

agricultural solutions
agriculture
brochure

v.1.0



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:

Drainage and Water Management Solutions

Tunnel and Shaft Solutions

Rail, Power and Infrastructure Solutions

Walling Solutions

Fencing Solutions

Agricultural Solutions

Rooms Solutions

Flooring Solutions

Specialist Precast Solutions

Modern manufacturing plants at Alnwick (Northumberland), Cadeby (Warwickshire), Ellistown (Leicestershire), Grantham (Lincolnshire), Knockloughrim (Northern Ireland), Littleport (Cambridgeshire), Lydney (Gloucestershire), Telford (Shropshire) 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.

introduction



Technical helpline 01594 847500
fpmccann.co.uk/agriculture

FP McCann (Milbury Systems) have been supplying the agricultural industry with quality precast concrete solutions for over 60 years. Today FP McCann continues to supply our agricultural range including solutions for livestock dairy buildings, bulk storage such as grain, crops, fertilizer, slurry storage, silage, retaining and much more. We deliver to any part of the UK and Ireland, meeting your requirements with affordable and safe solutions.

Agriculture remains as the driving force behind our quality and service in our precast products. Our valued customer relationships drives FP McCann to develop better products in addition to adapting existing products to best meet the needs of farmers and farm building contractors. After 60 years we remain committed to the agricultural community by developing our products to be quickly and easily installed, provide lasting quality and on time service.





grain & crop storage

Prestressed Concrete Horizontal Panels

The versatility of FP McCann Horizontal Panels make them ideal for creating flexible storage bays of all sizes with a range of thicknesses (120mm, 160mm & 200mm). Our prestressing process provides enormous strength over a precast panel making our panels ideal for securely containing grain and other crops. Our controlled factory engineering allows us to work with you to specify an affordable solution to meet your requirements. Horizontal panels typically fix to the steel frame of the building and do not require foundation or casting into position.

Prestressed Concrete Vertical Cantilever Panels

FP McCann's Vertical Cantilever Panels are cast in to position using cradles prior to construction of the floor slab. Panels sit together cleanly with vertical tongue and groove edges sealed together. Vertical Cantilevers have the added advantage of being used when the steel frame is not able to support the panels.

Precast Rocket Wall®

An alternative to panels for storing grain and other cereals is our Rocket Wall® precast unit. These units come in three heights, 2.4m, 3m and 4m and are all the same 1.25metre width; by design these units are free standing and require no base fixing for level fill grain storage. If surcharged (heaped) grain storage is required then we recommend that

the precast units are bolted to an existing level floor using Excalibur bolts into pre-drilled holes and grouting over then sealing the joints. Rocket Walls® can also be re-sited after the grain has been removed with relative ease giving the option to reuse the storage area for alternative purposes.

By design the Rocket Wall® units can support up to 16KN/m³ and can be loaded from both sides making them a versatile, fast and effective way to store grain and other cereals. Alternatively use them to create a dividing wall within a shed to increase storage options.



silage panels

One of the most enduring panels FP McCann produce is that which is used for storing silage.

FP McCann recommend a variety of panels for silage and can tailor the products depending on your individual requirements. Silage panels are made from high quality pre-stressed concrete designed in accordance with BS5502. As an alternative to prestressed panels FP McCann can supply precast L-Wall units that are Eurocode compliant.

Key Features and Benefits:

- Prestressed concrete panels for maximum strength
- 3 equally reliable product options available; each with their own added benefits
- Tongue and groove joints for easy alignment and sealing
- Quick and easy to install
- Vertical panels are an effective way of constructing a permanent bunker. Generally double loading panels are available for dividing walls

Horizontal panels are ideal for use, supported against columns of a building, or within the flanges of stub columns of an open bunker. The stub columns may be designed to allow the later addition of a roof to cover the silo, or form a building to the outside. Panels are provided on

a supply only basis conforming to all relevant standards and regulations.

Precast L-Wall units are an effective solution for silage clamps and are produced in heights from 1m up to 3.75m. They can be loaded one side or both sides and can be placed in bays either sitting near existing walls or using corner units using a complete L-Wall system. Once again there is no steel required for this option adding an even greater advantage.





slurry stores

FP McCann slurry panels are made from high quality pre-stressed concrete designed in accordance with BS5502.

