

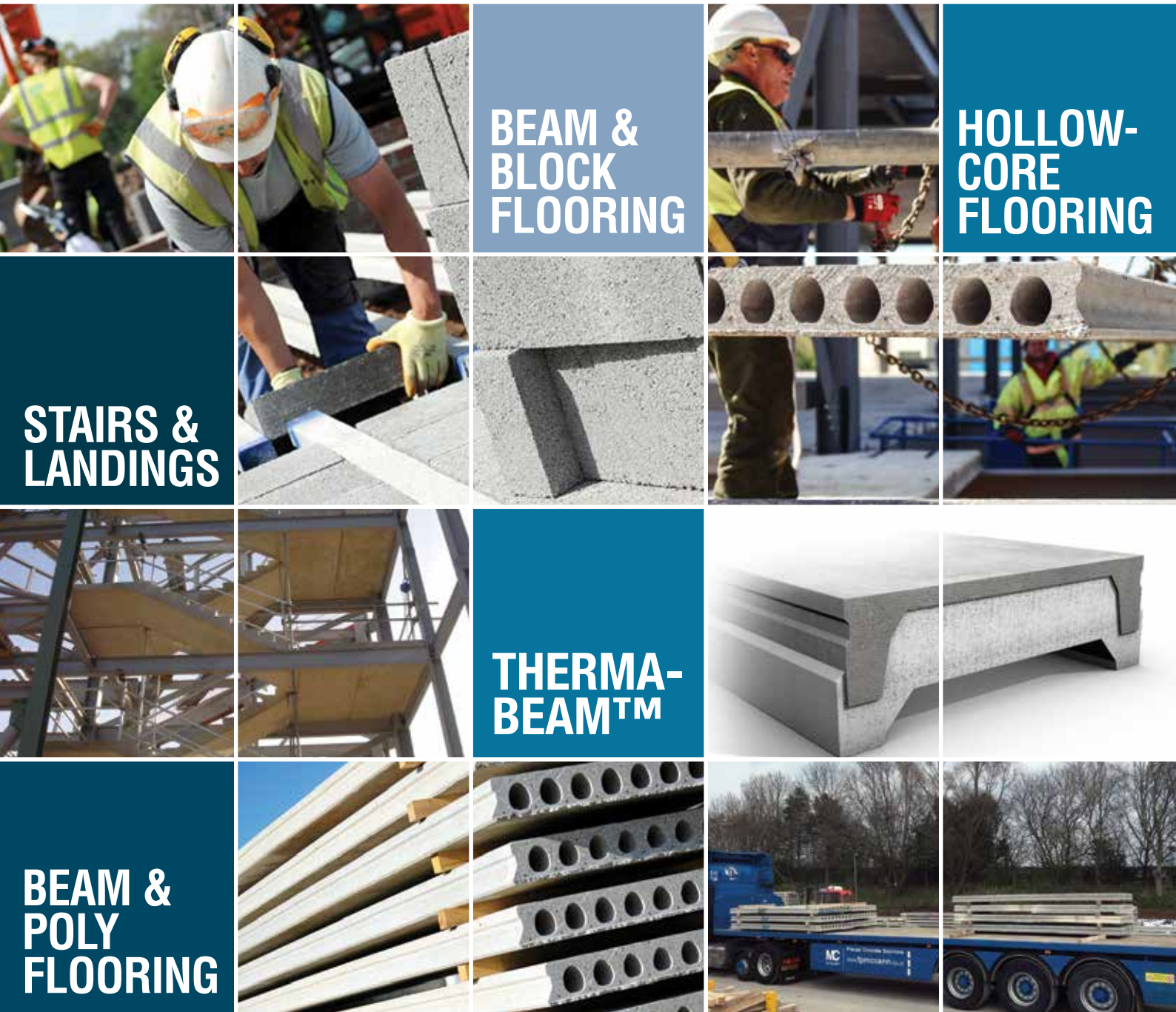


THINKING PRECAST?
THINK FP MCCANN



PRECAST FLOORING SOLUTIONS

v.4.1



BEAM &
BLOCK
FLOORING

HOLLOW-
CORE
FLOORING

STAIRS &
LANDINGS

THERMA-
BEAM™

BEAM &
POLY
FLOORING



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 LEVELLERS | 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.

FP McCann is one of the UK's leading manufacturers of high quality precast concrete products. A family run business with over 60 years' experience, we offer an extensive range of flooring solutions including beam and block/poly flooring, hollowcore flooring, stairs and landings to the industrial, commercial and domestic markets.

Modern manufacturing facilities at Weston Underwood, Derbyshire and Uddingston, Lanarkshire and an in-house design team ensures we have the knowledge, experience and the manufacturing capacity to meet our customers' requirements.

FP McCann will deliver to locations throughout the UK and our sales and technical teams are on hand to discuss your requirements. All our products are manufactured in accordance with relevant British and

European standards and we are quality assured to ISO 9001 and OHSAS 18001 Health and Safety Management System.

Whether you require a small 60m² plot or a 10,000m² floor, we have the slabs and the capacity to suit your needs. We work with everyone from multinational construction companies, architects, consultants and engineers to self-employed builders and we will always aim to build a solid working relationship with our client base.

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WHY CHOOSE PRECAST CONCRETE FLOORING SYSTEMS?

