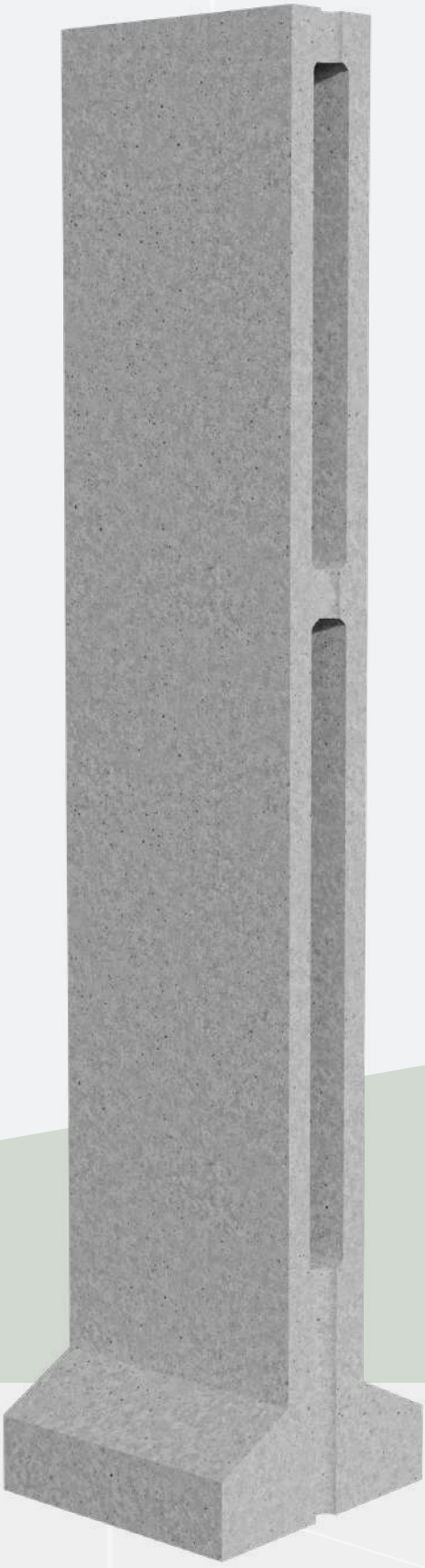
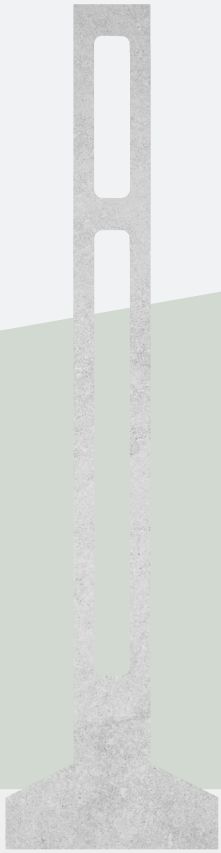
POUNDFIELD PRECAST
A PPG COMPANY

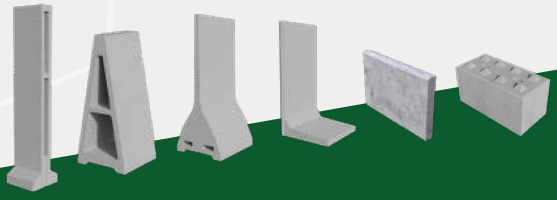
'INNOVATION in CONCRETE'

SHUTTABLOC™
retaining wall

The faster,
more economical
alternative to
casting in-situu.







Part of the Poundfield retaining wall range

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'INNOVATION in CONCRETE'

Unique heavy duty retaining wall system

Up to 50% reduction in build time compared to in-situ construction

Whilst traditional precast concrete units are suitable for retaining bulk materials in many circumstances, some situations require a higher specification – this is where Shuttabloc comes into its own.

The Shuttabloc reinforced precast concrete wall system is designed to withstand significant impact from loading plant and to retain higher loads. It provides a faster, more economical alternative to casting in-situ.

No on-site formwork, faster installation and a factory-controlled finish results in a product that is flexible, cost effective and designed to exactly the same properties as an in-situ wall.

The hollow cores of the precast concrete units are pumped full of concrete once in place, resulting in a solid push wall and can be designed and manufactured in a variety of heights (from 3m to 6m tall) with lengths tailored to suit your needs.