Key Features and Benefits:

- Above and below ground options
- Tongue and groove joints for easy alignment and sealing
- Access to store with machinery
- Choice of ways to handle slurry

Where possible slurry would normally be pushed over a retaining wall using a tractor or automatic scraper, though if appropriate a ramp, underground pipe, mechanical loading system or pump may be utilised. When emptying the store it can be pumped or removed by a vacuum tanker. Solids can be removed by tractor bucket via ramp. Our ramp panels are ideal for ease of construction and minimal loss of capacity, within the store.

A properly designed strainer box would allow dewatering of the store to increase capacity for solids, the remaining muck either being handled as a semi solid or a slurry, if sufficient liquid is retained to allow agitation. The management of the store during the winter is of prime importance to ensure that this simple system works efficiently. Free-standing panels with slots designed to give maximum separation and

to minimise jetting allow the liquid to transfer via a perimeter gully to a holding/settlement tank. Separation of the liquids and solids can make handling easier and is particularly useful if low volume irrigation through the winter period is permissible.



dairy systems

Ever since cows were first housed, the effective removal of the manure, slurry and the cleanliness of the cows have been primary objectives. The FP McCann Slatted Cubicle Building comes close to achieving this ideal.

FP McCann prestressed concrete stock walling is ideal for containing livestock providing a smooth surface for quick wash down. Stock wall panels are 80mm thick and made to suit your desired lengths; tongue and groove joints allow for very quick installation with a clean finish.

FP McCann generally uses tractor loading slats within the building up to 4 tonne axle loading weight which should be adequate for any likelihood. The central feed passage and specified areas are designed for much greater holdings. The collection yard can be totally slatted, generally at least 3m away from the parlour entrance, or can be scraped or washed into a channel. Either of these options can then be fed into the main tank if levels and proximity allow. Slurry is extracted by tanker, pump or more commonly nowadays by umbilical system. Sumps at one or both ends are provided and inspection/access hatches can be distributed around the building. Slurry is conditioned automatically with the Aeromixer or other options which keeps it constantly agitated and available for spreading, and reduces smell.

Key Features and Benefits:

- Cleanliness and comfort of cows and building
- Provide adequate slurry storage
- Low running costs
- Low maintenance
- Exclusion of rainwater
- More economical use of space: no external slurry stores and associated concrete areas
- No disturbance to the cows. Enhanced foot health – drier and harder
- Lower labour requirement. Slatted floors for better efficiency and strength

A light automatic scraper can be run down the passage if necessary however you may find that the slats remain clean enough as there will be almost no slurry to remove. FP McCann recommend using sawdust or chopped straw for bedding rather than sand to assist with cleanliness.



cattle slats

FP McCann design and manufacture a range of agricultural cattle slats, ideal for use over slurry channels, underground tanks and as part of a suspended floor system. All cattle slat products are manufactured in accordance with BS 5502 and ISO 9001, ensuring that quality; durability and animal welfare are at the heart of design and manufacture.

The Cattle Slat products are suitable for use as floors for livestock and are made from high strength reinforced concrete, designed to withstand the pressure and demands associated with livestock management over a considerable time period. These products are suitable for use for all classes of livestock loading, shown in Table 5 of BS5502: Part 22 including the maximum vehicle loadings.



Features of FP McCann Cattle Slats:

- Alex bearing load of 4.5 tonnes
- Edges designed to prevent injury to cattle
- Tapered/smooth sides to allow easy access for slurry tank
- Excellent space to surface ratio
- One-man operation for safe mixing or slurry removal from effluent tank
- Hardwearing non-slip surface
- Choice of single or gang slats
- Cattle, pig, sheep and multi-purpose slats available
- Access slat with manhole
- Diagonal slat to cover slurry channels
- Available as tractor or cattle loading

Applications

Cellars / Channels / Dairy farms



livestock buildings

Prestressed Concrete Livestock panels are an ideal, hygienic solution for containing all types of livestock. 80mm thick prestressed panels are lightweight and quick to install while providing superior strength to withstanding impact load from livestock. The prestressed manufacturing process provides in built strength and resilience; whilst using less concrete resulting in a better engineered and more cost effective solution.