- Products designed in accordance with BS EN 1992-1-1
- Higher strength, durability and longer working life than other flooring systems
- Fast and efficient to design, estimate, install and deliver
- More cost-effective than other forms of flooring systems
- Maintenance-free
- Fire resistant – minimum one hour
- Thermal insulation, reducing the need for air-conditioning
- Impressive design flexibility
- Factory-controlled, high-quality products
- Superior acoustic performance
- Unaffected by damp, rot and vermin
- High load capacity – can support heavy loads
- Once laid, provides an immediate working platform for follow-on trades

WESTON UNDERWOOD FACILITY





- Former Tarmac Topfloor facility, acquired in 2013
- £4.65M capital expenditure invested in upgrading the facility since January 2014
- Large production capacity incorporating 19 no. x 100m manufacturing lines
- All products are CE marked
- Extensive 45 acre site allows for high storage capacity
- T beam, hollowcore and stairs/landings manufactured on site
- Centrally located, Derbyshire based manufacturing plant allows for easy access to all parts of the country
- High quality extruded T beam and hollowcore allowing universal manufacture across all lines
- Highly experienced in-house design team
- Extensive range of delivery vehicles including artics, rear steer trailers and rigids
- Our highly experienced installation team adhere to the British Precast Flooring Federation Code of Practice for the Safe Installation of Precast Concrete Flooring and Associated Components

UDDINGSTON FACILITY

- Modern precast concrete manufacturing facility located in Glasgow
- Adjacent to main motorway network, our reliable transport fleet are able to service our customers' needs throughout Scotland and North England
- Long-line prestressed concrete production capacity of 1100m² per day
- Bespoke concrete production capability with reinforcement and carpentry facility
- ISO 9001, ISO 14001, OHSAS 18001 and factory production control (CE)
- Highly experienced design, planning, production and installation teams delivering exceptional customer service





HOLLOWCORE FACILITY



REINFORCEMENT PREPARATION FACILITY

BEAM AND CONCRETE BLOCK FLOORING



The traditional beam and block flooring system involves laying precast, prestressed concrete beams across or between walls which are then infilled with concrete blocks. FP McCann manufactures 150mm deep floor beams, which come in two widths – 110mm and 168mm, and spans of up to 7 metres can be achieved, depending on loading conditions.

This dry construction method can be used to produce high quality economic ground and upper floors in residential and other building types.

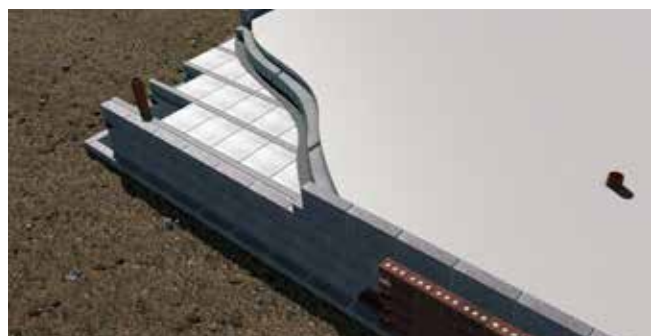
Our quotations will stipulate the number and type of blocks required to complete the floor. Beams are available on a supply only or a supply and fix basis.

Did you know that 75% of ground floors now utilise beam and block of some form? This could either be with a concrete block or a polystyrene panel.

KEY BENEFITS

- Quotations returned within 48 hours
- Concrete block and poly panel solutions available
- Lead-in times of 3-10 working days from receipt of order

To find out more about your local beam and block flooring stockists, please contact our Weston Underwood office on 01335 361269. We cater for all types of projects, ranging from extensions to large housing sites.



BEAM & POLYSTYRENE PANEL FLOORING

FP McCann offers a choice of two energy efficient beam and polystyrene panel systems, outlined below.

TOP SHEET SYSTEM

Our top sheet flooring system incorporates a polystyrene panel which sits within the depth of the floor beam, as well as including an over board top sheet to sit on top of the floor. U-values of 0.11 W/m²K or better can be achieved with our top sheet system. This system is easier to install than the undercloaking system, creates very minimal waste and has been tested to allow block partitions to be built off the floor.

