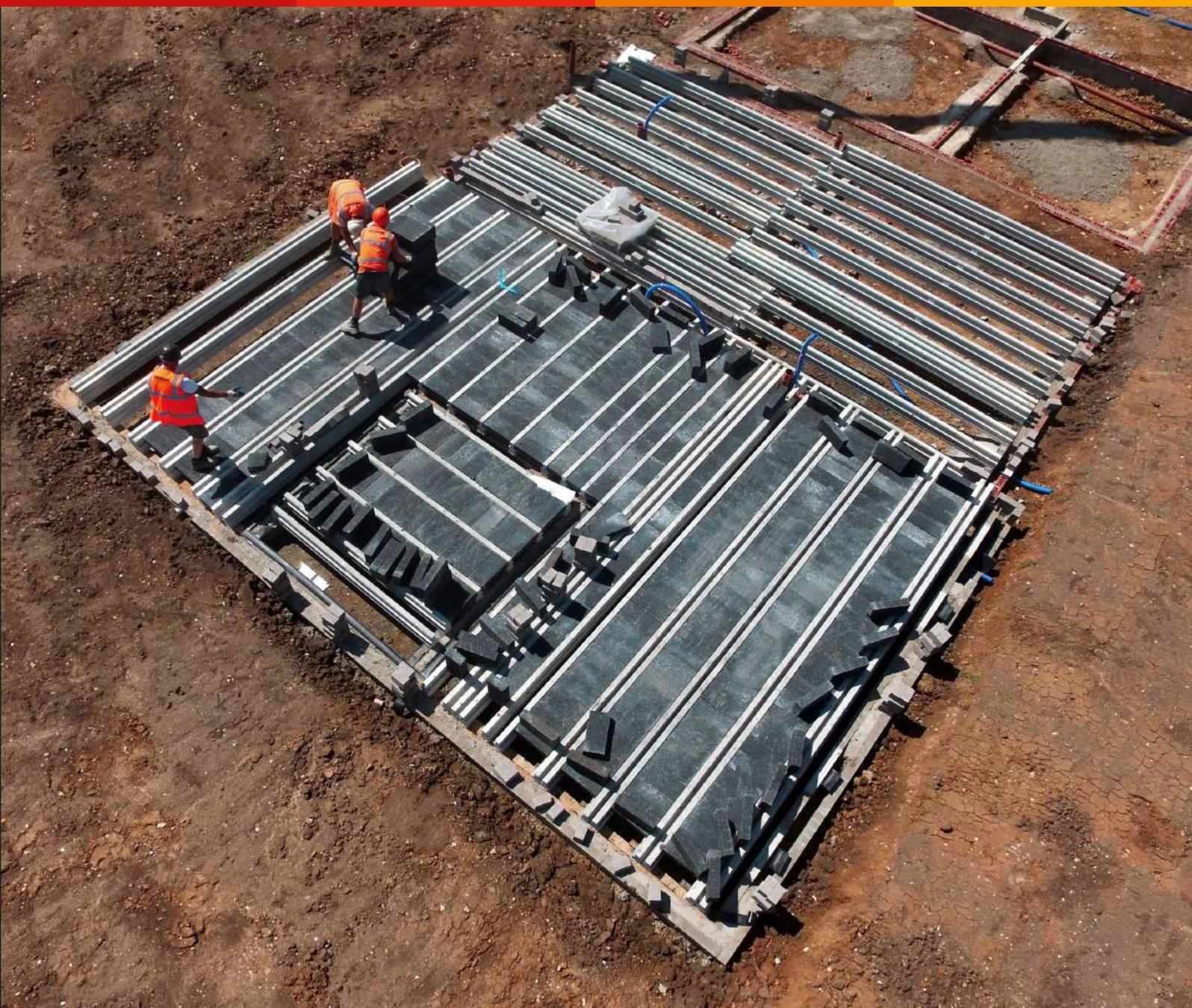


MILBANK

CONCRETE PRODUCTS

Beam & Block Flooring







About Us

For more than 70 years, we have dedicated ourselves to providing an exceptional level of service within the precast concrete industry. From design and manufacture to delivery and installation, we offer the most comprehensive concrete product service across the UK, providing a range of standardised and bespoke precast concrete products.

Our people are at the heart of our business, whether producing a product, quotation, or piece of advice, or supporting our clients and local communities. We strive to be a rewarding place to work where our people are happy, supported, rewarded, and motivated to go the extra mile.