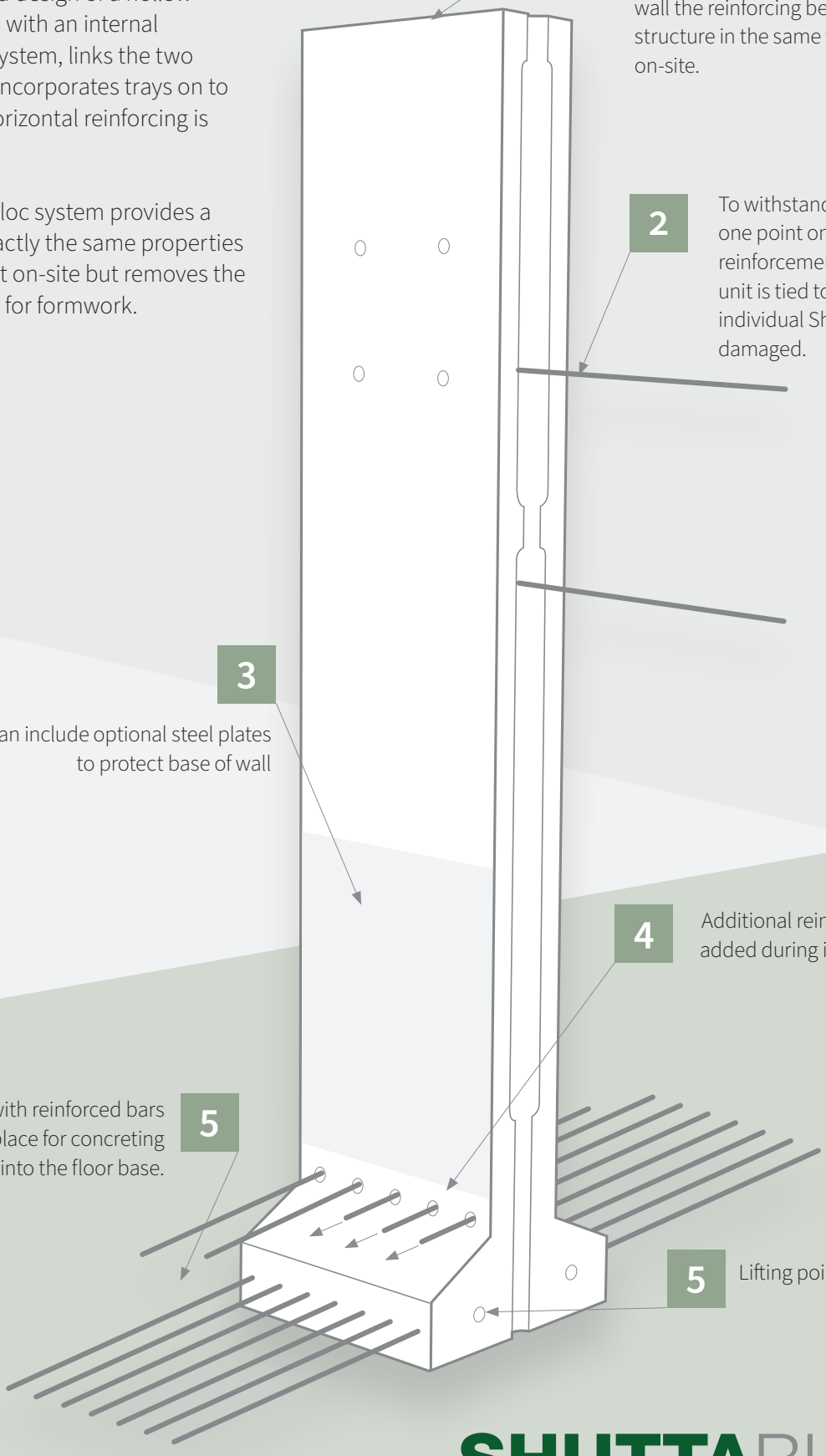
The advantages of the Shuttabloc system are:

- **Up to 50% reduction in build time** compared to full on-site construction
- **No on-site formwork required**
- **Less wastage** than in-situ construction
- Suitable for high spec walls needing to **withstand impact or retain heavy loads**
- **Less weather dependent** than in-situ construction
- **Factory controlled** finish
- **No concrete finishing** on site
- **No foundation slab** required
- Full design, supply and install service available

Shuttabloc has been designed to provide an economical alternative to casting retaining walls on-site.