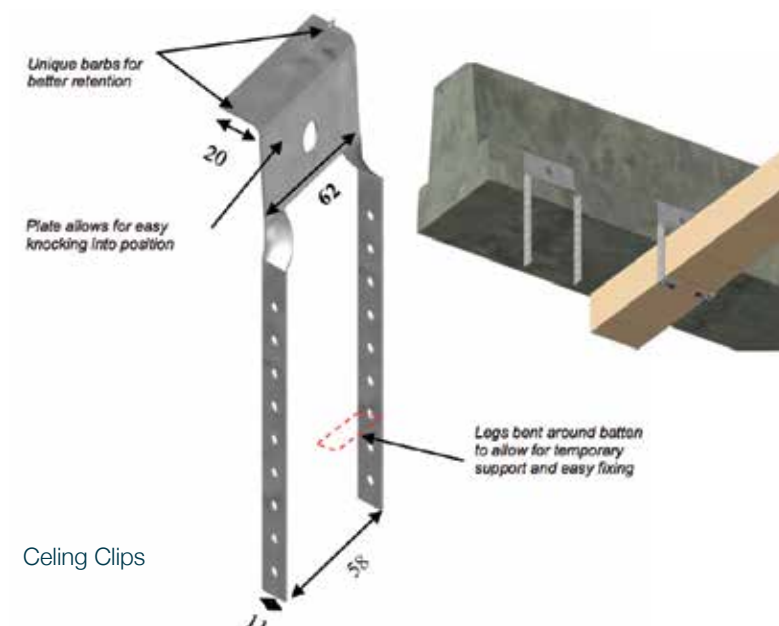
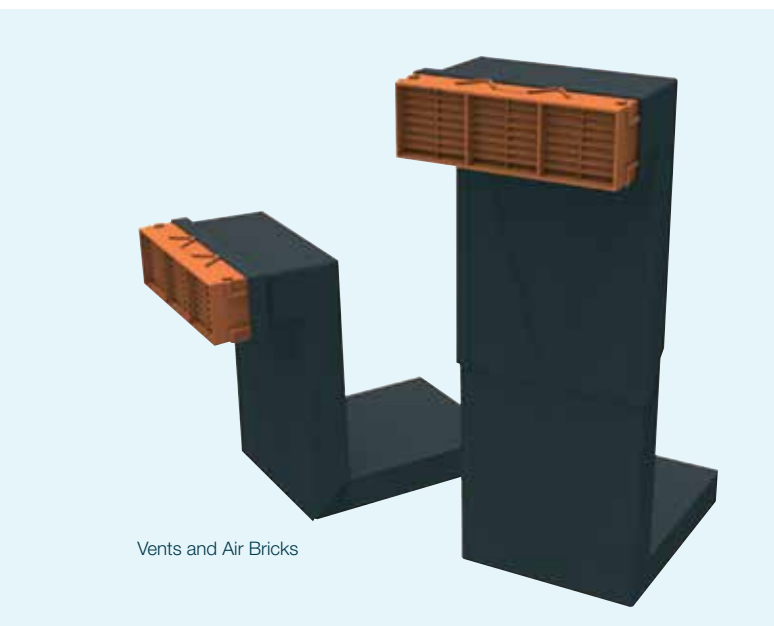
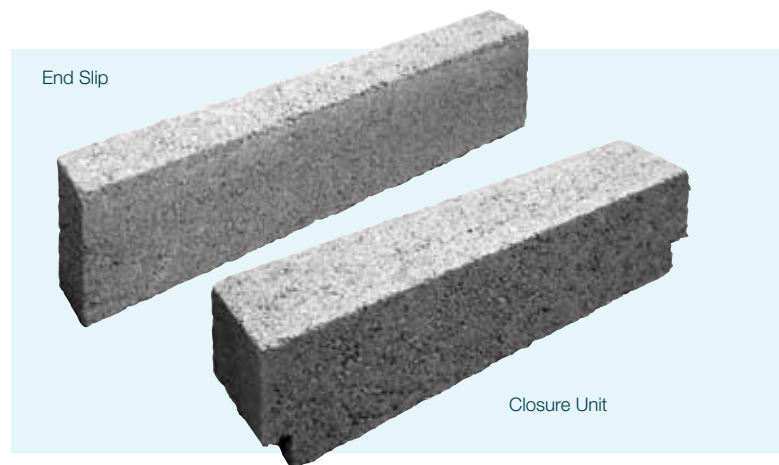
ANCILLARIES

Alongside our beam and block flooring solutions, we offer the relevant ancillary products such as end slips, closure units, ceiling clips, vents and air bricks. These extras will be detailed on our quotation and shown as either an extra-over or an inclusion.



UNDERCLOAKING SYSTEM

We also supply an undercloaking system which incorporates one panel that fits within the floor beam depth, as well as falling beneath the level of the beam to allow for complete thermal coverage. U-values from 0.08 W/m²K or better can be achieved utilising the undercloaking system. This system has been around over 10 years now and is well known by the majority of installers. It offers a wider range in U-values and only requires 'one fix' when it comes to infilling with polystyrene as no top sheet is required.



BEAM & BLOCK ADDITIONAL SERVICES

SUPPLY & FIX

As well as offering products on a supply only basis, we also offer a supply and install service. Any contract undertaken on a supply and fix basis will include labour and plant, as necessary.

TRANSPORT

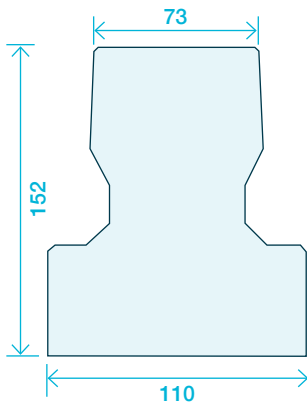
We have a range of delivery vehicles available including articulated vehicles, rear wheel steer trailers or rigid loads. Please contact us for further details.

MERCHANTS

Beams are readily available for stock and can be supplied in standard lengths. Blocks are available on a supply and fix basis only. For further information on this, please contact us.

