POUNDFIELD PRECAST
A PPG COMPANY

'INNOVATION in CONCRETE'

Beam and Block

Concrete flooring solutions

Beam & block flooring

Poundfield Precast flooring systems carry the CE Mark Accreditation British Standard EN 15037-1:2008 so you can be assured of receiving consistently high quality precast concrete products manufactured to meet with current construction and installation best practices.

Beam & Block suspended flooring systems are cost effective, easy to install and can be laid in all weathers. They can be used for both ground and upper floor levels in domestic and industrial buildings and only minimal levels of excavation are required.

Poundfield Precast Flooring Division specialises in the following sectors:

- Large Contract Sites
- Installations and Project Management
- Self-build support and technical consultations
- Extensions to domestic houses
- Full technical support to builders merchants
- Commercial and bespoke projects – from patios to railway platforms

Always in stock and cut to 25mm increments for quick delivery, our beams offer the perfect solution to your flooring needs.

What services do we offer?

- Full packages on projects where applicable and unrestricted
- Tailored designs to meet your requirements
- Both beam and block and EPS systems available at request
- U-values as low as 0.08W/m2K
- BBA approved and CE accredited
- Manufactured to 25mm increments
- A range of infill blocks – all blocks are transversed tested for flooring

Our beams

Our precast concrete beams are suitable for use in a number of building projects, from one off properties to multi-million-pound developments.

Poundfield beams are made from a precision steel mould using pre-stressed steel wires covered in a bespoke concrete design to give a high quality product, this process enables Poundfield to have a superior finish to other suppliers known as Wet-Cast finish or A-Grade.

Wet-cast beams are more operative friendly than extruded beams. With the smooth wet-cast finish, no further work is required on the product.

Extruded beams are commonly left with further maintenance required on the beams by means of removing snots and burrs. This maintenance needs to be done prior to block placing otherwise blocks sit proud/uneven into the floor.

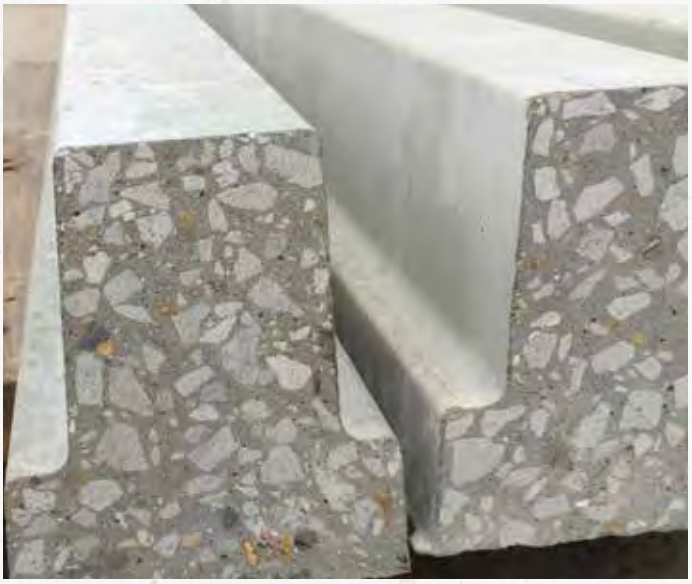
One of the key things to get confirmed early is the block specification for sites. These can often be found on the Architects/Engineer plans and is vital for the pricing element of the project and most importantly the design of the floors.

Each block has it's own self-weight and guide to where they can and cannot be used.

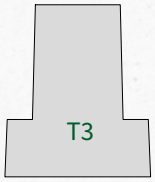
A few examples of universal infill blocks - CEMEX 1400, Lignacite GP, Celcon 3.5N Standard. When a build is getting to digging stage on foundations, the question of blocks must be asked.

For higher loadings, the **W1** and **D1** beams can span even further and help to reduce foundations costs.

To select the correct beams for your project, speak to a member of our sales team.



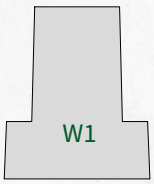
Residential beams

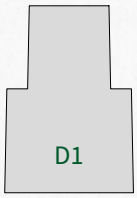


	SINGLE 488	ALTERNATE 376	NARROW 263	SINGLE 522	ALTERNATE 410	NARROW 297
1.5kN/m²	4259	4800	4800	4561	5091	5800
1.5kN/m² with 0.5kN/m²	4031	4560	4800	4323	4832	5570
1.5kN/m² with 1.0kN/m²	3835	4343	4800	4117	4608	5322
2.5kN/m² - Garage	3191	3435	3754	3610	3877	4223
Height	150mm			150mm		
Width	92mm			127mm		
Weight	24kg per metre			34kg per metre		

