accessible dock edge path to the south, the Docklands Light Railway, Gallions Reach Roundabout, University Way to the north and Woolwich Manor Way to the east.

PRISONS / SECURE ACCOMMODATION

Our range of precast modular building solutions provide secure, sustainable, robust, and cost-effective solutions for Prisons and Young Offenders Institutes. We have vast experience within this sector and can ensure that a fully coordinated design solution can be achieved to meet any criteria.

HMP DOVEGATE

FP McCann was challenged to deliver this project within a fast-track timescale. There were up to 11,000 individual elements which formed 12 different buildings, all of which had to be designed, manufactured, and installed on-site by our teams.

These formed over 800 cells and various recreational areas. Just-in-time deliveries enabled maximum productivity to be achieved, with up to 10 erection gangs being utilised at the peak of production. State-of-the-art AutoCad systems were used to build a 3D model and co-ordinate the design development to ensure a successful project was delivered.

Benefits gained included a simplification of the various panel types, improved quality, and safety, together with more effective sequencing during the manufacturing stage – thereby providing valuable experience to carry forward on future projects.

HMP BELMARSH

DfMA in construction of a 600-cell prison four storey house block together with associated buildings to provide education, rehabilitation, training, hospital, sports, healthcare, worship, kitchens, recycling, storage, visits, administration works, horticulture and security. FP McCann's precast concrete structure address this important environmental aspect.

FP McCann contributed to Value Engineering (VE) in developing VE solutions along with specialist subcontractors (e.g., M&E). As we had worked with Skanska and the same M&E contractors on previous projects such as HMP Dovegate, we were able to take lessons learnt on these projects and apply them to HMP Belmarsh to provide a higher quality and more efficiently built prison.

The 600 cell Living Unit was the world's first for prison construction to achieve BREEAM "Outstanding" and won a BREEAM award for the Prisons category at the Ecobuild Awards.

PRISONS / SECURE ACCOMMODATION

WEST MIDLANDS POLICE DEPARTMENT

This major project comprised of the refurbishment of West Midlands Police's headquarters in Birmingham city centre, a building which spans 17,000 square metres in total.

FP McCann provided Hybrid Precast Structure for the West Midlands Police department. This consists of insulated sandwich panels, RC shaft walls, slabs, and columns, Hollowcore flooring and Peikko Delta beams.

The scope of work included internal reconfiguration and refurbishment, replacement and upgrade of building services, over-cladding of the existing facade with an insulated render system, and new windows.

HMP SHOTTS

DfMA in construction of a 285-cell prison houseblock and a multi-function building providing training and education facilities.

Our early involvement with the client's team and main contractor enabled us to highlight risks on concepts and provide an input into build ability such as connections from floor slabs to ground beams etc.

Integrating our design and installation teams on site enabled faster development of solutions on any problems that arose. Our design and installation teams also provided advice for the future Phase 2 scheme completed by Laing O'Rourke Construction.

PRIVATE APARTMENTS, PRS & SOCIAL HOUSING

High value and low costs are paramount in the residential development sector. Our precast concrete structures provide the optimum sustainable solution for apartments and private and social housing.

ST. JAMES' COURT, BIRMINGHAM

St James' Court is a luxury apartment development consisting of four storeys constructed from a ground floor in-situ concrete transfer slab. The main contractor constructed the underground car park and transfer slab using in-situ concrete.

The first three floors were constructed using FP McCann's modular flat-pack factory engineered concrete panels, providing internal structural load-bearing apartment dividing walls, together with elevation panels. The structural envelope was completed with the supply of precast stairs and landings.

The top storey was a combination of a precast concrete crosswall system and a lightweight steel frame. FP McCann was able to incorporate this combined steel and concrete solution into one subcontract package.

The limited working space within this site and its position adjacent to a busy railway line dictated the use of a Factory Engineered Concrete (FEC) modular system, and the use of just-in-time delivery of components was critical to this project.

THE LANSDOWNE BUILDING, BIRMINGHAM

FP McCann's precast concrete walls, columns, beams, stairs, hollowcore flooring planks and architectural sandwich panels were used on a brand new 16 storey, 206-unit residential apartment building called The Lansdowne.

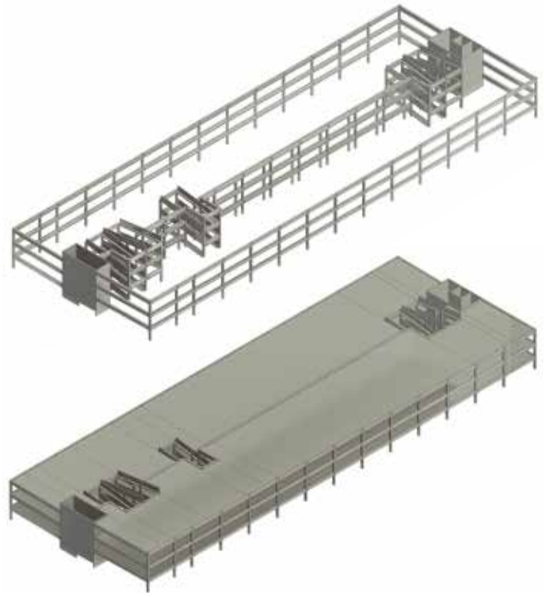
Both the structural and architectural facade teams at FP McCann worked closely with the designers SRC and Building Design Group (BDG) architects on the project to ensure all aspects of the build met the exacting specification standard. FP McCann took around nine days to complete each floor.