The patented design of a hollow precast unit, with an internal reinforcing system, links the two halves, and incorporates trays on to which the horizontal reinforcing is laid.

The Shuttabloc system provides a wall with exactly the same properties as a wall cast on-site but removes the requirement for formwork.



1 Designed with a lifting point cast into the top which is also used for filling completed wall with concrete. By pumping concrete into the Shuttabloc wall the reinforcing becomes part of the structure in the same way as if it was cast on-site.

2 To withstand high loads at any one point on the wall horizontal reinforcement is required. Each unit is tied together to prevent individual Shuttablocs being damaged.

3 Can include optional steel plates to protect base of wall

4 Additional reinforcement added during installation

5 Built with reinforced bars in place for concreting into the floor base.

5 Lifting points for safe handling

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Where is Shuttabloc used?

The Shuttabloc reinforced precast concrete wall system is designed to withstand significant impact from loading plant and to retain higher loads. It is therefore a popular choice in industries where a heavyweight retaining wall solution is required. These include:

Waste and recycling plants

With constant use and frequent impact from loading equipment, Shuttabloc ticks all the boxes for withstanding the day-to-day pressures of operating a waste and recycling plant.

Aggregates

When filling and emptying aggregates significant pressures are put on the retaining walls and Shuttabloc is capable of withstanding the significant push requirements.

Anaerobic storage plants and silage clamps

The use of heavy equipment to compact a silage clamp results in significant pressures on the clamp walls. Shuttabloc provides a heavyweight solution to withstand the stresses.

Material storage bays

In demanding situations where a long design life is required Shuttabloc is the ideal choice.

Case studies

STAPLES
GREAT BRITISH FARMERS

"After the success of our first project using Poundfield's Shuttabloc at Wrangle, we were keen to repeat it at our second site and once again the installation has gone well"

Vernon Read, Production Director of Staples Vegetables Ltd

120 X 4M SHUTTABLOCS

Lagan

"This project was a challenge, requiring walls of up to 5 metres high to retain the bottom ash from the furnace, and the loads were severe.

Originally, an in-situ cast wall was proposed, but Poundfield's Shuttabloc was chosen after it was proven to save costs by reducing the installation time by two-thirds. A team of just four men completed the installation in only six weeks, with minimum disruption to other works on site.

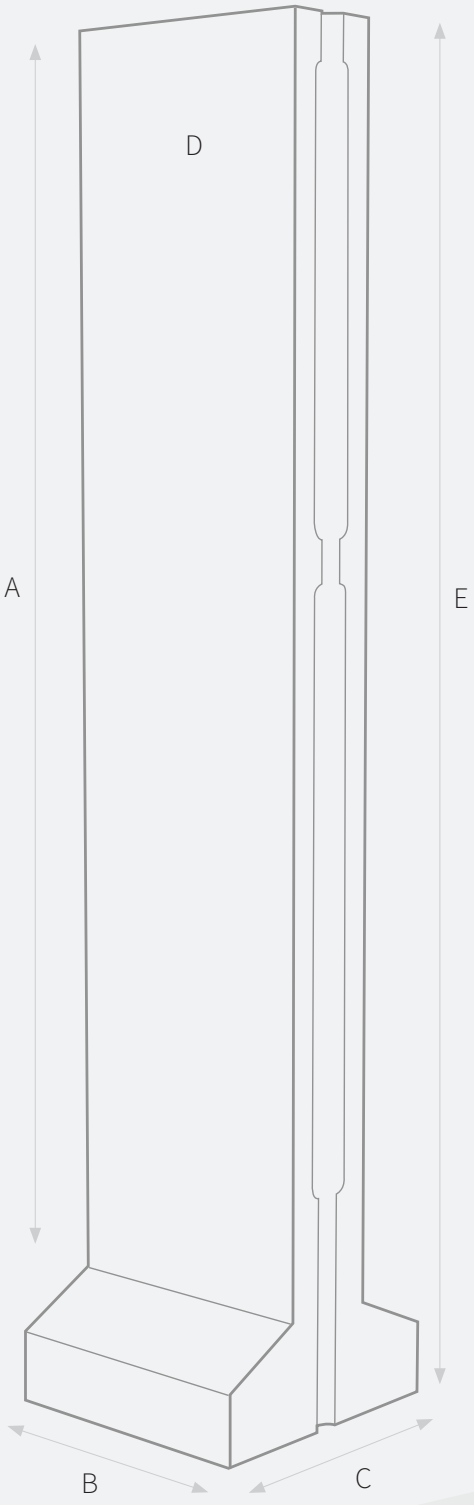
Poundfield's Shuttabloc installation went to plan and the reduction in the build time was a big factor in choosing their system. We would have no hesitation in using Shuttabloc on other projects."