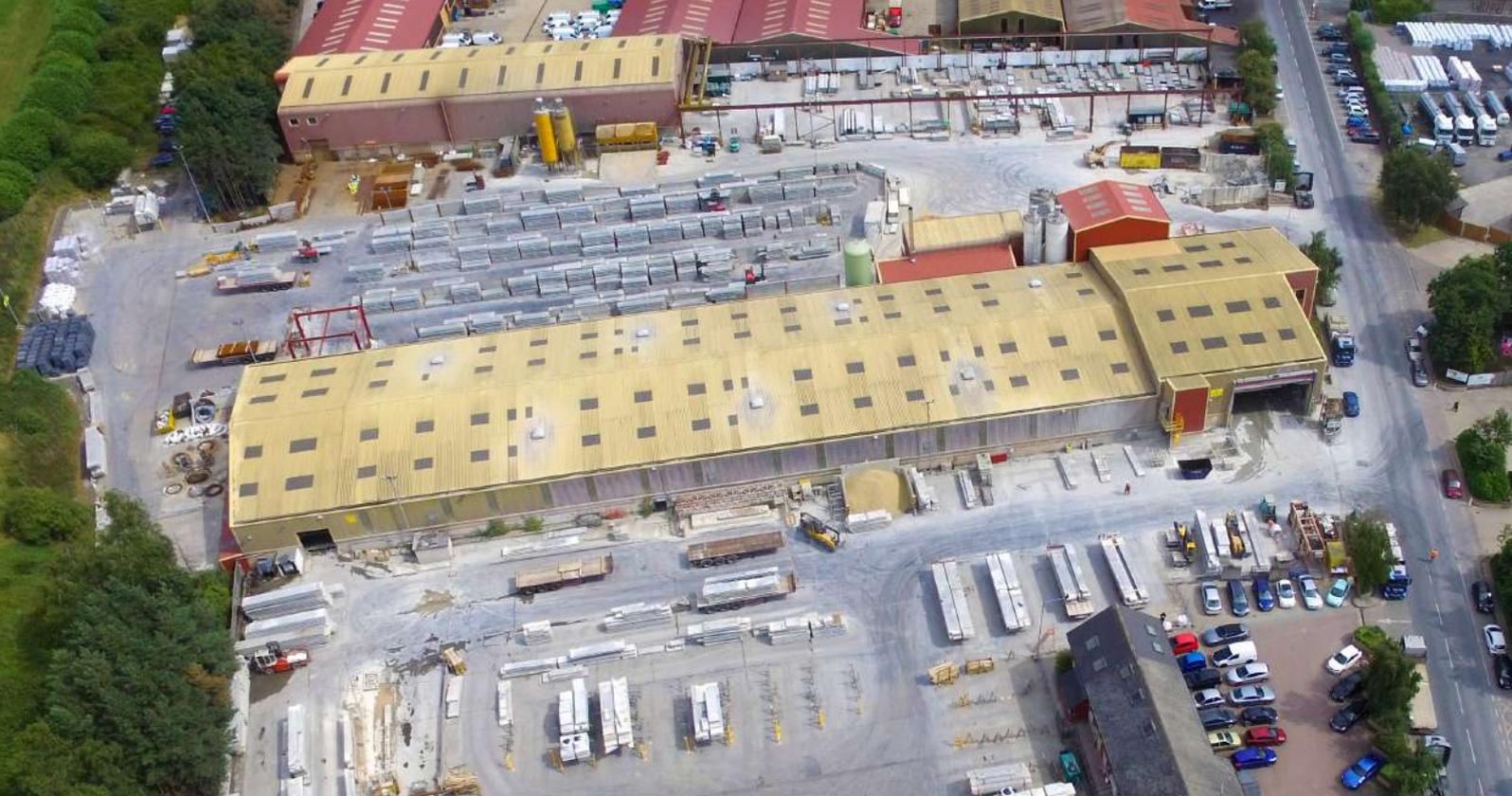
Precast Concrete Products for every requirement

We pride ourselves on offering a diverse range of precast concrete products including beam & block flooring, hollowcore flooring, insulated flooring and straight stairs and landings, along with a varied selection of specialist bespoke precast concrete products.