CAR PARKS & FRAMES

Precast multi-storey car park structures are designed and manufactured using several structural precast elements, including columns, beams, spandrels, stairs, lift shafts, hollowcore flooring slabs and wall panels. Due to their reduced self-weight, hollowcore flooring slabs can achieve clear spans of up to 16m; this reduces the requirements for vertical columns, creating better manoeuvrability and therefore the risk of damage to vehicles and the car park's structure.

FP McCann manufactures three main types of precast frame construction:

1. Portal Frames
2. Column and Beam
3. Crosswall Construction



APPLICATIONS

- Low-rise and multi-storey offices
- Elevated car parks
- Retail, industrial and warehousing developments

PRECAST BEAMS

- FP McCann manufactures a range of precast concrete beams including
- Ground beams – span between foundations or bases to support brick/ blockwork
- Spandrel beams- span between columns around the perimeter of a building, providing load-bearing support to floor and roof loads
- Spine beams – span the length of a building, providing load-bearing support to floor slabs on either side
- Lintel beams – span above door and window openings, providing load-bearing support to the structure above
- Balcony beams – are beams cast with an integral balcony
- Raker beams – span between columns, providing structural support for terracing units and can be made to any size or length

BENEFITS OF USING PRECAST CONCRETE FRAMES

- Speed of construction is increased as follow-on trades can commence much earlier
- Quick installation since the structure is fabricated off-site
- Offsite construction enables a high standard of workmanship in factory conditions – reduces the potential for accidents and is not affected by weather or labour shortages etc.
- Wide variety of quality finishes achievable and concrete can be left exposed
- Maintenance-free – no need to paint or periodically replace beams as you would with alternative types of beams such as timber beams, which can rot, or steel beams – which can rust and corrode
- Fire-resistant – concrete has its own built-in fire resistance, which can also help to keep insurance costs down etc. and there is no requirement for a site applied fire coating as with other systems
- Economical – lower total cost due to speed of construction, lower labour costs as welders or skilled workers are not required for installation; concrete frames are not as expensive as steel beams and have lower maintenance costs
- The high thermal capacity of concrete can reduce the demand for heating, ventilation and air conditioning, unlike alternative types of frames
- Flexible design – concrete can be cast into any shape, for example, arch-shaped beams, required to suit a variety of project plans and elevations

PRECAST STAIRCORES

FP McCann has vast experience in delivering bespoke precast stair core solutions based on two design options, stability cores and freestanding cores. The key difference being that stability cores provide lateral stability to the whole surrounding structure.

We offer a full design and installation service throughout the UK. We work closely with your design team at an early stage to develop the optimum solution to meet your needs. As a result, the minimum of temporary works is required on-site.

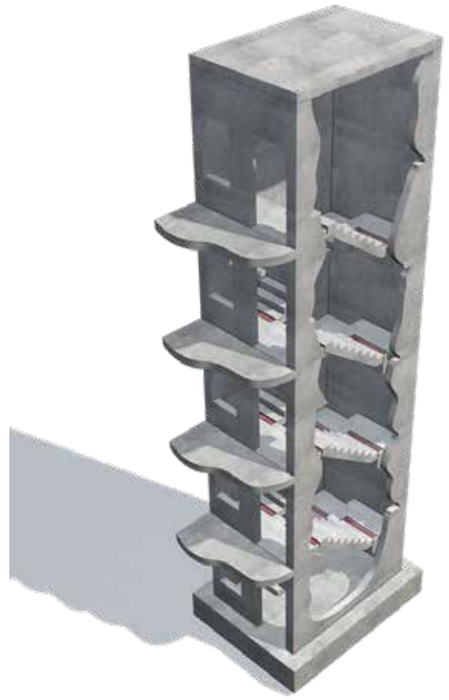
L and T shaped walls form our precast concrete stair cores. If the core dimensions suit, precast box units can also be adopted. Inside the stair core, FP McCann provides precast stairs and landings with cast-in lifting points making installation efficient and safe.

The wall thickness will depend on the type of stair core you choose (i.e. stability or freestanding), fire rating and the number of storeys. However, with FP McCann huge production and mould capacity we have a solution for all scenarios.

We manufacture all the precast components using self-compacting concrete which results in a high-quality finish.

KEY BENEFITS

- Units produced in a factory-controlled environment
- Quick installation
- Increased health and safety with reduced temporary works
- Immediate working platform
- Inherent fire resistance



PRECAST STAIRS & LANDINGS

FP McCann provides precast concrete stairs and landings which allow immediate access to site personnel and following trades and the final end-users.

Using FP McCann precast stairs helps to eliminate the need for expensive form work and temporary propping. All the flights have cast in lifting points to make installation efficient, easy, and safe. FP McCann has built up vast knowledge and experience of different types of applications of precast concrete stairs and landings over the years. We can share this knowledge through our technical support, design and installation services.

KEY BENEFITS

- Self-compacting concrete provides a high-quality finish
- Cast on edge or flat, depending on finish requirements
- A range of casting options are available for integral or separate landings
- Quick installation
- Immediate access
- High load capacity

PRECAST CONCRETE STAIRS AND LANDING INSTALLATION SERVICE

Our specialist team will install your stairs with expertise and efficiency. Our installers are highly trained and vastly experienced. By choosing to use our installation service we aim to get your job done quickly and safely. We can offer professional advice and guidance on compliance with health and safety legislation. Especially when it comes to working at height, we can supply the necessary fall protection whilst the staircases are installed.