Table based on finishes of 1.80kN/m² and 1450kg/m³ medium dense blocks

Commercial beams



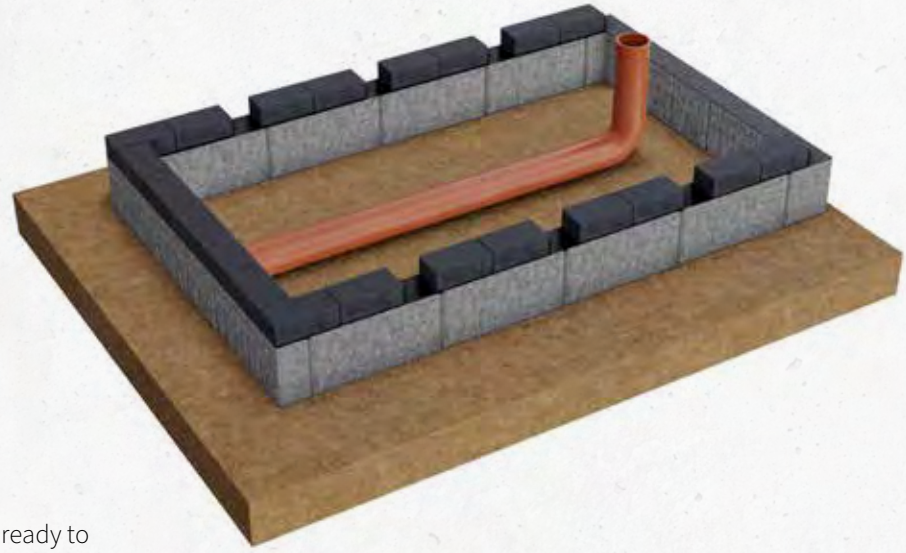


	SINGLE 540	ALTERNATE 428	NARROW 315	SINGLE 540	ALTERNATE 428	NARROW 315
1.5kN/m²	5800	5800	5800	7226	7300	7300
1.5kN/m² with 0.5kN/m²	5557	5800	5800	6893	7300	7300
1.5kN/m² with 1.0kN/m²	5298	5800	5800	6602	7263	7300
2.5kN/m² - Garage	5001	5434	5800	6263	6907	7300
Height	150mm			225mm		
Width	155mm			155mm		
Weight	44kg per metre			67kg per metre		

Table based on finishes of 1.80kN/m² and 1450kg/m³ medium dense blocks

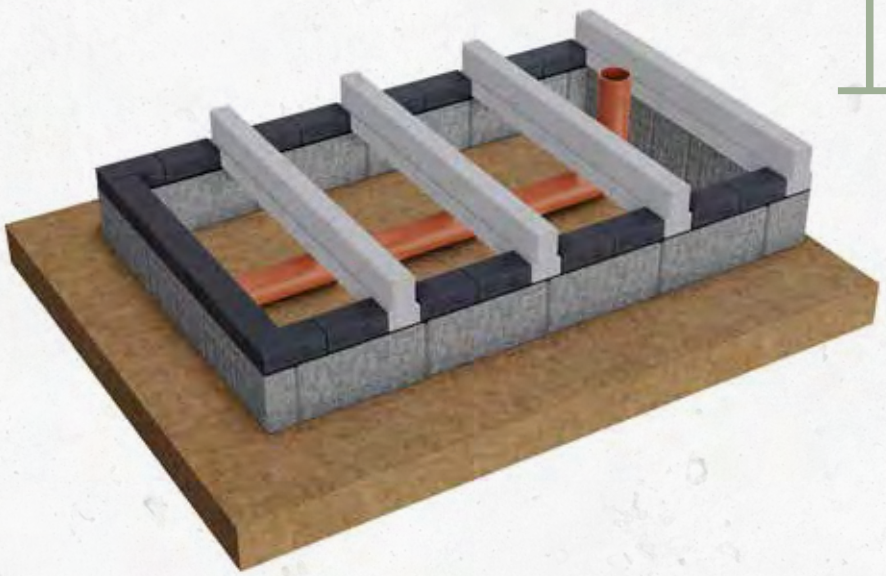
Figures are clear span – including 200 mm bearing (100 mm either end)

Installation guide



Before installing the Poundfield beam system the following checks must be carried out:

- Over-site has been cleared of vegetation and relevant weed-killer treatments have been carried out
- Sufficient void from ground to underside of beams has been checked and confirmed (Architect or Local Building Control will confirm this based on ground conditions – standard minimum of 150mm+)
- Confirmation on whether a DPM is required in cases where ground conditions are poor
- DPC has been laid over the internal substructure ready to receive the beams
- Drainage is installed in its required positioning before beams are laid and all services are piped out or marked for spacing requirements
- Ensure the adequate ventilation requirements have been met and lintel sets are cured and ready for laying on-top of