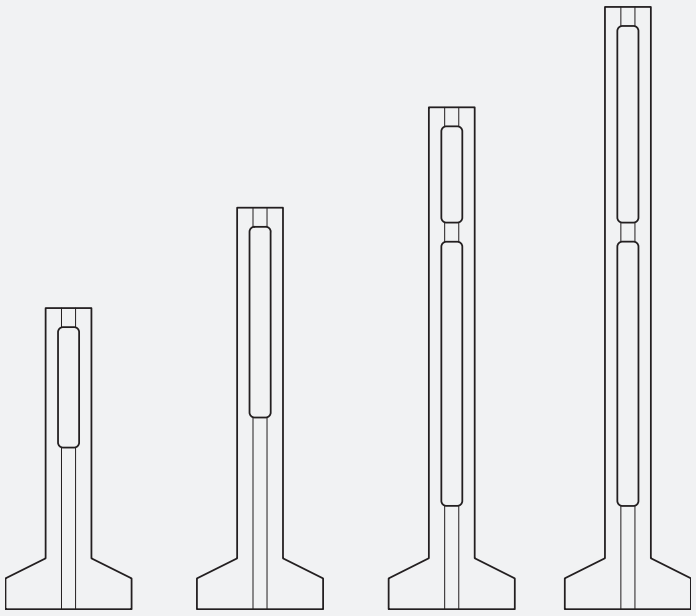
Gareth Rooney, Lagan Construction

30 LINEAR METRES OF SHUTTABLOC

Product range

Shuttabloc is available in 4 standard sizes from 3m to 6m high. Bespoke sizes are available depending upon your project's requirements, at an additional cost.





3.0m 4.0m 5.0m 6.0m

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Storage Height (A)	3000mm	4000mm	5000mm	6000mm
Length (B)	1220mm	1220mm	1220mm	1220mm
Depth (C)	457mm	457mm	457mm	457mm
Weight (D)	4.20 tonnes	5.50 tonnes	6.20 tonnes	7.10 tonnes
Unit height (E)	3607mm	4607mm	5607mm	6607mm

Technical specification

Shuttablocs are reinforced hollow wall sections which are placed together, sealed and then filled with concrete on site to form a retaining wall with the same properties as a wall which has been cast in-situ.

The inside of the unit has cast-in fixings. Anchors are fixed into these to enable the two sides to fix together when filled with concrete. These anchor points then act as supports for the horizontal reinforcing which is placed inside to form a continuous wall when filled on-site with concrete.

Both ends of the units have a 100mm diameter semi-circular recess at each end which provides a complete vertical cast joint when placed together, and locks the units in line as well as providing a complete seal to the finished wall.

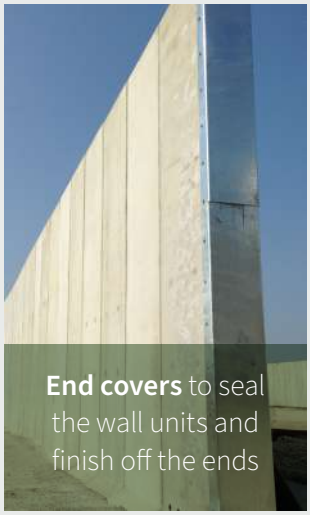
Concrete strength **C50**	Surcharge capacity **20°**	Material density **Up to 10kn/m²**	Design life **100 years**
Concrete finish **Class 3/F4**	Reinforcement cover **75mm**	Edge profile **square**	Fire resistance **120 MINS +**
Impact loading **35kn/m²**	Push loading **10kn/m²**	Single or double sided loading? **both**	Tolerances **5mm**

Accessories

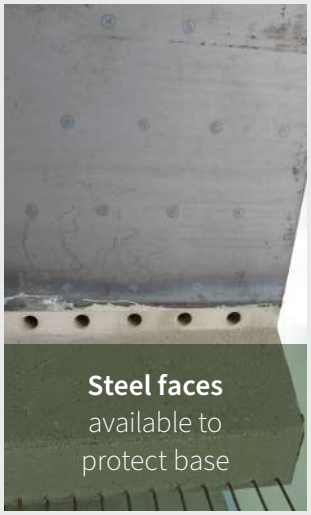
There are a number of accessories which can be used in conjunction with the Shuttabloc units to create a flexible solution for your storage requirements.