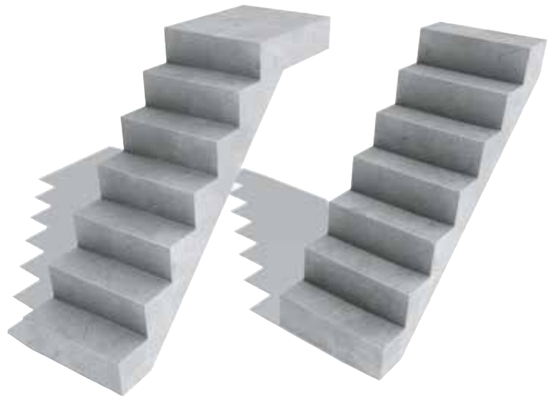
When using our installation service, an FP McCann Contracts Manager will visit your site before installation to discuss all health and safety issues and ensure all the correct procedures are in place. They will also ensure the crane requirements are correctly planned and that costs and time are kept as low as possible, minimising disruption.

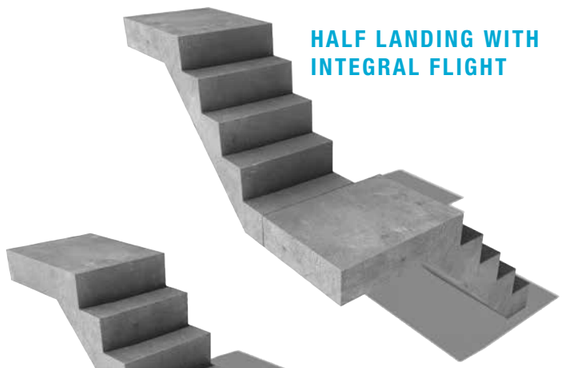
PRECAST CONCRETE STAIRS AND LANDING DESIGN SERVICE

With our designers' years of experience, we can offer a design service covering many staircase applications, including creative solutions to unconventional applications.

INTEGRAL TOP LANDING

STRAIGHT FLIGHT





HALF LANDING WITH INTEGRAL FLIGHT

INTEGRAL LANDINGS TOP AND BOTTOM

PRECAST LIFT SHAFTS

FP McCann manufactures precast modular lift shafts which can be tailored to suit any project. Since construction is completed off-site, the lift shaft is erected very quickly, greatly assisting the build programme schedule.

FP McCann's lift shafts can be built from 1200mm each way up to 2750mm, in increments of 50mm. Wall thickness starts at 150mm, but this can be increased to 200mm or 250mm.

Our standard lift design supports all loading from the lift equipment during installation, operation, and maintenance. The lift shaft can also be designed to support vertical loads from other structural elements such as beams and slabs.

We work closely with your lift supplier to ensure that all components are accurately positioned, including channels and recesses.

We use a water resisting concrete admixture to cast the lift pit sections, to protect against water ingress.

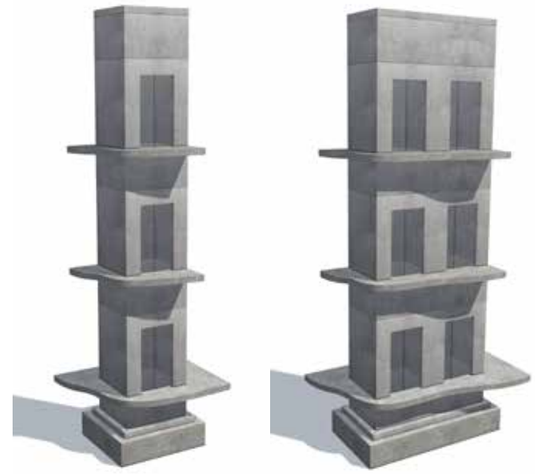
Lift shafts that are at least 4 stories high may need to be restrained at intervals moving up the building, assumed to be achieved by tying back to the main structure. If shafts are to be erected ahead of the main structure, it may be necessary to provide temporary support.

KEY BENEFITS

- Quick and easy to install
- Flexible, bespoke modular design
- Off-site construction minimises disruption on-site
- Minimal on-site labour and costs
- Minimal on-site health and safety risks
- Cast-in fittings provided for lift installation
- Factory-fitted and tested lifting beam/sockets, if required
- Minimum one hour fire resistance
- Temporary works or propping is minimised or eliminated
- Can replace block work or act as shear walls

SINGLE LIFT SHAFT

DOUBLE LIFT SHAFT



TRIPLE LIFT SHAFT

PRECAST GROUND BEAMS

Precast concrete ground beams will be supplied and delivered / supplied, delivered and installed in lengths to span between stanchion bases. Ground beams will be fixed in position via an Excalibur bolt and fixing plate to the foundation pad.

The maximum length of span between stanchions is to be 7400mm. Ground beams will require a minimum of 300mm full bearing at each foundation base. Greater spans can be achieved by the introduction of a small intermediate concrete base by others at mid span for beams to bear upon. Ground beams of standard size will be cast in steel moulds, where non-standard beams are required; moulds may require formation partially in timber.

The Ground beams are designed to support their self-weight only as standard, to form a permanent shutter to the edge of an in-situ concrete floor slab, but can be designed to accommodate specific loads subject to design. Increased spans and loadings may incur an additional cost.

The maximum length of ground beams is 10000mm.

All designs are carried out in accordance with Eurocode standards and relevant national annexes.

Panels will have a standard steel mould finish based on a BS8110 type B Finish to the flat face. The boot face will have a float finish based on BS8110 type A finish due to mould configurations.