Key Features and Benefits

- The panels are all manufactured to BS-8110 standard
- Cast in fixing sockets assist with efficient installation
- No foundation required
- Tailor made lengths and a variety of widths
- Easily washed down
- Smooth impervious surface
- Panels absorb minor accidental damage from livestock



prestressed horizontal panels

Horizontal Panels

Instant concrete walling that offers efficient installation with the future-proof option of re-siting if required.

FP McCann instant walling concrete panels are the ideal solution for the progressive farm where the adaptability of buildings is important. They are manufactured in prestressed concrete, giving them in built strength and resilience.

Key Features

- **No foundation required**
- **Tongue and grooved joints for easy alignment and positive sealing**
- **Tailor made lengths and a variety of widths**
- **Easily washed down. Smooth impervious surface**
- **Prestressed Panels absorb minor accidental damage**
- **The simplicity and speed of installation makes**
- **Milbury wall panels a much more attractive proposition than alternative walling.**
- **More cost effective – more versatile than blockwork**

Stability and Durability

FP McCann prestressed panels are highly resistant to accidental damage, as they have the ability to flex on impact when normal block walls would crack. Panels are easily removed and re-sited with existing farm plant. Panels are easily removed and re-sited providing flexibility to change a configuration of the structure as the Client's future needs evolve.

Using Horizontal Panels (spanning between columns or fixed within the walls) considerable wall heights can be achieved, through stacking units. Various panel heights are available including 1000mm, 1200mm and 1500mm; these may be mixed and matched for benefit of providing an overall wall height to meet the client's requirements.

This system is particularly useful for raising internal and external ground levels in or around a building frame, or for King post applications to retain an earth bank.

Foundations

Connected to the building frame by transmitting the load against stanchions, these panels are held in place with bolts and cleats and do not require foundations.







prestressed vertical cantilever panels



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Vertical Cantilevers

The FP McCann Prestressed Vertical Cantilever Panel system provides the user with more a cost time efficient system when comparing against a traditional on site in situ wet-cast system.

FP McCann Prestressed Vertical Panels allow greater strength in a more slender panel than a comparable thicker traditional in situ wall.

Key Features

- The vertical cantilever panels are prestressed, allowing greater strength in a more slender panel
- Prestressing reduces the incidence of tensile cracking in the panels
- The concrete used for the prestressed panels is designated as a C50/60 grade.
- The foundation can be individually designed to suit site and loading requirements
- The prestressed panels are tongue and grooved together, allowing effective sealing between units without stressing the sealant
- The units are lighter – height for height – so require smaller site lifting vehicles
- The prestressed unit can be lifted and handled more easily on site
- The panels are supplied with a tongue and grooved joint in the vertical plane to assist with wall alignment, load share and ease of sealing. Manufactured on 70mm long prestressing beds the panels are prestressed during manufacture, which provides an inherent enhanced strength and resilience to many types of retained materials. Retained heights of up to 4m can be achieved for many material types

Where vertical cantilever panels are designed for wind only, such as a security wall or fire wall, effective heights of up to 7.50m can be achieved.

The units are cast as standard with a Class A steel mould finish to one side and all edges complete with hand trowelled finish to the other face.

During the casting process, cast in Wavy Tail Lifters can be cast in the top edge of the panel to assist with on site installation.

Applications

- Soil retention
- Coarse material retention
- Coarse aggregation retention
- Silage clumps
- Under-ground slurry stores
- Basements of structures
- Waste recycling bunkers
- Prison security walls
- Substation fire walls
- Flood alleviation schemes





1400 l x 700 w x 700 h (1.7 tonne)



700 l x 700 w x 700 h (0.85 tonne)

Easi-Bloc is a precast concrete block, offering solutions where limited space is available for containment. Blocs are simplistic in design allowing for effortless handling and speed of installation. Easi-Bloc comes in two sizes making them ideal for a variety of applications.

Applications

Ideal for a variety of uses to include:

- Segregation
- Temporary road blocks
- Security barricades
- Storage bays
- Agricultural bays suitable for grain, silage etc
- Earth Retention
- Aggregate bays
- Partition walling
- Landscaping
- Waterways
- Highways
- Shoreline Defences

Features

- Cost effective
- Easy to handle and install
- Durable

Easi-Bloc contains a central cast in lifting loop for ease of handling and installation.

Products are manufactured to comply with the requirements of BS EN 1992-1-1:2004.







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