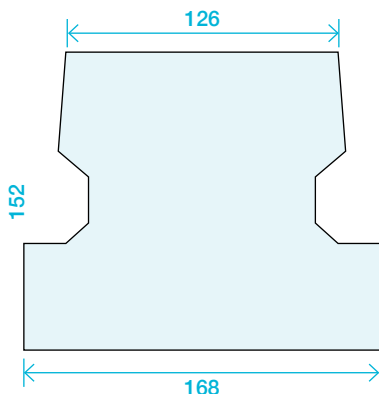


*150MM DEEP T BEAM



Span Load Table - 150mm Deep T Beam		Finishes = 1.5kN/m ²					
		Superimposed load in kN/m ²					
Floor case (based on 1400kg/m ³ block density)	Floor self weight kN/m ²	1.5	2	2.5	3	4	5
150 DEEP T BEAM			Maximum clear span (m)				
Single beam - full block	1.78	4.30	4.10	3.90	3.74	3.46	3.24
Single beam - full block/narrow block, alternate	1.88	4.82	4.58	4.37	4.20	3.90	3.65
Single beam - narrow block	2.07	5.57	5.31	5.08	4.88	4.34	4.26

150MM DEEP WIDE BEAM



Span Load Table - 150mm Deep Wide Beam		Finishes = 1.5kN/m ²					
		Superimposed load in kN/m ²					
Floor case (based on 1400kg/m ³ block density)	Floor self weight kN/m ²	1.5	2	2.5	3	4	5
150 DEEP WIDE BEAM			Maximum clear span (m)				
Single beam - full block	1.96	4.75	4.67	4.56	4.37	4.07	3.81
Single beam - full block/narrow block, alternate	2.10	5.07	4.99	4.90	4.80	4.51	4.24
Single beam - narrow block	2.33	5.48	5.40	5.30	5.25	5.10	4.83

* We also offer a 225 deep T beam, details available upon request.

THERMABEAM™

THE INNOVATIVE ALTERNATIVE TO
BEAM AND BLOCK FLOORING

WHAT IS THERMABEAM™?

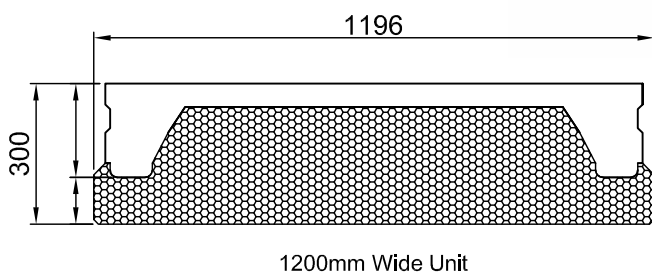
Thermabeam™ is an insulated precast flooring system that combines both high performance expanded polystyrene (EPS) insulation and reinforced concrete, forming a continuous layer of insulation across the whole floor. The structural concrete is cast onto the insulation, eliminating air gaps, thereby minimising heat loss.

Thermabeam™ units are available in a standard depth of 300mm, each with a choice of two insulation types - poly or platinum poly. All Thermabeam™ units are grouted on-site using C25/30 sand cement mortar.

Thermabeam unit	Perimeter/ Area Ratio	U-Value (W/m²K)
300mm	0.6	*0.14W/m²K

* Figures based on the Platinum Poly Insulation

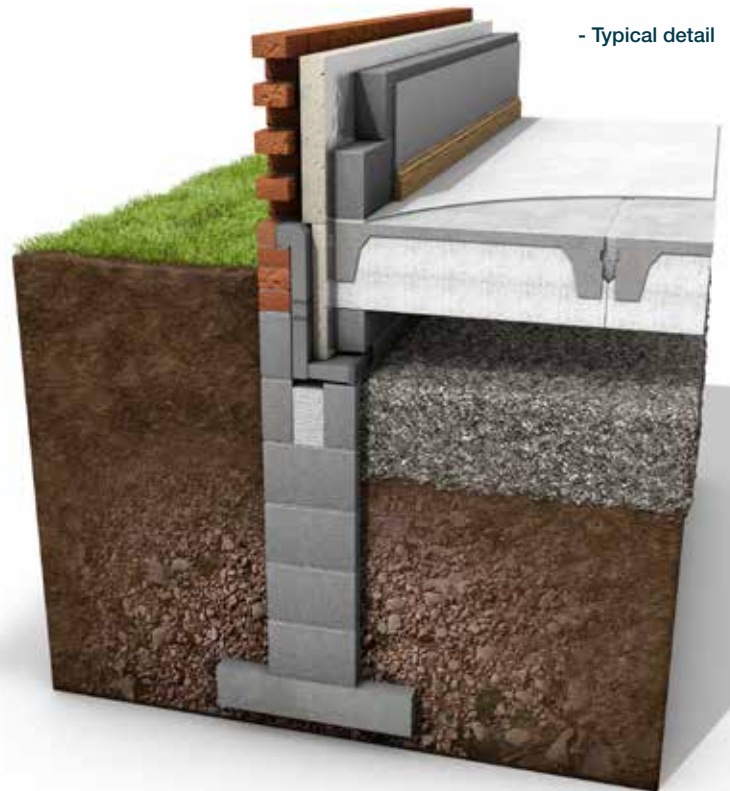
300mm Thermabeam



APPLICATIONS

Residential ground floors.

As well as offering excellent insulating properties, and a significant reduction in cold bridging, the Thermabeam™ system helps to reduce CO₂ emissions by decreasing the amount of non-renewable energy required to heat the building.