Based in the beating heart of the Essex countryside

Our manufacturing facilities, offices and transport hub are located near Colchester on the border between Essex and Suffolk. With the A12, M11 and M25 all nearby, we are well positioned to offer a competitive concrete products service to London & the Home Counties, East Anglia and the Southeast of England.

We see ourselves as more than just a precast concrete manufacturer. Putting our customers first, we are solution providers, on a mission to deliver a continually exceptional level of service.



Trusted by professionals since 1947

Milbank have been producing reinforced concrete flooring products since our origination in Chelmsford, Essex, in 1947. With over 75 years' of experience manufacturing and supplying pre-stressed concrete beam and block flooring products, we're confident that we can provide you with the perfect solution to your flooring requirements. Our in-house team of industry-leading designers, manufacturing staff and installation gangs are continually driving our mission to deliver exceptional levels of service to our customers.

Milbank precast beam and block concrete floor beams are expertly manufactured by our experienced operations team at our facility in Essex, UK, and are cast to a high-quality with excellent durability & longevity.

We carry a permanent stock of over 25,000m of 155mm concrete floor beams, in varying lengths, to suit any order. We also hold a limited stock of the thicker 225mm beams but are well equipped to efficiently manufacture concrete beams to order (in 50mm increments) up to 7.8m long. Our variability and flexibility, along with our dedication to providing exceptional levels of customer service, is what sets us apart from competitors.

Our professional 'all-in-one' concrete floor service includes on-site installation, ensuring any issues are addressed quickly and efficiently from our head office. We cover all aspects of the design and installation process and pride ourselves on our quick response to queries, world-class manufacturing, and expert installation.



The foundation of great homes

Beam and block concrete floors comprise a series of inverted T-beams made of pre-stressed concrete cut to specified lengths as determined by construction drawings. On site, they are laid perpendicular to the supporting blockwork walls that make up the inner leaf of the footings and are laid at suitable centres to allow them to be filled with standard-sized lightweight aircrete or dense aggregate blocks.

The floor structure is brushed over with a 4:1 dry mix of sharp sand and cement to fill the gaps, consolidating both the beams and blocks into a solid structure. Because this is an entirely dry process (in that no mortar or adhesive is required) as soon as the flooring is laid it provides an instant working platform, ready for follow-on trades.

Milbank have been manufacturing and supplying concrete flooring products for over 70 years. Our concrete t-beams are available in 155mm and 225mm deep pre-stressed options in lengths of 1-6m in 50mm increments. We also provide concrete block flooring products, with standard 100mm deep building blocks to span the gaps between the beams during installation.



The UK's favourite flooring solution, for a reason



Beam and Block flooring is renowned for being fast, cost-effective, and simple to install, requiring no special construction skills – it is the cheapest way to build a highly durable and solid floor.



Varying the concrete beam centres during construction offers a quick and economical solution for a wide range of problems, both at ground and upper floor levels.



Beam and Block flooring is a flexible and easy system to work with, enabling multiple solutions to any given flooring problem.



The use of different sized beams means that it is ideal for use on sloping or on uneven ground.



Speedy construction means that a safe, level, platform can be quickly established – workmen can use the floor as a safe working base for further construction work.



Frequently asked questions

Can Beam and Block floors be constructed in bad weather or the winter?

As the concrete products used are all precast at our factory, the installation is an entirely dry process. For this reason, the installation of beam and block is usually unaffected by cold or wet weather so can continue even during winter months.

What preparation work needs to be completed to install Beam and Block floors?

The supporting blockwork needs to be laid first, but otherwise there is very little preparation needed. Minimal levels of excavation are required – with preparation at a minimum, project timelines are shortened.