1

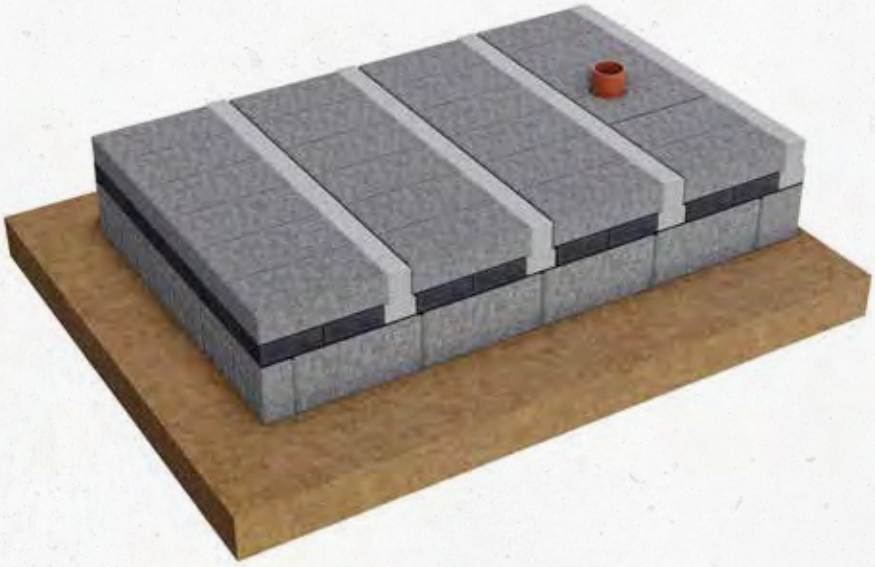
- Ensure you have the correct lifting equipment if using mechanical plant, lifting points should be within 300mm of each end of the beam
- If using manual labour, please ensure that the correct PPE is used as to avoid injury or harm to hands
- 100mm nominal bearing is required on the beams at each end based on brickwork substructures
- Identify and adhere to the recommended start points for your project, these will be indicated by the Beam office if you are unsure
- Ensure that all doubles and triples are placed where indicated on the floor plans
- Use infill blocks as spacers at either end of the beams, the remaining infill blocks can then be dropped into place as required
- Trim any blocks as required around protruding drainage pipes & services
- Cut blocks where required and prep substructure walls for slipbricks

These guidelines are recommended to be followed to ensure a smooth installation of your flooring system.

A risk assessment & method statement of your site must be carried out by a competent person prior to your install. If you are unsure at any stage of your install please contact our sales office.

2

Once the beams and infill blocks are installed, the 'Wet Works' are now required to complete your floor. To do this, follow these simple steps:

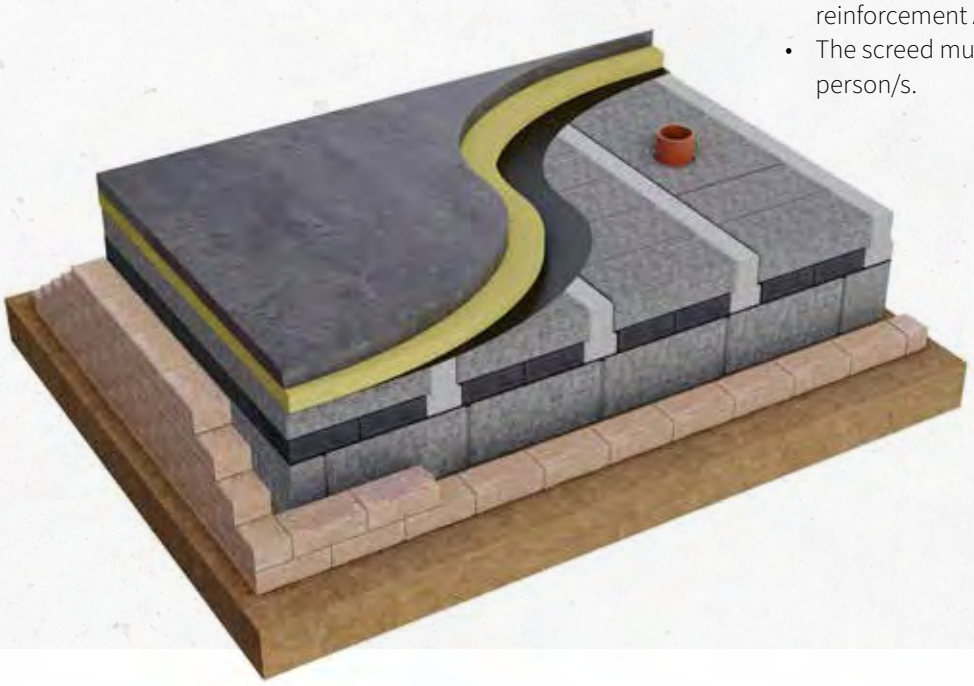


- Mix up a standard brick mortar for bedding the slip bricks down
- Slipbrick locations can be found at either ends of the beams in the floor and along a block strip onto a substructure wall. These will be indicated on your design
- Standard practice is 2 no slip-bricks per 440mm spacing (Maximum block) and 1no slip-brick per 215mm spacing (Narrow block)
- Please ensure that the relevant cross-ventilation airflow between internal bays is met to conform to Building Regulations
- Once the floor has been completed, wet heavily with a hose ready for grouting
- Mix up a grout mix of 4:1 sharp sand – cement and brush over the floor and into the joints with a stiff brush
- Mix up a concrete mix using a sufficient aggregate to a C30 standard and deposit within the voids between any doubles or triple beams. This is to create a unified bond between the beams.
- Do not grout Garage Floors. These must remain un-grouted due to Composite Action.