- Typical detail

BENEFITS

- Low on-site costs and space required since units are manufactured off-site
- Fast installation, enabling a safe platform for follow-on trades within a few hours
- Excellent thermal performance due to its insulating properties. A reduction in cold bridging is achieved, resulting in better Psi (ψ) values
- U-Values as low as 0.14W/m² K, based on a P/A ratio of 0.6 can be achieved
- Helps building to achieve a higher energy-efficiency rating
- Reduced safety issues – reduced on-site working
- High quality units are designed in accordance with relevant BS EN standards: BS EN 1992-1-1:2004 (Eurocode 2: Design of concrete structures) and BS EN 13224:2001 (Precast Concrete Products – Ribbed Floor Elements)
- Low carbon footprint – since less energy is required to heat building
- Spans up to 6.5m (depending on load)



HOLLOWCORE FLOORING



KEY 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 preattached to the soffit
- Prestressed design with inherent precamber (generally span/ 300)
- 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



HOLLOWCORE LOAD/SPAN TABLE

Spans indicated opposite allow for characteristic service load (live load kN/m²) + unit self WT + 1.5kN/m² for floor finishes.

Unit Depth (mm)	Self Weight (kN/m ²)	Fire Rating (hrs)	Characteristic Service Load kN/m ²									
			0.75	1.5	2.0	2.5	3.0	4.0	5.0	7.5	10.5	15.0
150	2.36	1	7.50	7.50	7.50	7.50	7.50	7.10	6.60	5.80	5.20	4.50
150H	3.02	1	7.50	7.50	7.50	7.50	7.40	6.90	6.40	5.60	5.10	4.40
200	2.98	*1	10.00	9.90	9.70	9.20	9.00	8.40	7.90	7.00	6.30	5.40
250	3.62	*1	12.50	11.70	11.30	10.90	10.50	9.80	9.30	8.20	7.50	6.40
260	3.47	*1	13.00	12.50	12.00	11.50	11.00	10.50	10.00	8.50	8.00	7.00
300	3.99	2	14.60	14.30	14.10	13.60	13.30	12.50	11.90	10.70	9.70	7.90
350	4.53	2	16.00	15.00	14.90	14.70	14.50	14.20	13.20	12.00	10.80	9.50
400	5.15	2	17.00	17.00	17.00	16.30	15.70	15.10	14.40	13.10	12.10	10.50
450	5.46	2	17.00	17.00	17.00	17.00	16.50	16.20	15.20	14.00	13.00	11.30

NOTE:

Tables are given as a guide only. When using maximum spans, consideration to the effect of camber/ deflection on finishes/ internal partitions is advised. Reinforcement patterns will vary, dependent on the spans/ loads specified.

Tables do not consider reduced capacities for potential service hole requirements or additional loads to those stated above. For alternative load/ span combinations, including service hole requirements or composite designs, please consult the FP McCann design office.

* 2hr available. Please consult the FP McCann's design office for further details.

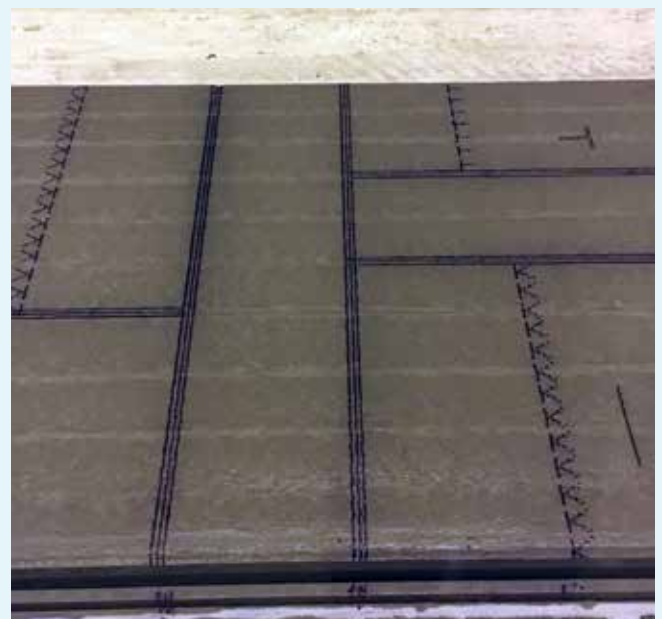
SOLID COMPOSITE PLANK LOAD/ SPAN TABLE

Unit Depth & Concrete Topping (mm)	Self Weight (kN/m ²)	Fire Rating (hrs)	Propped Y/N	Characteristic Service Load Kn/m ²									
				0.75	1.50	2.00	2.50	3.00	4.00	5.00	10.00	15.00	
75 + 75	3.57	1	N	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.50
75 + 100	4.24	1	N	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.65
100 + 50	3.55	*1	N	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.10	3.68
100 + 100	4.75	*1	N	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.30	3.90
75 + 75	3.57	1	Y	7.50	7.00	6.80	6.50	6.35	5.95	5.60	4.56	3.92	
75 + 100	4.24	1	Y	8.32	7.78	7.52	7.25	7.02	6.62	6.29	5.12	4.05	
100 + 50	3.55	*1	Y	7.80	7.27	7.00	6.75	6.50	6.10	5.60	4.10	3.65	
100 + 100	4.75	*1	Y	9.10	8.50	8.22	8.08	7.82	7.33	7.05	5.80	4.00	



INK JET PLOTTER

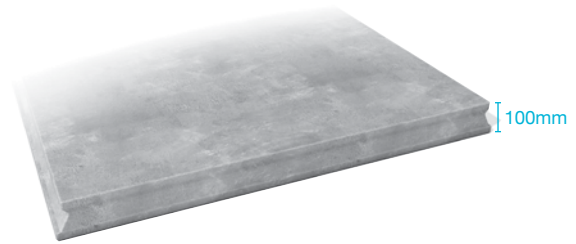
The ink jet plotter brings quality, detailing and dimensional benefits to our hollowcore flooring product. During the manufacturing process, the ink jet accurately details the exact dimensions from the designers AutoCAD drawings onto the top surface of the hollowcore. This ensures that the lengths and any required features are formed exactly as designed. The unique identification of each unit, together with the weight and traceability information, is also printed onto the flooring units.