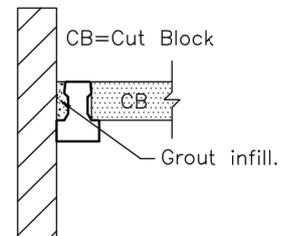
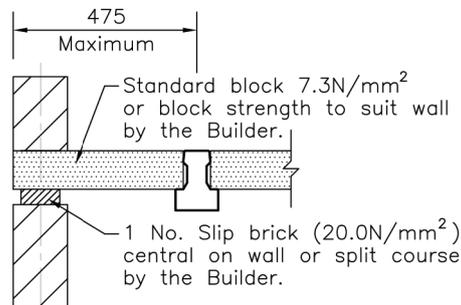
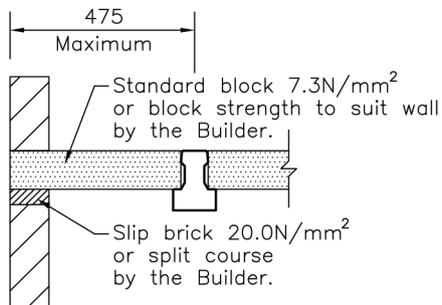
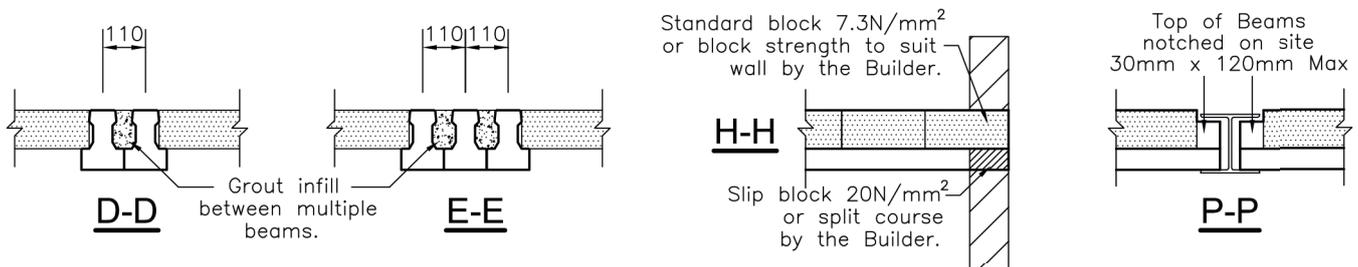
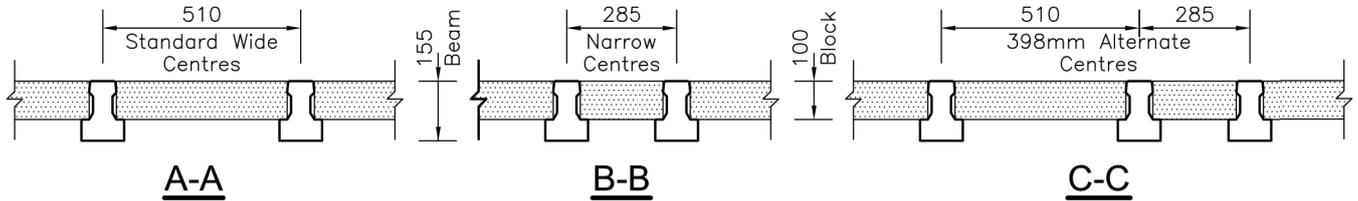
How does Beam and Block compare to timber flooring?

The beams employed in these floors have a significantly longer span than timber & therefore it is much cheaper and easier to install than traditional timber methods.

How much maintenance do Beam and Block floors need?

Beam and block floors are maintenance free – completely unaffected by damp, rot, or vermin. These highly durable floors are clean, mould free, unparalleled in longevity, and are incredibly low cost over their lifespan.

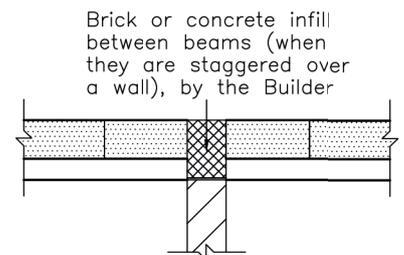
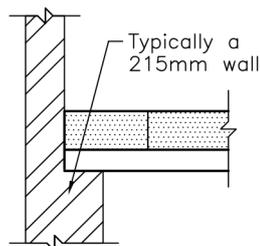
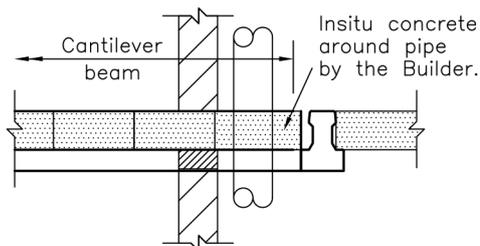
T155 Beam & Block Technical Details



F-F (100mm Wall)

F-F (140mm Wall)

G-G



L-L

T-T

Y-Y

Section Properties

Area A_c	11,829 mm ²
Nab	66.32 mm
Inertia	25,324,243 mm ⁴
Zt	285,582 mm ³
Zb	381,826 mm ³