3

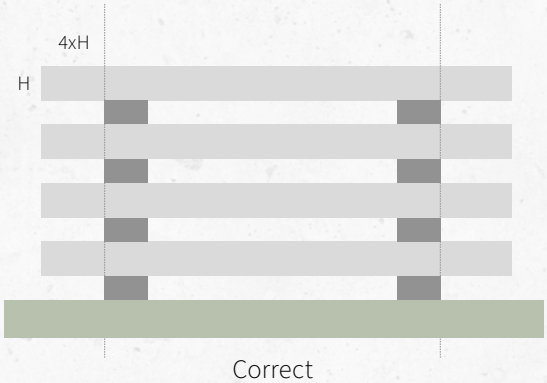
Once the Wet Works have been completed and your floor has set on the concreting. Prepare the floor for screeding.

- Brush off any excessive detritus from the floor to ensure a smooth level surface
- A DPM may be required – please confirm with Architect specification / Local Building Control for affirmation if required
- Install the specified insulation product, ensuring the thickness and grade matches what has been specified
- Confirm with Architect/Engineer for your project on the screed type/reinforcement required – Garages must have a reinforced screed often utilising a mesh reinforcement A142 or A98
- The screed must then be installed by a competent person/s.

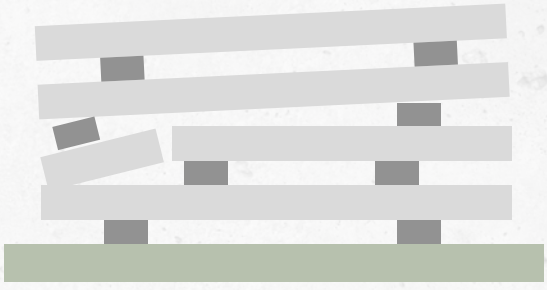


Stacking and lifting guide

- The flooring beams must be stacked the right way up, with timber bearers placed just in from the ends, (maximum four times unit depth, “H”) vertically above one another.
- Care should be taken in the stacking and general handling of the units, taking into account the weight of the products, the stability of the stacks and the load carrying capacity of the ground.
- Timber bearers must be lined vertically through the stack at a maximum 250mm from the end of the units.
- In addition to the precautions to be observed when stacking, e.g. the position of bearers, care must be taken to ensure that the ground or surface on which the components are to be stacked is suitable.
- The ground must be firm and level, and wherever possible stacking of components should be on firm hard-core or oversite concrete.
- The height to which components can be safely stacked on site will be greatly influenced by the condition of the ground on which they bear.
- Another prime consideration should be the height to which a man can reach to pass lifting chains or slings around the components.
- Similar length units should be stacked together.



Correct



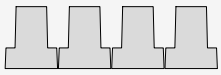
Incorrect

Safety warning

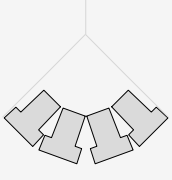
Protective clothing should be worn.
T-beams compact in on themselves when lifted,
KEEP HANDS CLEAR TO AVOID INJURY.

Ensure good manual handling techniques.

- Beam products are generally delivered on articulated vehicles therefore appropriate hardstanding and access is essential.
- The Contractor must inspect the floor units at the time of delivery on supply only contracts and sign the delivery ticket, as no liability for damage can be accepted at a later date.
- Ensure before lifting that the crane is sited on firm level ground and there is sufficient clear working area for turning and slewing with no overhead obstructions.



Before lifting



During lifting

PEPSFLOORING

Poundfield EPS Flooring

Expanded polystyrene (EPS) is proving to be an ideal insulating material in the construction of floors using prestressed concrete beams. PEPS is a lightweight, rigid, plastic foam insulation produced from solid beads of polystyrene. It is made up of 98% air and 2% plastic.

What are the benefits?

- Quick and easy to install
- Cost effective against other block and beam systems
- Can be laid in wet conditions – PEPS is moisture and rot proof
- Reduced wastage as standard sized panels are used for maximum efficiency
- Excellent thermal properties resulting in low thermal conductivity
- A+ green guide rating
- Exceeds the thermal requirements of part L of the building regulations without the need for additional insulation.
- Eliminates the problems associated with part C of the building regulations relating to site preparation and resistance to contaminants and moisture.
- BBA certified number 17/5431 product sheet 2
- PEPS acheiving 0.11 - 0.12 and lower u value 2025 Regs

As major manufacturers and suppliers of beam and block flooring Poundfield Precast has introduced PEPS (Poundfield EPS flooring) as a way for our customers to supply more environmentally-friendly solutions to help reduce heating costs by improving thermal insulation and saving wasted energy.