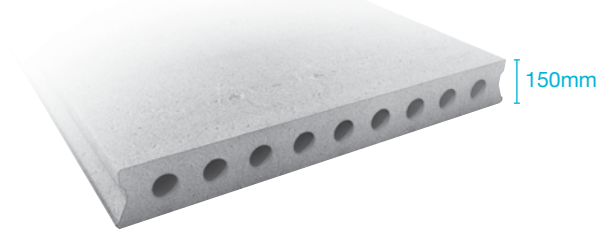
AVAILABLE SLAB DEPTHS

A wide range of hollowcore slab depths are available to suit your requirements. Slabs can be used as a finished soffit. Good flexibility on cut width units reduces in-situ strips. Allows for full precast make up.

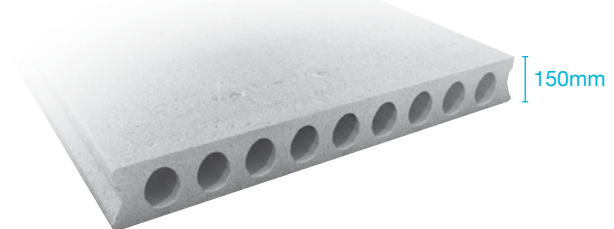
100MM DEEP (60/75/160 ALSO AVAILABLE)