The FP McCann Ground beam system requires a head height clearance for installation of 8000mm above Finished Floor Level and a minimum of 1m clear working space behind the beams is required to install the Excalibur bolts, fixing plates, grout and to dry pack beneath the walls to a maximum height of 40mm and a minimum height of 10mm. Head height requirements can be reduced down to a minimum of 5000mm by telehandler installation at an additional cost

In-situ works to column areas and Mastic Joints to be by others.

SPECIFICATION

This estimate is based on the use of our own tried and tested specifications and details. We therefore reserve the right to amend any specification or details where in our opinion the use of standard FP McCann Ltd specifications and details is beneficial.

PRESTRESSED HOLLOWCORE FLOORING

FP McCann manufactures precast concrete hollowcore flooring units. These units are a prestressed concrete slab normally 1200mm wide (part widths are also available if required) and a current depth range of 150mm to 450mm. In addition to this range, we also manufacture a 100mm deep precast concrete floor slab.FP McCann manufactures three main types of precast frame construction:

Our hollowcore slab production techniques are constantly being updated and developed to offer additional slab depths to the range and increase efficiency and achieve higher quality. As with our other flooring products, hollowcore slabs can be used with masonry, steel precast and in-situ forms of construction.

Whether you require a small 60m^2 plot or a 10,000m^2 floor, we have the slabs and the capacity to suit your needs. We work with everyone from multinational construction companies, architects and engineers to self-employed builders and we will always aim to work efficiently and effectively to build solid working relationships.

HOLLOWCORE FLOORING BENEFITS

- Long spans
- Quick installation, particularly when compared to wet concrete solutions
- Immediate working platform
- High load capacity
- Preformed holes for services
- A wide range of slab depths available
- Can be used with masonry, steel, precast and in-situ forms of construction

DESIGN & MANUFACTURE

- Designed to BS8110 and BS EN 1992-1-1
- Can be designed as a composite floor
- Lifting points can be provided
- All units can be offered with insulation pre-attached to the soffit
- Prestressed design with inherent pre-chamber (generally span/ 300)
- The fire-resistance rating of up to 2 hours
- 50 to 100-year lifespan
- Can easily incorporate disproportionate collapse details

TYPICAL APPLICATIONS

- Residential (Multi-occupancy)
- Offices
- Education
- Car Parks
- Retail
- Custodial

UNIVERSITY OF LEICESTER STUDENT ACCOMMODATION

Site: Freeman's Common Village, Leicester University

Client: Equans (Partners – Equitix, University of Leicester)

Main Contractor: Equans

Products Supplied: Precast Concrete Crosswall Modular Building System/Insulated Sandwich Panels (Architectural Finish); Precast Stairs and Landings;

FP McCann's structural precast concrete building and architectural façades division has worked in collaboration with regeneration and facilities management company Equans on the £200 million contract to build student accommodation at the Freeman's Common Student Village, part of Leicester University.

The flagship scheme includes seven residential blocks, a 550 space multi-storey car park and the creation of a new 9,000m^2 teaching and learning centre.

Architect on the project Sheppard Robson designed the residential development which will be completed in 2022. The regeneration of the site which includes refurbishment of the historic grade 2 listed Freeman's Cottages creates a new gateway link through to the city centre.

Working closely alongside Sheppard Robson and managing build partner/client Equans, FP McCann's engineers and supply/install teams were able to satisfy the requirement for the design and build of two of the seven residential blocks whilst fully embracing Modern Methods of Construction (MMC). The key elements of MMC on the project include prefabricated insulated sandwich panels with integrated external brick faced and acid-etched finishes, factory fitted windows, first fix services and factory finished internal walls and ceilings.

UNIVERSITY OF YORK STUDENT ACCOMMODATION

Site: University of York. New Student Accommodation

Client: University of York/Equitix

Main Contractor: Graham

Products Supplied: Precast Concrete Crosswall/Insulated Sandwich Panels (Architectural Finish) Modular Building System; Precast Stairs and Landings; Precast Structural Columns; Architectural Cladding Panels

FP McCann's structural precast concrete building and architectural façades division has worked in close partnership with national construction group Graham on the construction of a 1480 bed student accommodation project, part of York University's "Campus for the Future" masterplan. The £130 million flagship scheme which will help transform the Heslington East Campus commenced in 2019 and is due for completion ahead of the 2022 academic year.

Architect on the project Sheppard Robson designed the residential development in a natural waterside setting which has been broken down into 18 blocks that step down from four to three storeys in height as they get closer to the waterfront. The strong, simple forms of the precast concrete modular blocks, characterised by striking architectural finishes, have been designed to be a modern interpretation of the character of the university's original 1960s campus.

Working closely alongside Sheppard Robson and main contractor Graham, FP McCann were able to satisfy the requirement for the design and build project to fully embrace Modern Methods of Construction (MMC). The key elements of MMC include prefabricated insulated sandwich panels with integrated external brick faced, acid-etched and stencilled finishes, factory fitted windows, first fix services and factory finished internal walls and ceilings.

UNIVERSITY OF BIRMINGHAM STUDENT ACCOMMODATION

Site: Selly Oak Student Accomodation

Client: Birmingham City University

Main Contractor: Interserve

Products Supplied: Precast Concrete Modular Room Systems

FP McCann's structural precast concrete building and architectural façades division worked in close partnership with Interserve Special Projects on the construction of student accommodation on a site acquired by Unite and as part a £71 million major retail development in Selly Oak, Birmingham. The student accommodation block consists of 418 bedrooms over 18 floors.