The use of PEPS in conjunction with pre-stressed concrete beams is a highly effective, thermally efficient way of achieving and exceeding the thermal requirements of part L of the building regulations without the need for additional insulation.

PEPS will maintain its performance throughout the lifetime of the building and is therefore a long-term and cost-effective way to reduce heating costs in a property. EPS has obtained an A+ green guide rating.

Poundfield PEPS system can be installed in conjunction with underfloor heating systems which are becoming increasingly popular.

Grades of PEPS available

PEPs are available in both white and grey in multiple grades (70/120/150) to achieve your required U-value target. The higher the number, the denser the PEPS, and the better the thermal conductivity. For full details please see the technical specifications below.

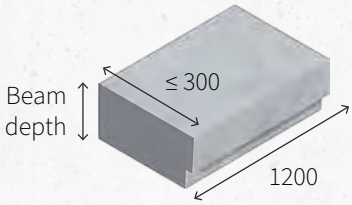
Difference between white and grey PEPS

The white is our standard option whilst the grey EPS contains tiny chemically modified particles that reflect heat radiation and gives the material its grey colour.

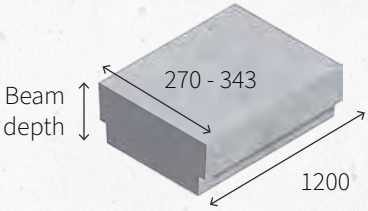
These infrared absorbers and reflectors lower the thermal conductivity of the material offering a thickness reduction of about 20% against standard white EPS.

Examples of standard dimensions of EPS infill panels:

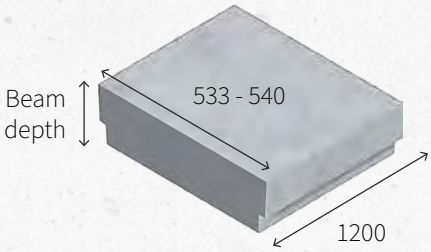
Starter Infill



Half Infill



Standard Infill



Topsheet Overlay
Length 1200

Perimeter strips
Length 1200

Inlay sheet
Length 1200

Frequently asked questions

Is EPS flooring more expensive than traditional block and beam and which is more cost effective?

Depending on the specification of the job, Poundfield's PEPS system can prove to be more cost effective than traditional beam and block. New planning conditions on floor U-values under Part L results in a reduction in overall floor values from 0.45W/m^{2}K to 0.25W/m^{2}K. We are able to provide full costings and advice on which system will be the optimal solution for your projects.

How do you store PEPS flooring?

The PEPS infill blocks are delivered on 5' x 4' pallets and are shrink wrapped. The PEPS infill blocks and top sheet can simply be stored using Herras fencing and weighed down using concrete blocks to prevent them being blown by wind.

Which beams from Poundfield will PEPS work with?

Our PEPS System is compatible with all of our range of beams (N1, T3, W1 and D1).

Does it get damaged by rain?