Corner units to achieve a continuous gap-free wall

T-junctions to create bays to a wall



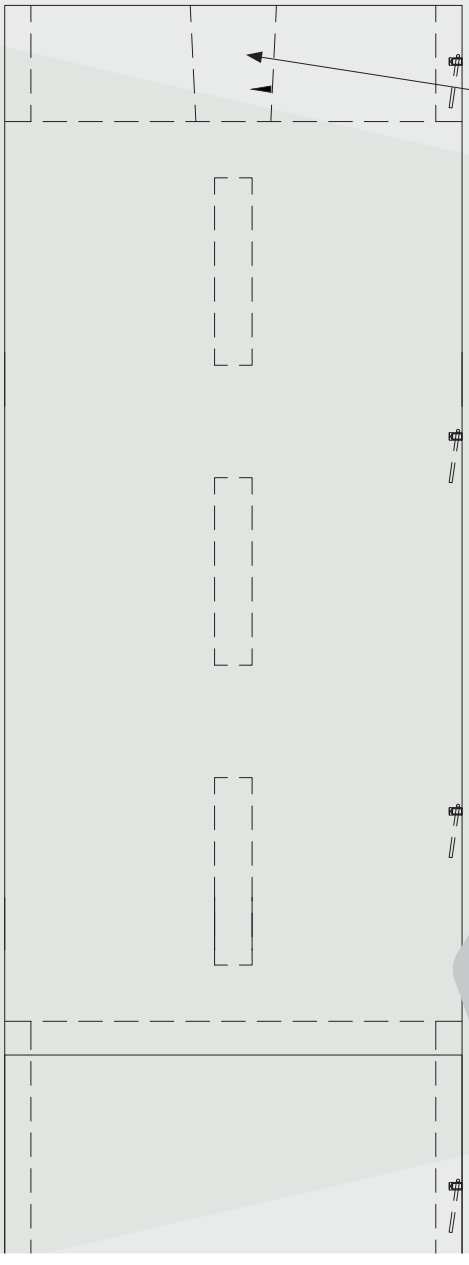
End covers to seal the wall units and finish off the ends