Construction work began in July 2018, taking ten months to complete the 18 floor building, sited on the grounds of former metal factories known as the 'Birmingham Battery Company', which has been vacant since 1980.The accommodation is part of a scheme to re-develop 30-acres of the Battery Park site, ideally located at the heart of the student area and within walking distance of the University of Birmingham.

Main contractor Interserve's appointed architect Glen Howells Associates had previously worked with FP McCann on another Birmingham University campus development, University Locks near the city centre where a similar precast concrete crosswall/ insulated sandwich panel system was used.

On the Selly Oak project, FP McCann provided some 2,500 precast units for the structural frame and the cladding envelope, including walls, floor slabs and external architectural sandwich panels. The internal crosswall sections are 250mm thick and external sandwich facade panels are mainly 495mm thick and 665mm thick on the returns of the corner sections. The inner leaf of the sandwich panel is a 180mm thick structural concrete skin designed to carry its own dead loading and that of the external skin together with floor loading where required. Insulation between the concrete faces is 200mm thick. The outer 50mm facade skin of the sandwich panels is a cut brick slip face. Bricks to the architects specification are Weinberger Ouverture Marziale and together with a colour designed mortar were cast onto the sandwich panels at FP McCann's specialist architectural factory in Byley, Cheshire.

HAGLEY ROAD BIRMINGHAM PRS PROJECT

Site: The Lansdowne, Hagley Road

Client: Long Harbour / Seven Capital

Main Contractor: Interserve

Products Supplied: Precast Brick-faced Cladding Panels & Precast Crosswalls

The development of The Lansdowne through the Long Harbour Income Fund, its £214m institutional fund focused on delivering high quality residential homes for rent. The scheme has been specifically designed for rent and will offer its residents a concierge service, storage facilities, bike storage, gym, café and work/study space.

FP McCann worked alongside BGD Architects to develop a full precast solution for the private residential scheme. The 206 apartments were formed with 396 precast concrete crosswalls and 361 brick faced sandwich panels all produced at FP McCann's Byley depot.

Works started on the 8th May 2017 and the last unit was installed on the 12th of March 2018.

Due to the busy city centre location a precast solution was ideal for minimal disruption with finished panels delivered on site directly from the vehicle and into the final position.

AC MARRIOT HOTEL MANCHESTER

Site: Marriot Hotel, Manchester

Client: AC Marriot

Main Contractor: Bardsley Construction / FP McCann

Products Supplied: Precast concrete sandwich panels, stairs and landings, crosswalls and solid floors

FP McCann's structural precast concrete building and architectural facades division is supplying and installing the complete package of modular precast components on a brand new £15.5 million four star hotel by AC Marriot in Manchester.

Working in partnership with main contractor Bardsley Construction, the building of the 9 storey, 172 bedroomed hotel commenced in early summer 2017 and is on schedule to open early in 2019.

In total, some 1,000 individual units will make up the precast structural frame including 250 solid floor slabs, 300 cross walls and 251 brick-faced facade panels. Also included in the build are precast stairs and landings and stair and lift cores.

The units are being delivered on a 'just-in-time' basis from the company's Byley depot. The FP McCann contracting team have been erecting an entire floor every two weeks, and have completed works to the 6th floor, including the decorative cladding to the ground floor podium slab and columns. The single handling operation ensures that the components are installed with minimal risk of damage.

COMMONWEALTH GAMES DOUBLE STADIUM SUCCESS

Site: Alexander Stadium Birmingham/City of Manchester Stadium (Commonwealth Games 2022/2002)

Products Supplied: Structural Precast Concrete Stadia Systems including Standard and Curved Terrace Seating Units; Non-standard Terracing Sections; Base Slabs; Double Step Blocks; Precast Concrete Stair Flights and Landings; Vomitory Walls; Precast 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.


City of Manchester Stadium

City of Manchester Stadium


Alexander Stadium


Alexander Stadium

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 2022.

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.

POOLE MULTI STOREY CAR PARK

Site: Muliti-Storey Van Storage Park. New Distribution Hub Poole, Dorset

Client: St Modwen Industrial and Logistics

Main Contractor: TSL Projects

Products Supplied: Precast Concrete Columns and Beams; Parapet Walls; Ramp Sections; Precast Stairs and Landings; Hollowcore Floor Planks.

FP McCann has recently completed the supply and installation of a precast concrete multi-storey van storage facility in Poole, Dorset. The four storey van park is being constructed to service a 10,500m² distribution warehouse based on the 10 acre development site, St Modwen Park.

Developer, St Modwen Industrial and Logistics and appointed main contract partner on the scheme TSL Projects Ltd, have recently completed the warehouse build, with the final stages of construction including the 633 van storage park which FP McCann is delivering on behalf of TSL Projects.

The precast concrete 'van deck' superstructure consists of perimeter and internal columns, spine beams, end and side parapet walls, ramp sections, precast stair cores, stairs and landings. In total over 6,200 tonnes of precast concrete product has been delivered from Byley in Cheshire.

Additionally and forming each level of the van park, is a total of 32,000m² of FP McCann's steel prestressed precast concrete hollowcore floor planks. Each plank is 500mm deep spanning up to 17.2 metres. The 1,585 hollowcore floor planks have been manufactured at the Company's Weston Underwood factory in Derbyshire.