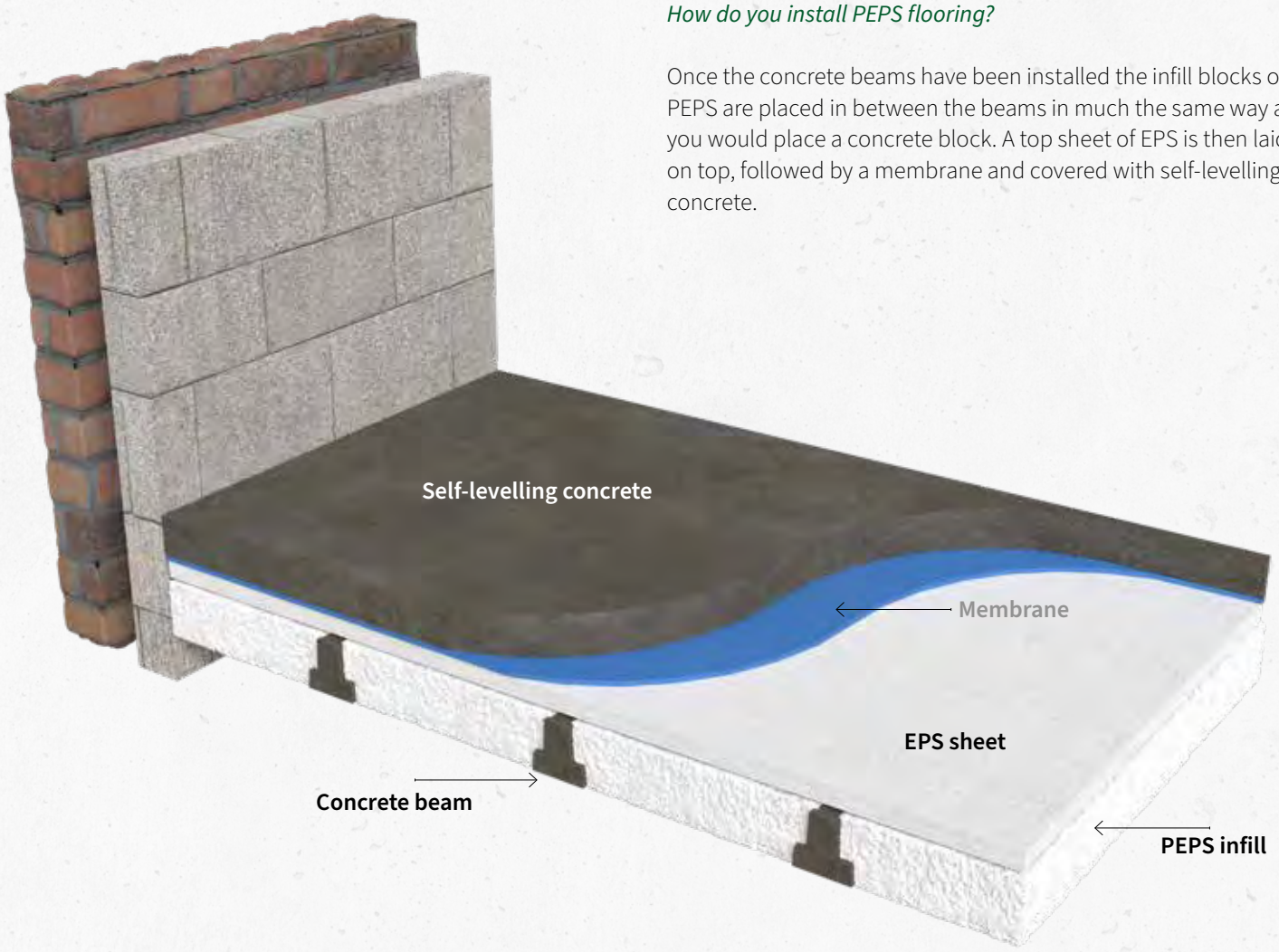
No. PEPS is waterproof and doesn't shrink or rot, therefore it can be laid in all weathers without any concerns.

Can you walk on PEPS flooring or will it damage the flooring?

The PEPS system can be walked on after installation within reason, however we do not recommend storing materials or heavy goods on them. Please ensure that your boots are clean before walking on the PEPS to avoid having to clean the blocks before laying the top sheet and membrane.

How do you install PEPS flooring?

Once the concrete beams have been installed the infill blocks of PEPS are placed in between the beams in much the same way as you would place a concrete block. A top sheet of EPS is then laid on top, followed by a membrane and covered with self-levelling concrete.



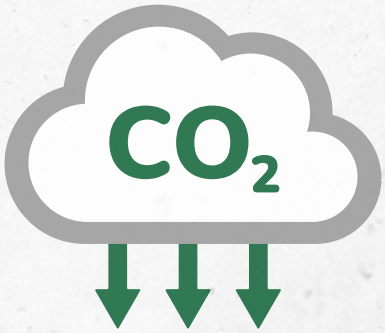
A zero carbon future

The necessity to limit global warming to no more than 1.5°C above pre-industrial levels has been well documented and publicised. The science could not be any clearer. The world has to reduce CO_2 emissions to as close to zero as possible by the middle of this century.

The UK Government has committed to reaching net zero by 2050 and every business, organisation and individual has a part to play in achieving this.

Concrete is the most used material on the planet and as a consequence is a significant contributor of CO_2. Up to 90% of greenhouse gas emissions associated with concrete are in the cement[1]. As a building material, concrete cannot be matched. But as the world's third highest source of man-made CO_2, greener options have become of even greater importance.

As a major precast concrete manufacturer we recognise the contribution we can make to help our customers lower their carbon footprint and this is now our major driver within the business.



[1] *Source: Low Carbon Concrete Group*

Lowering the carbon footprint of concrete

Concrete is made up of aggregates, water, cement and air. Of these four ingredients, aggregates make up the largest amount of volume and fortunately are low in embodied carbon.

However, cement has the highest embodied CO_2, and this is where the focus has been to find alternatives to OPC (Ordinary Portland Cement), to reduce the carbon footprint of this important building material.

Reducing our carbon footprint in construction can be achieved in various ways, whether that be in using cement-free options, by partial CEM 1 replacement or considering different reinforcement solutions.

Currently, within British standards there are a number of ways to reduce embodied carbon by reducing the percentage of clinker in a mix. The use of ground granulated blast-furnace slag (GGBS) for example, instead of clinker, can have a significant effect on lowering embodied carbon. CEM III/B contains up to 80% GGBS and has a 73% lower embodied carbon than Portland Cement (CEM I).

Introducing Greenbloc

2021 In 2021 we launched Greenbloc Ultra which was the UK's first cement free ultra low carbon dense carbon block, offering carbon savings of up to 77%.

2022 In 2022 41% of PPG (Precast Products Group) major infrastructure projects involved Greenbloc technology.

2023 We now offer three levels of Greenbloc. Standard, premium and ultra, offering carbon savings of up to 50%, 70% and 80% respectively.

