FP McCann is the UK’s market leader in the manufacture, supply and delivery of precast concrete solutions. Our comprehensive precast concrete business extends to include:

**AGRICULTURE | ARCHITECTURAL PRECAST | BOX CULVERTS | BUILDING PRODUCTS | DOCK LEVELLER PITS | DRAINAGE | FENCING | FILTER BED SYSTEMS | FLOORING | POWER & INFRASTRUCTURE | RAIL | SPECIALIST PRECAST | STRUCTURAL PRECAST | TANKS & CHAMBERS | TUNNELS & SHAFTS | WALLING**

Modern manufacturing plants at Alnwick (Northumberland), Armagh (Northern Ireland), Byley (Cheshire), Cadeby (Warwickshire), 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 are able to 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.

Please note: all information is correct at time of going to print.
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.

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 provides 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 both 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

**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, fire-stop, etc

**ARCHITECTURAL PRECAST**

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

FINISHES AVAILABLE INCLUDE:
- Brick faced
- Natural Stone faced
- Mould formers
- Acid Etched
- Exposed Aggregate

SANDWICH PANEL CROSS-SECTION
The illustration above shows a facade panel which can be tied back to either a concrete frame or steel.

**Facade panels**

**Fully pointed with windows built-in**

**Brick faced precast sandwich wall panel**

**Textured/pattern imprinted cladding panels**
**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.
COLUMNS & BALCONIES

FP McCann offers a range of precast concrete columns and balconies to suit all specifications. All of 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.

KEY BENEFITS OF USING PRECAST CONCRETE STRUCTURES

- Increases speed of construction between levels
- Helps reduce margins of error
- High compressive strength
- Eliminates complex pours on-site
- Reduces Health and Safety risks on-site
- Health and Safety statistics indicate that fatal accidents are five times more likely on-site than in a factory controlled environment
- Detailed and manufactured to your specification, incorporating additional features and fittings, if required

BENEFITS OF PRECAST BALCONIES

- Balconies can be erected with floor units prior to pouring of screed
- Balconies can be manufactured to suit any architectural and/or structural design
- Time saved on-site
- 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 connecting kit

BENEFITS OF PRECAST 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
PRECAST CLADDING

FP McCann offer 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
CASE STUDY / PRESTIGIOUS SHOREDITCH DEVELOPMENT SPECIFIES FP MCCANN’S ARCHITECTURAL CLADDING PANELS

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 623m² and pointed with mortar; colour as specified by the architect.  The 28 acid etched panels (243m²) for the side of the building facing the car park were colour matched to the brick façade.

Additionally, FP McCann supplied the corner and ‘L’ shaped precast brick-faced concrete columns consisting of 130m³ of concrete. To allow for fixing of the cladding panels which were secured floor by floor, FP McCann designed and supplied bespoke brackets.

The architectural façade team at FP McCann worked closely with the engineers and architects on the project to ensure all aspects of the build met the exacting client specification.

Commenting on the completed project, Anthony Kelly - Project Manager for Montway says, “This method of architectural precast concrete/brick-faced construction demonstrates a number of efficiencies compared with practices associated with a traditional build. The off-site manufacturing of the building components offers significant advantages in terms of product quality and integrity. On site, speed of construction, minimising waste and the ability to work uninterrupted in all weather conditions are all major benefits. Additionally, the external façade system removes the need for scaffolding and wet trades, thereby minimising the health and safety risk factors associated with people working at height.”

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
CASE STUDY / HOLIDAY INN EXPRESS GROUP SPECIFIES FP MCCANN’S MODULAR PRECAST CONCRETE FRAME SOLUTION ON 4TH GENERATION HOTEL DESIGN

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 £10 million hotel near Bridgwater, Somerset. Working on behalf of main contractor Midas Construction, experienced sub-contracting partner to FP McCann, S4J Ltd, is undertaking the precast frame build.

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.

The four storey building is well underway with work having commenced in March this year.

In total, around 509 individual precast concrete structural and architectural units will make up the precast structural frame including 394 structural products consisting of reinforced concrete solid floor slabs, internal walls and stairs all manufactured at FP McCann’s Grantham depot.

The building’s architectural façade has been specifically designed to incorporate both a brick faced and acid etched finish. The decorative cladding panels are of an insulated ‘sandwich’ construction, specially cast to meet the exacting design brief. The 30 brick faced panels, each 365mm thick, are being manufactured at Grantham and 84 acid etched panels from Littleport are 410mm thick, with two different colour shades to match the architectural design requirements.

The insulation layer sits between the inner and outer concrete faces on each sandwich panel and have been designed to accommodate the aluminium framed 0.18 U value windows, supplied by Window Glass (Bristol) Ltd, all pre-installed into the precast panels prior to delivery. A single handling operation on site then ensures that the architectural panels are installed quickly and efficiently with minimal risk of damage.

The precast wall and floor sections have been designed for ease of build, linking together with hidden tie rods. Joints are finished with a high-strength non-shrink grout. As part of the contract, S4J Ltd are also installing 130 pre-formed bathroom pods supplied by Somerset-based company, Off Site Solutions (RT) Ltd.

Both the structural and architectural facade teams at FP McCann have worked closely with the engineers and architects on the project to ensure all aspects of the build meet the exacting client specification.

Commenting on the building progress to date, Grant Millar, Operations Manager for Midas Construction says, “This method of modular precast construction demonstrates a number of efficiencies compared with practices associated with a traditional build. The remote manufacturing of the building components offers significant advantages in terms of product quality and integrity. On site, speed of construction, minimising waste and the ability to work uninterrupted in all weather conditions are all major benefits. Additionally, the sandwich panel external facade system removes the need for scaffolding, thereby minimising the health and safety risk factors associated with people working at height.”

Site: Holiday Inn Express (HiEx), Bridgwater
Contractor: Midas Construction
Client: Zeal Hotel Group
Frame Installation Contractor: S4J Ltd
Products Supplied: Brick faced and acid etched ‘sandwich’ cladding panels, precast concrete reinforced solid floor slabs, internal walls and stairs.
AGRICULTURE
Lydney 01594 847500  Grantham 01476 562277

ARCHITECTURAL PRECAST
London 020 3905 7640

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/NI)

FENCING
Cadeby 01455 290780

FILTER BED SYSTEMS
Littleport 01353 861416

FLOORING
Weston Underwood 01335 361269   Uddingston 01698 803300   Magherafelt 028 7954 9026 (NI)

POWER & INFRASTRUCTURE
Littleport 01353 861416

RAIL
Littleport 01353 861416

SPECIALIST PRECAST
Littleport 01353 861416

STRUCTURAL PRECAST
Byley 01606 843500  Grantham 01476 562277

STORMTANK™ - TANKS & CHAMBERS
Weston Underwood 01335 361269

TUNNELS & SHAFTS
Cadeby 01455 290780

WALLING
Grantham 01476 562277   Lydney 01594 847500
Uddingston 01698 803 300 (Scotland)   Magherafelt 028 7954 9026 (NI)

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