WAKEFIELD MULTI STOREY CAR PARK

Site: Multi-Storey Car Park/ Dock Leveller System - Wakefield Distribution Hub

Client: Newmarket Lane Ltd (Joint-Venture Henry Boot Development/Yorkcourt)

Main Contractor: ISG

Products Supplied: Precast Concrete Columns; Beams; Parapet Walls; Ramp Sections; Precast Stairs; Hollowcore Floor Planks; Precast Concrete Dock Leveller System; Insulated Double and Single Dockwall Panels.

FP McCann has recently undertaken the supply and installation of a precast concrete multi-storey car park to service a huge 2 million square feet distribution centre based in Wakefield, West Yorkshire.

Based on the former 200 acres Newmarket Colliery, the Mountpark Wakefield Hub site adjacent to junction 30 of the M62 motorway, is being delivered by Newmarket Lane Ltd a joint venture between Henry Boot's property development business HBD and Yorkcourt.

Main contractor on the project, global construction specialist ISG, has recently completed the work, the final stages of which have included the construction of the double level car park which FP McCann has both supplied to and delivered the build on behalf of ISG.

The precast concrete superstructure consists of columns, beams, parapet walls, ramp sections and precast stairs. Topping off the car park is 3,800m2 of FP McCann's steel prestressed hollow core floor planks 400mm and 200mm deep, finished with a 100mm layer structural screed. The car park was completed on schedule.

LORD'S CRICKET GROUND LONDON

Site: Ice Arena Wales, Cardiff Bay International Sports Village

Client: Greenbank Partnerships

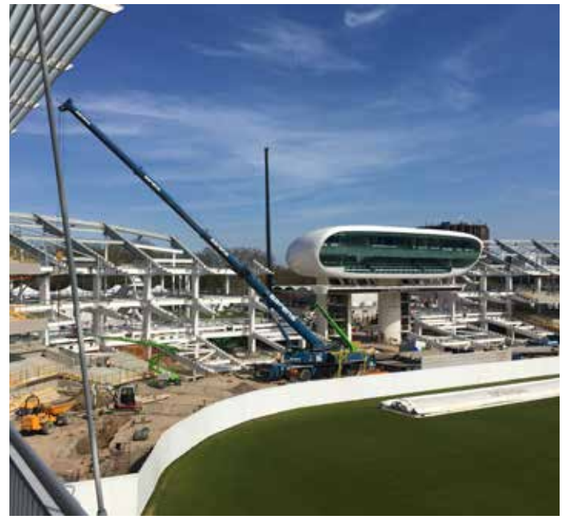
Main Contractor: Kier Construction

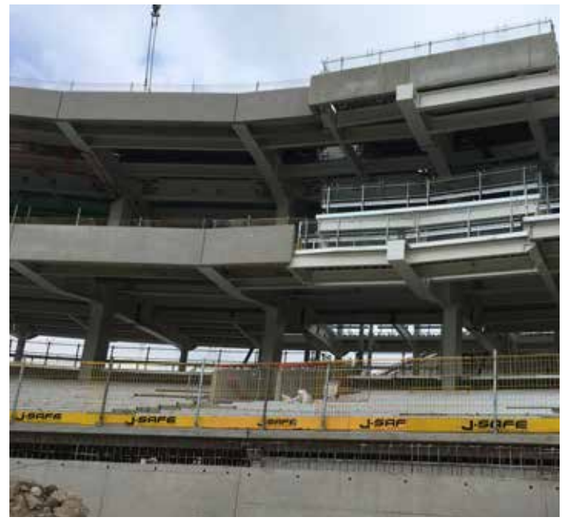
Products Supplied: Bespoke Precast Concrete Terracing Units

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).





MANCHESTER SCIENCE PARK

Site: Base at Manchester Science Park

Client: Bruntwood Scitech

Main Contractor: Caddick Construction

Products Supplied: Precast Concrete Triple Lift Shaft and Stair Cores

Principal contractor Caddick Construction is building Base on behalf of client Bruntwood Scitech. The building is the first new development at Manchester Science Park to incorporate measures towards the achievement of Net Zero Carbon. Base's design embraces the latest innovations in building materials and environmental technology. These include the installation of a 700 metre square solar panel, demand side response technology and occupancy and utilisation sensors.

Recognising that Modern Methods of Construction (MMC) are key on the project, Caddick Construction along with Russell Bridge architects engaged and involved FP McCann at the early stages of design. FP McCann were able to demonstrate fast-track construction of the structural off-site manufactured precast concrete elements thereby allowing follow-on trades easier and safer access.

The structural precast concrete lift shaft and two stairs cores form the initial phase and have been erected ahead of the main building in modular box and panel sections manufactured off-site at FP McCann's Byley factory in Cheshire.

Nominated FP McCann installation contractor Irish Gulf Contracting, completed the build of the three precast structures over a period of 17 days. Components and features in the box section triple lift shaft include dividing walls, door openings and cast in fixing channels. The precast panel wall stair cores comprise stair flights, landing slabs and lids.