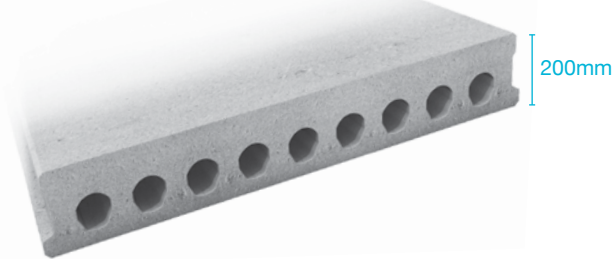
150MM H DEEP



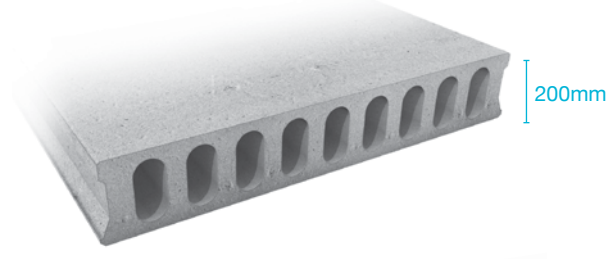
150MM DEEP



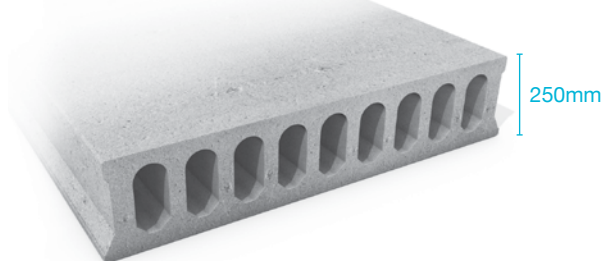
200MM H DEEP



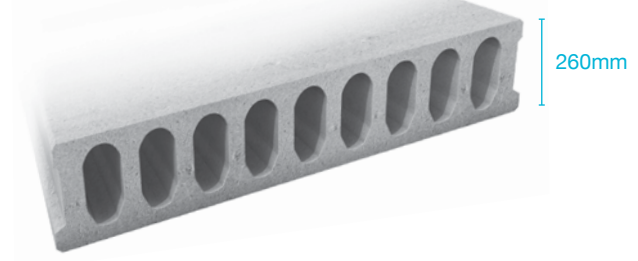
200MM DEEP



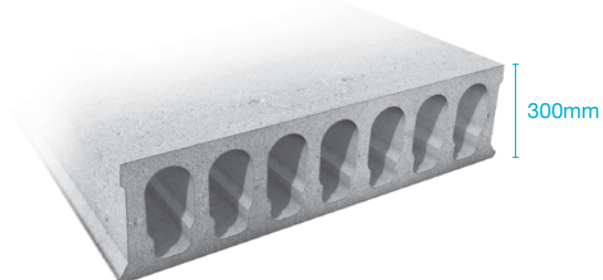
250MM DEEP



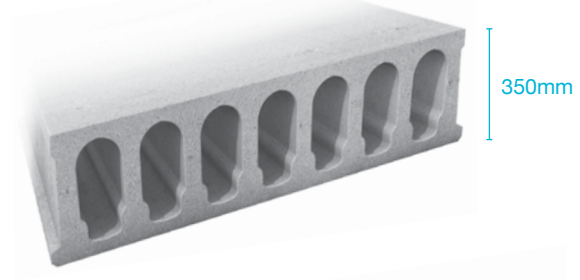
260MM DEEP



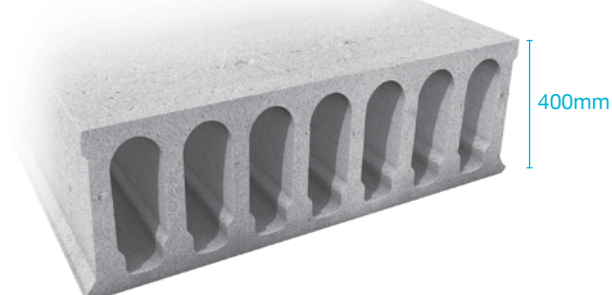
300MM DEEP



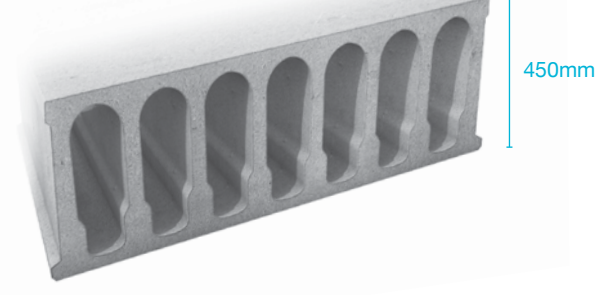
350MM DEEP



400MM DEEP



450MM DEEP



STAIRS AND LANDINGS



KEY BENEFITS

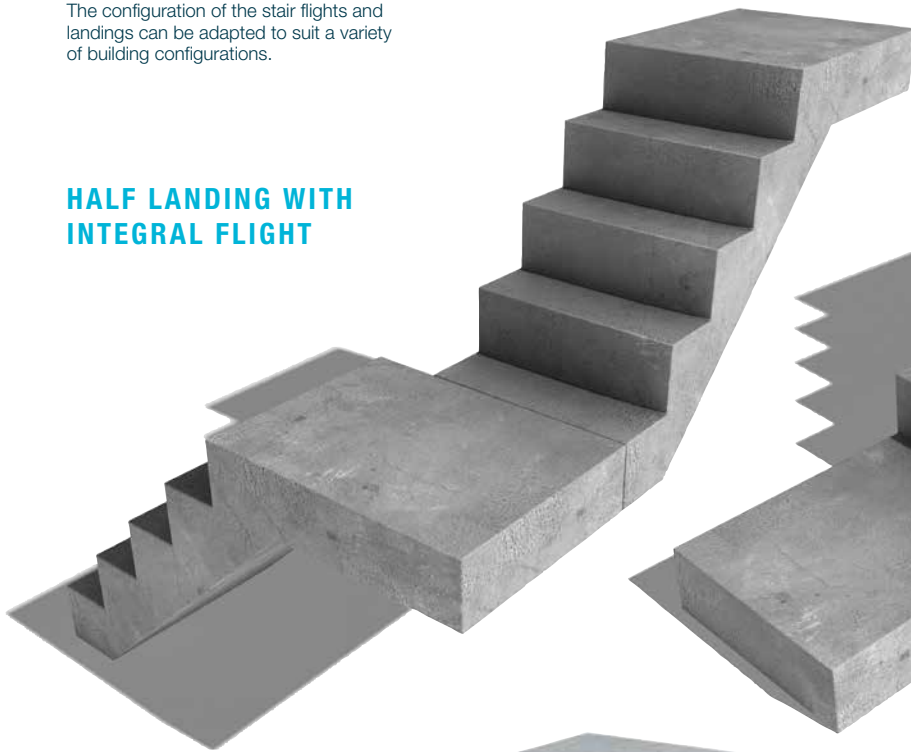
- Self-compacting concrete provides a high quality finish
- Cast on edge or flat, depending on finish requirements
- A range of casting options are available for integral or separate landings
- Quick installation
- Immediate access
- High load capacity

TYPICAL STAIRCASE CONFIGURATIONS

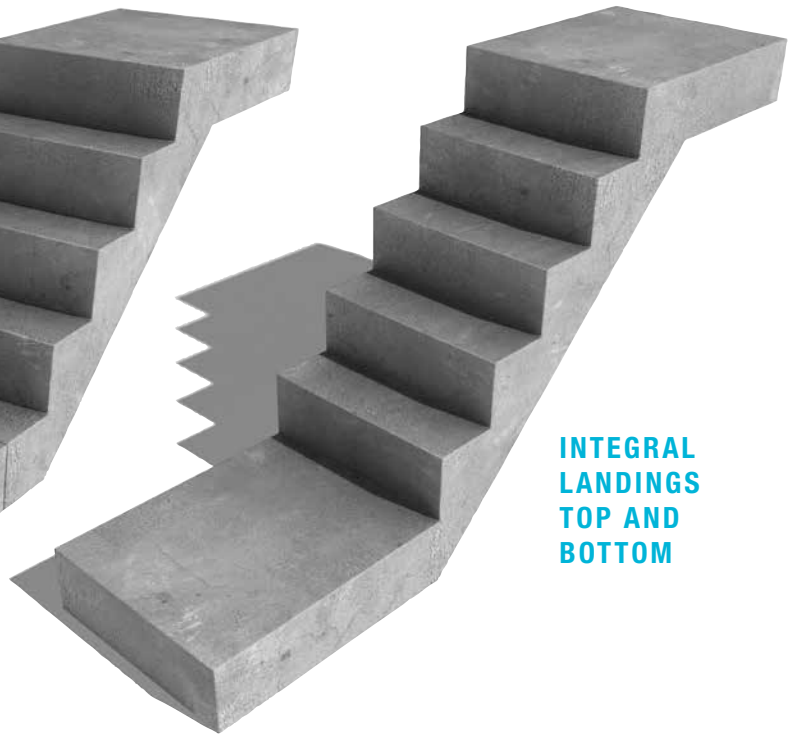


The configuration of the stair flights and landings can be adapted to suit a variety of building configurations.