FAQs

What are the advantages of Greenbloc?

Products within our Greenbloc range all offer carbon savings compared with using OPC (Ordinary Portland Cement).

How do you achieve the carbon saving?

CCP Greenbloc technology is based on reducing cement which is the key material in concrete that contributes the highest amount of carbon. We replace the cement with low and ultra-low carbon cement alternative materials that can be manipulated to perform in the same way as cement.

Do your blocks have the same u value?

Yes they do. Our low carbon Greenbloc blocks have the same performance, same cost and lower carbon footprint.

Do you have any independent results to verify its performance?

To verify our carbon reduction claims we have 3rd party verified EPD (Environment Product Declaration) to prove that our carbon reduction values and data are as specified and reported.

Do your blocks which feature the Greenbloc technology have the same fire resistance as a conventional block?

Yes they do. There is no difference. All Greenbloc products perform to the same specification, performance, quality and aesthetic characteristics as 100% cement versions.

Timeline of events from enquiry to delivery

Enquiry

Customer to send drawings across to Poundfield Precast along with covering letter of what is required.

Quotation

Poundfield Precast will produce a quotation for the customer detailing price, extras and advising of proposed lead times (this period includes time for drawings to be produced). If there is any ambiguity surrounding what is required then we will send back a marked up plan detailing required supports and span directions. Average time 2-3 days for a quote.

Order

If the customer is happy with the price and delivery period we will require a written instruction to proceed.

Drawings

Once an order is received we will produce fully detailed layout drawings to be sent back to the customer.

Approvals

Customer is to approve our layout drawings. Approvals required within 24 hours to adhere to lead times set out in quotation.

Delivery

Beams will be manufactured and delivered following approvals. Confirmation of exact delivery vehicle and dates will be confirmed at this point. During busy periods lead times may be extended.

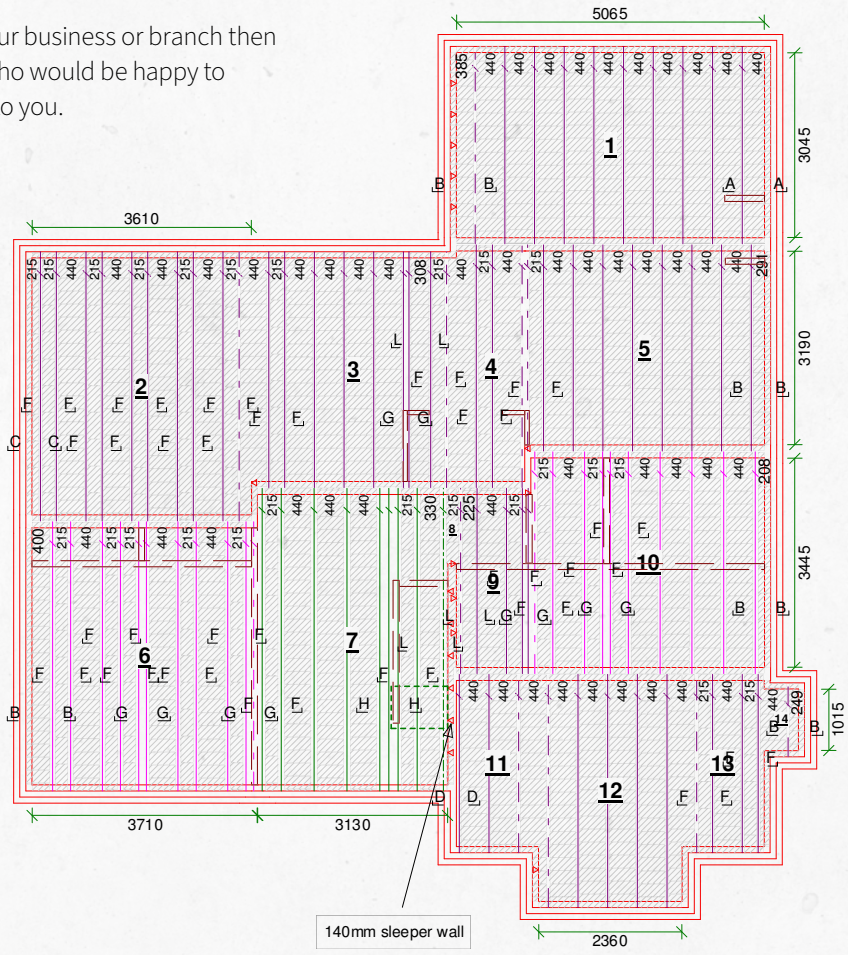
Supporting your business

If you would like some sales support for your business or branch then please speak to one of the flooring team who would be happy to organise some information to be sent out to you.

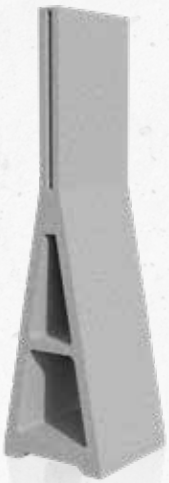
We can offer branded banners, bollard covers, flags, floor graphics and merchant counter packs with specification sheets for our beams and floor options.