PROJECT LIST

HOTELS

	No. of beds
Arora Hotel, Crawley, Extension Block	96
Arora Hotel, Crawley	311
Casa Hotel, Chesterfield	100
City Inn, Manchester	284
Crowne Plaza, London Docklands	210
Crowne Plaza, Manchester	228
Days Inn, Glasgow	110
Etap/Ibis, Birmingham Airport	282
Golden Tulip Hotel, Manchester	50
Hilton Burton-on-Trent	142
Hilton Garden Inn, Stoke-on-Trent	138
Hilton Hotel, Croydon	120
Hilton Hotel, Edinburgh	110
Hilton Hotel, Edinburgh	133
Hilton Hotel, Heathrow T5	350
Hilton Hotel, Luton	180
Holiday Inn, Commercial Rd, London	130
Holiday Inn, Glasgow	113
Holiday Inn, Newcastle	154
Holiday Inn, Norwich	150
Holiday Inn, Speke, Liverpool	100
Holiday Inn, Woking	161
Holiday Inn Express, Aberdeen	N/A
Holiday Inn Express, Ayr	108
Holiday Inn Express, Barrow	127
Holiday Inn Express, Bath	126
Holiday Inn Express, Bath Extension Block	15
Holiday Inn Express, Bedford	80
Holiday Inn Express, Brentford Lock	120
Holiday Inn Express, Bridgewater	138
Holiday Inn Express, Bristol	133
Holiday Inn Express, Bristol Extension Block	24
Holiday Inn Express, Burnley	98
Holiday Inn Express, Cheltenham	100
Holiday Inn Express, Chester Racecourse	97
Holiday Inn Express, Chingford	102
Holiday Inn Express, Colchester	99
Holiday Inn Express, Cowgate	78
Holiday Inn Express, Croydon	150
Holiday Inn Express, Derby	120
Holiday Inn Express, Doncaster	94
Holiday Inn Express, Dundee	93
Holiday Inn Express, Epsom	120
Holiday Inn Express, Exeter	122
Holiday Inn Express, Fulham	96
Holiday Inn Express, Golders Green	83
Holiday Inn Express, Greenwich	162
Holiday Inn Express, Hamilton	104
Holiday Inn Express, Harlow	130
Holiday Inn Express, Hemel Hempstead	112
Holiday Inn Express, Kent	104
Holiday Inn Express, Kettering	121
Holiday Inn Express, Leicester	109
Holiday Inn Express, Lincoln	118
Holiday Inn Express, Luton Airport	147
Holiday Inn Express, Luton Airport, Extension Block	37
Holiday Inn Express, Manchester	150
Holiday Inn Express, Manchester	193
Holiday Inn Express, Milton Keynes	178
Holiday Inn Express, North Acton	108
Holiday Inn Express, Northampton	127
Holiday Inn Express, Oldbury	109
Holiday Inn Express, Oxford	162
Holiday Inn Express, Redbridge	126
Holiday Inn Express, Redditch	100
Holiday Inn Express, Sheffield	161
Holiday Inn Express, Slough	142
Holiday Inn Express, Southampton	131
Holiday Inn Express, Southampton, Extension Block	45
Holiday Inn Express, Stevenage	108
Holiday Inn Express, Stoke	123
Holiday Inn Express, Stratford	114
Holiday Inn Express, Stratford, Extension Block	45
Holiday Inn Express, Swiss Cottage	69
Holiday Inn Express, Tamworth	120
Holiday Inn Express, Taunton	92
Holiday Inn Express, Walsall	100
Holiday Inn Express, Wandsworth	148
Holiday Inn Express, Warwick	117
Holiday Inn Express, Watford	98
Holiday Inn Express, Winnersh	174
Holiday Inn Express, Witney	N/A
Hotel Brooklyn Portland Street, Manchester	191
Hotel Hampton by Hilton, Burton-on-Trent	86
Hotel La Tour, Birmingham	152
Howard Johnson Hotel, Glasgow	108
Ibis, Aldgate	348
Ibis, Birmingham	90
Ibis, Bradford	86
Ibis, Borehamwood	122
Ibis, Bristol Harbourside	180
Ibis, Carlisle	102
Ibis, Gatwick	131
Ibis, Hull	106
Ibis, Leicester	150
Ibis, Liverpool	127
Ibis, Luton Airport	64
Ibis, Manchester	127
Ibis, Temple Quay 2, Bristol	141
Ibis, Wembley	210
Macdonalds Hotel, Sheffield	166
Malmaison Hotel, Liverpool	130
Marriott Hotel, Cable Street Manchester	172
Mercure Hotel, Swansea	102
Motel One, Manchester &	328
Staycity Aparthotels, Manchester	256
Park Inn, Manchester	252
Pentahotel, Derby	112
Premier Inn, Dale Street, Manchester	193
Premier Inn, Doncaster	107
Radisson Blu, Guildford	180
Radisson Blu, Jersey	166
Ramada Encore, Birmingham NEC	120
Ramada Encore, Chatham	93
Ramada Encore, Crewe	112
Ramada Encore, Doncaster	102
Ramada Encore, Haydock	102
Ramada Encore, Newcastle	156
Ramada Encore, Walsall	121
Splash Landings, Alton Towers	120
The Armouries, Leeds	130
The Hoxton, Shoreditch, London	180
The International Hotel, Telford	101
Travelodge, Slough	180
Village Club Hotel, Ashton Moss	120
Village Club Hotel, Elstree	120
Village Club Hotel, Farnborough	114
Village Club Hotel, Leeds South	115
Village Club Hotel, Solihull	122
Westbridge Hotel, Stratford	75