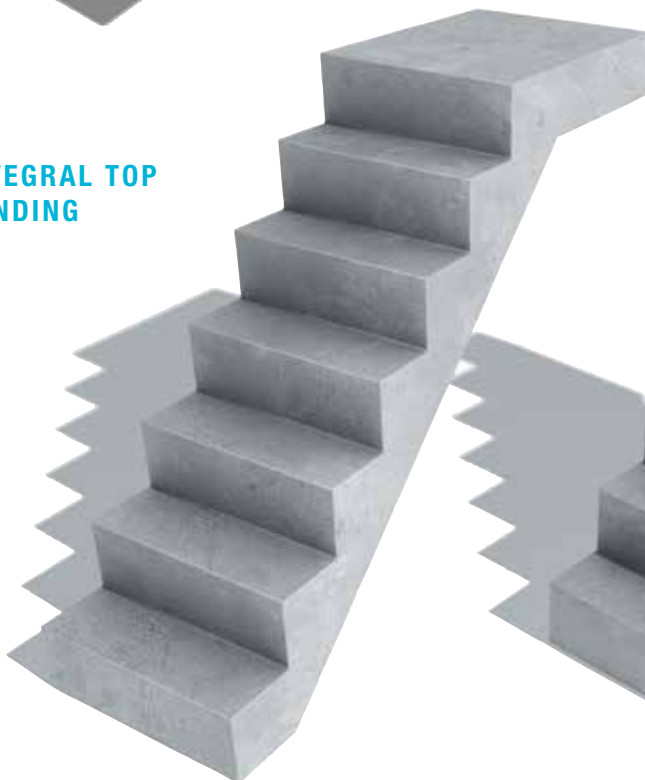
HALF LANDING WITH INTEGRAL FLIGHT



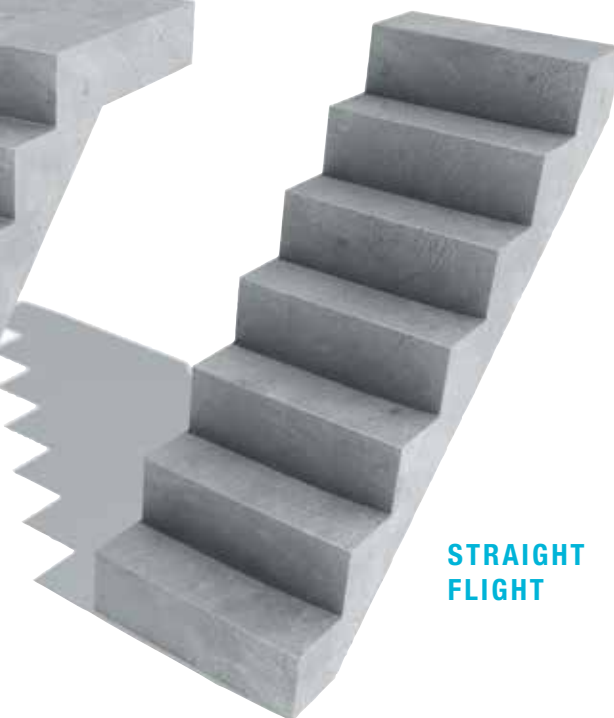
INTEGRAL LANDINGS TOP AND BOTTOM



INTEGRAL TOP LANDING



STRAIGHT FLIGHT



CASE STUDIES

Site:
STEM Facility, Loughborough University

Contractor:
Henry Brothers Ltd.

Client:
Loughborough University

Products Supplied:
Precast hollowcore slabs, T-Beam and stair units



Site:
Birmingham City University, Eastside

Contractor:
Willmott Dixon

Client:
Birmingham City University

Products Supplied:
Precast concrete hollowcore flooring planks & precast concrete stairs





Site:
Glasgow Fort Multi-Storey Car Park

Main Contractor:
McLaughlin & Harvey

Sub Contractor:
BHC steel erectors

Client:
British Land

Products supplied:
Supply and fix - 9000m² of prestressed flooring.





Site:
The Quarters, Bracknell, Berkshire,

Contractor:
Redrow Homes

Products supplied:
Supply and Fix - 4400m² of 200mm deep Hollowcore and Precast Stairs to 2 large plots from 1st-4th floor.





**WESTON UNDERWOOD
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sales@fpmccann.co.uk

**UDDINGSTON
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Uddingston Glasgow
Lanarkshire
G71 6NE
T 01698 803300
sales@fpmccann.co.uk

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 LEVELLERS

Weston Underwood 01335 361269

DRAINAGE

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

FENCING

Cadeby 01455 290780

FILTER BED SYSTEMS

Wellesbourne 01789 336960

FLOORING

Weston Underwood 01335 361269 Uddingston 01698 803300

POWER & INFRASTRUCTURE

Littleport 01353 861416

RAIL

Littleport 01353 861416

SPECIALIST PRECAST

Littleport 01353 861416

STRUCTURAL PRECAST

Byley 01606 843500 Grantham 01476 562277

TANKS & CHAMBERS

Wellesbourne 01789 336960

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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