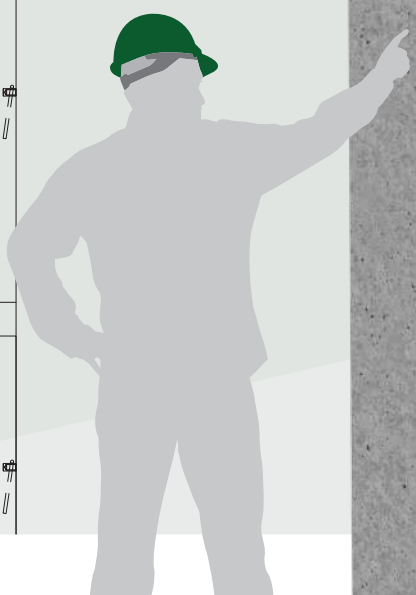


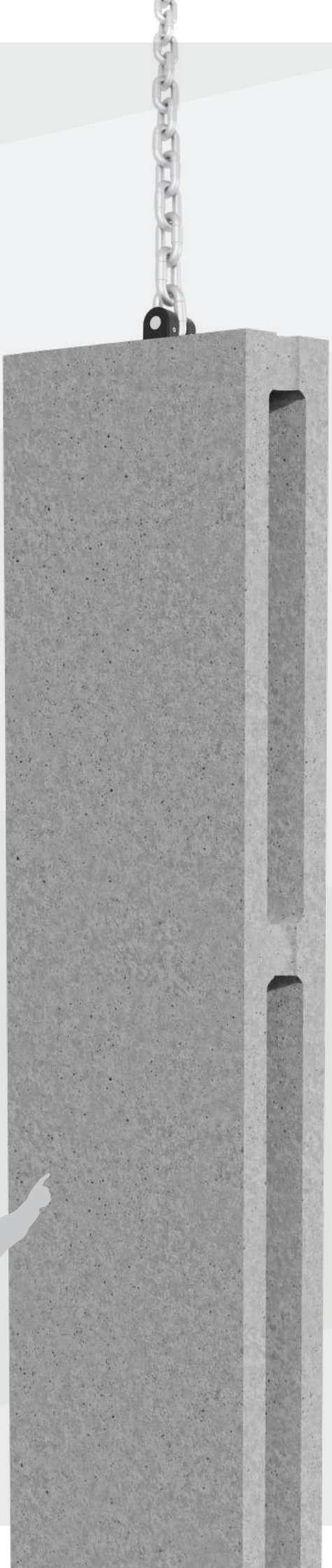
Steel faces available to protect base

Lifting guide

Shuttablocs are delivered horizontal in preparation for lifting with a telescopic crane. One lifting point is cast into the top of the Shuttabloc.



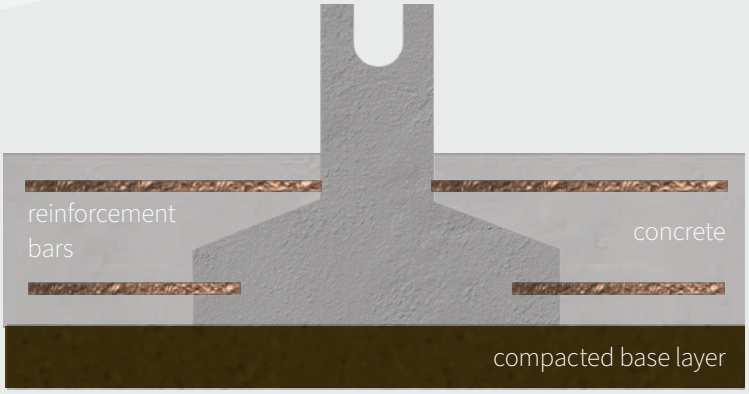




Installation

1 Prepare base

Foundation requirements are subject to ground conditions.



One-sided loading

Typically, installation of a single-loading (outside) Shuttabloc wall would require a compacted base of type 1 / crushed concrete, 200mm thick, with a top of compacted lean-mix 125mm thick.

Two-sided loading

Installation of a double-loading (dividing) Shuttabloc wall would be onto a suitable compacted concrete trench. Subject to a site inspection, this would require a 200mm thick compacted lean mix on to compacted type 1 / crushed concrete base depending on the ground conditions.

2 Level unit

3 Lower further units into position

Scan QR code to view video

5 Anchoring the wall. Shuttabloc units are cast into the ground slab using reinforcing bars cast into the base of the unit. Add reinforcing and pour concrete into trench.

Ultra low carbon concrete

Greenbloc
Building a sustainable future

Poundfield Precast have led the way in the introduction of precast Ultra Low Carbon Concrete. Reducing the carbon footprint of construction projects is a key priority in order to help achieve the government's target to reduce greenhouse gas emissions by the United Kingdom by 50% on 1990 levels by 2025, and to net zero by 2050.

Shuttabloc is available in two options:

1. Ultra Low Carbon Concrete
2. OPC (Ordinary Portland Cement).

Ultra low carbon concrete from Poundfield Precast retains all of their hardwearing properties but with one major addition – **a major eCO_2 saving of up to 80%.**

As part of our commitment to reducing the construction industry's dependency on cement we are the only company to offer an ultra-low carbon alternative for every product in our precast concrete portfolio.

PPG

Poundfield Precast is part of PPG (Precast Products Group) – a cluster of companies specialising in the manufacture of precast concrete products.

With locations in East Anglia, the North West, the East Midlands and London we supply a wide and diverse range of industries, ranging from house builders and agriculture through to sea defences and car park contractors. Our companies are some of the most experienced and innovative in the industry with some operating for over 70 years, while others hold a number of exclusive patent licenses on their market leading products.

The group provides a selection of precast concrete products and has the technical and production capabilities to work with our clients on any custom or bespoke project.

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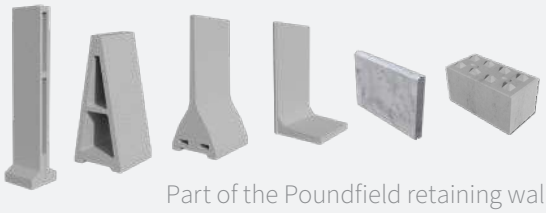

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