STUDENT ACCOMMODATION

	No. of beds
University of York	1480
University of Leicester	1000
Abertay University, Dundee	700
Birmingham City University, City Centre Campus (BCU)	
Brunel University, London Phase 5	538
Buckingham New University, High Wycombe	200
Buckingham New University, High Wycombe	234
Cambridge University, North Cambridge Academy	321
Homerton College, Cambridge	138
Keele University, Staffordshire	500
Kings College, Great Dover St, London	350
Lancaster University Phase 2	1870
Lancaster University Phase 3	1500
Loughborough University	661
Loughborough University	700
Magna Carta, Runnymede (ongoing)	600
Manchester Metropolitan University, Crewe Campus	51
Masons Hall, Birmingham	800
Newcastle University	300
Pittfield St, Hackney	350
Plymouth University	329
Reading University, Bridges Hall	400
Reading University, Childs Hall	600
Reading University, Stenton and Mackinder Halls	967
Reading University, Whiteknights Campus	120
Selly Oak, Birmingham	480
Selly Oak, Birmingham (UNITE)	418
Sheffield University	N/A
Southbank University, London	300
Swansea University	500
University Locks, Birmingham	659
University of Essex, Colchester House	767
University of Essex, Southend-on-Sea	561
University of Hertfordshire	1601
University of Kent, Pier Rd, Gillingham	350
University of Lincoln, Cygnet Court	500
University of London, Docklands Campus	788
University of London, Malet Street	166
University of London, London Mile End Road, Queen Mary Campus	595
University of London, Tufnell House	450
University of Southampton Chamberlain Halls	350
University of Southampton Portswood Road	500
University of Sussex	228
University of the Arts, Camberwell	280
University of the West of England, Bristol	1974
University of Worcester	177
University of Worcester	358

MINISTRY OF DEFENCE

	No. of beds
JRSLA, Lucknow Barracks	450
SNCO, Lucknow Barracks	50
RAF Woodbridge	344
RAF Woodbridge	58
DACI Shrivenham	460
DACI Shrivenham B36	250

APARTMENTS

	No. of apartments
Browning Street, Birmingham	N/A
Didsbury Point, Manchester	45
Fleet Street, Birmingham	N/A
Lansdowne House, Birmingham	206
Pocock Street, Birmingham	N/A
Sadlers Park, Burslem Campus Phase 1	58
Sadlers Park, Burslem Campus Phase 2	64
Sportcity, Manchester Phase 2C Block 1	66
Phase 2C Block 2	57
Phase 2C Block 3	42
Phase 4 'The Cresent'	55
Phase 4 'The Cube'	50
St. James's Court, Birmingham	N/A
The Cargo Building, Baltic Triangle, Liverpool	324

MINISTRY OF JUSTICE

	No. of cells
HMP Jurby Prison – Isle of Man	200
HMP Greenock Prison	64
HMP Saughton Edinburgh	120
HMP Glenochil Prison - Seg Unit	30
HMP Polmont Prison - Seg Unit	30
HMP Perth Prison - Seg Unit	120
HMP Edinburgh	94
HMYOI Polmont	118
HMP Shotts Prison	285
HMP Lowdham Grange	500
HMP Kilmarnock Prison	500
HMP Pucklechurch Remand Centre	400
Medomsley Secure Training Centre	40
Logford Detention Centre	400
HMP Hassockfield Prison	16
HMP Lowdham Grange Expansion	30
HMP Lowdham Grange Expansion	260
Gatwick Immigration/Removal Centre	420
Harmondsworth Immigration/Removal	196
HMP Coldingley	120
HMP Onley - House Block	120
HMP Bullingdon - House Block	110
HMP Dovegate Prison	800
HMP Liverpool	24
HMP Cardiff	20
HMP Albany - Hospital Wing	N/A
HMP Winchester	116
HMP Dovegate	264
HMP Littlehay Seg Unit	12
HMP Parc	326
HMP Belmarsh	600
HMP Thameside (Belmarsh)	216
HMP Wrexham (Ancillary Buildings)	N/A

CAR PARKS & FRAMES

	No. of spaces
Poole MSCP	633
Wakefield MSCP	791
Thorpe Park MSCP	1200
Manchester Hopital MSCP	1000

BYLEY OFFICE:
Byley Road
Middlewich
Cheshire
CW10 9RJ
T 01606 843500
sales@fpmccann.co.uk

GRANTHAM OFFICE:
Summit House
Alma Park Road
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NG31 9SP
T 01476 562277
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LITTLEPORT OFFICE:
Wisbech Road
Littleport
Ely, Cambridgeshire
CB6 1RA
T 01353 861416
sales@fpmccann.co.uk

PRECAST OFF-SITE BUILDING SOLUTIONS

Byley 01606 843500 Grantham 01476 562277 Littleport 01353 861416

AGRICULTURE
Lydney 01594 847500 Grantham 01476 562277

BOX CULVERTS
Weston Underwood 01335 361269

BUILDING PRODUCTS
Cadeby 01455 290780

DOCK LEVELLER PITS
Weston Underwood 01335 361269

DRAINAGE
Ellistown 01530 240000 (England/Wales) Magherafelt 028 7954 9026 (Scotland)

FENCING
Cadeby 01455 290780

FILTER BED SYSTEMS
Littleport 01353 861416

FLOORING
Weston Underwood 01335 361269 Uddingston 01698 803300

POWER & INFRASTRUCTURE
Littleport 01353 861416

RAIL
Littleport 01353 861416

SPECIALIST PRECAST
Littleport 01353 861416

TANKS & CHAMBERS
Littleport 01353 861416

TUNNELS & SHAFTS
Cadeby 01455 290780

WALLING
Grantham 01476 562277 Lydney 01594 847500
Uddingston 01698 803 300 (Scotland)

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