We can also provide training at our factory site for key members of your team to fully understand Beam and Block flooring. Our comprehensive training session will discuss in detail our beam types, demonstrate a beam and block install to help understand the process of how the flooring is installed onto the site and a chance to tour our facility to see how the beams are cast and cut.

One of the benefits of being a stockist is that we will provide layout designs for all projects taken from yard or direct as a standard, along with full technical support.



Retaining walls range



ALFABLOC®

- Connect the blocks to create one solid wall
- Out performs the competition
- Easily transported
- Can be lifted without chains or shackles
- Fast and easy one-man installation
- Easily configured meaning you can change the layout in minutes

L-BLOC®

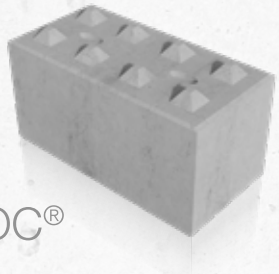
- Easy installation, with tongue and groove system.
- Pre-stressed and interlocking, to create robust wall.
- Use for grain walling, waste separation, bulk storage, recycling materials.
- Accommodates loading from either side of the wall. No reverse heel.

TAPERBLOC™

- Freestanding
- Ideal for grain walling, waste separation, bulk storage, recycling materials
- No protruding toe makes access to stored material easier
- Easy to manoeuvre and reconfigure to change structure

PRESTRESSED PANELS

- Lengths from 1m to 6.5m
- Thickness from 100 to 300mm
- Interlocking tongue and groove
- Cast in fixing points
- Can be used with steel frames
- No foundation required
- Easy to install



BETALOC®

- Ideal retaining wall system
- Rapid and flexible construction
- Lightweight
- Easy installation
- Immediately useable
- Expandable and moveable
- Permanent and temporary applications
- Landscaping, flood defences or site security barriers.

ALFASTOP®

- Protect your workforce and visitors from hazards on site.
- Instant site security from the moment of delivery
- Reconfigure or extend your fencing
- Temporary or permanent solution
- Reusable for multiple applications
- Alfastop® is designed specifically to work with a standard Heras fence

Precast concrete fencing products

Allen Concrete manufactures precast concrete products for the fencing and building industries. Plants in Surrey and Northamptonshire utilise modern production methods and machinery backed by careful quality control for the mass production of a large range of standard products. Large stocks and regular, flexible, delivery options ensure the fast and efficient despatch of products throughout the country.

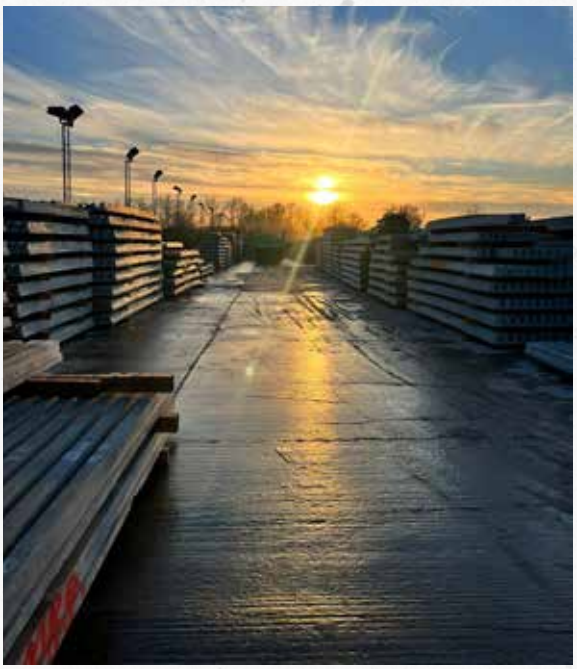
- Recessed Fence Posts
- Slotted Fence Posts and Gravel Boards
- Wildlife Friendly Gravel Boards
- Strained Wire Concrete Fence Posts
- Universal & Ornamental Chain Posts
- Chain Link Fence Posts
- Concrete Palisade Fencing
- Bollards and Barrel Posts
- Morticed Fence Posts

Precast Concrete Spurs
Bespoke products and services

With extensive experience and close relationships with various high quality specialist manufacturers, we are well placed to undertake the sourcing and supply of a range of bespoke structural and non-structural precast concrete products made to customer specification in large or small quantities such as:

- Pier Caps and Copings
- Marker Posts
- Window sills and surrounds

Allen Concrete
A PPG COMPANY



Marketing support for your branch

We can offer branded banners, bollard covers, flags, floor graphics and merchant counter packs with specification sheets for our beams and floor options.

Smooth finish, high quality floor beams

Lengths in stock: **3m** **3.6m** **4.2m** **4.8m**

Now in stock – see our sales staff for details

POUNDFIELD PRECAST
A PPG COMPANY

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