Material Properties

f_{cu}	55 N/mm ²
f_{ci}	35 N/mm ²
f_{ct}	-3.3 N/mm ²
E_t	27 kN/mm ²
E_w	31 kN/mm ²
E_s	200 kN/mm ²

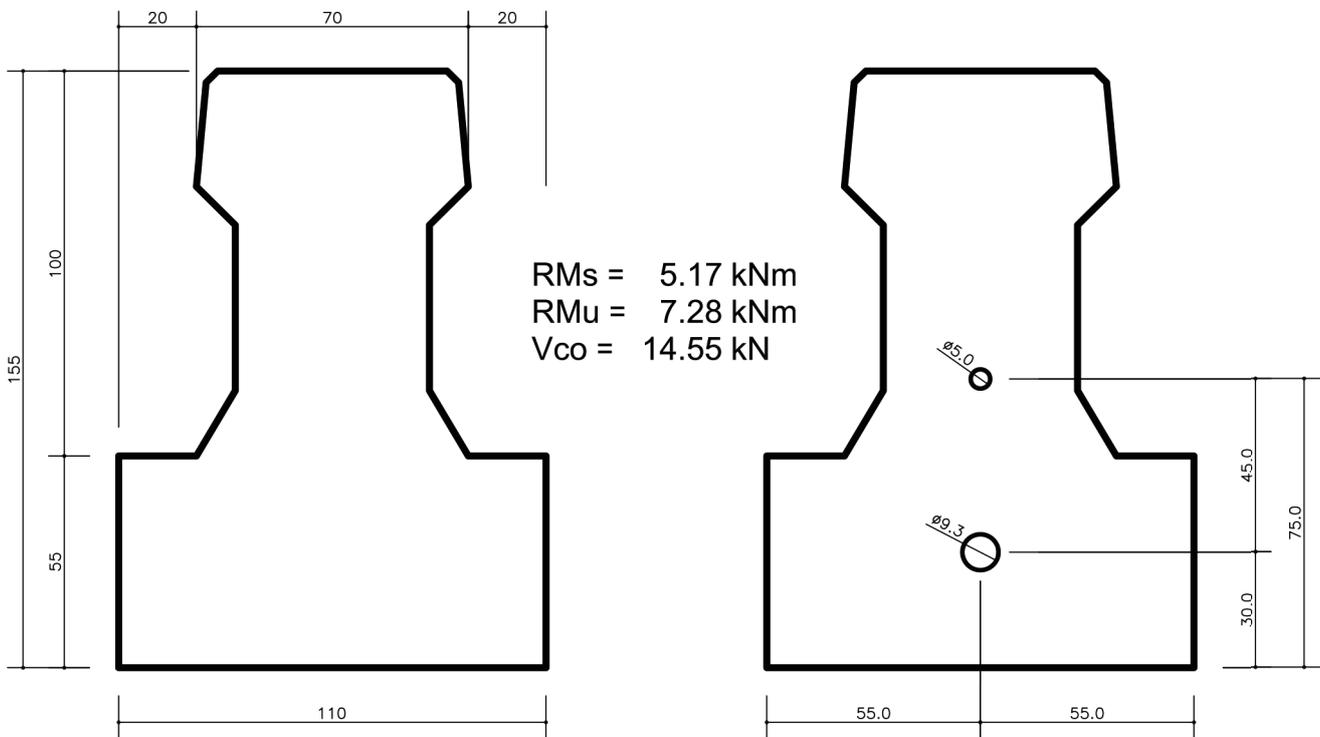
Beams: Manufactured in 50mm increments.
Design to BS 8110-1:1997 Class 2 members.

Prestressing Tendons: 5mm Wire to BS 5896 / 2 wire - 1770 - 5 - PI - relax 2
9.3mm Strand to BS 5896 / 3 strand - 1770 - 9.3 - PI - relax 2

Cement: CEM I 42,5 R to BS EN 197-1

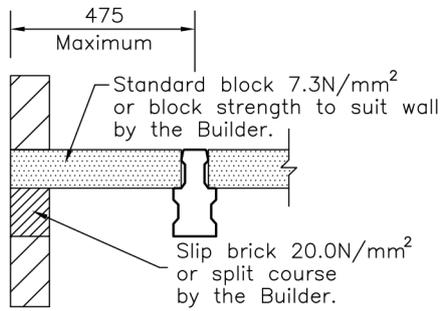
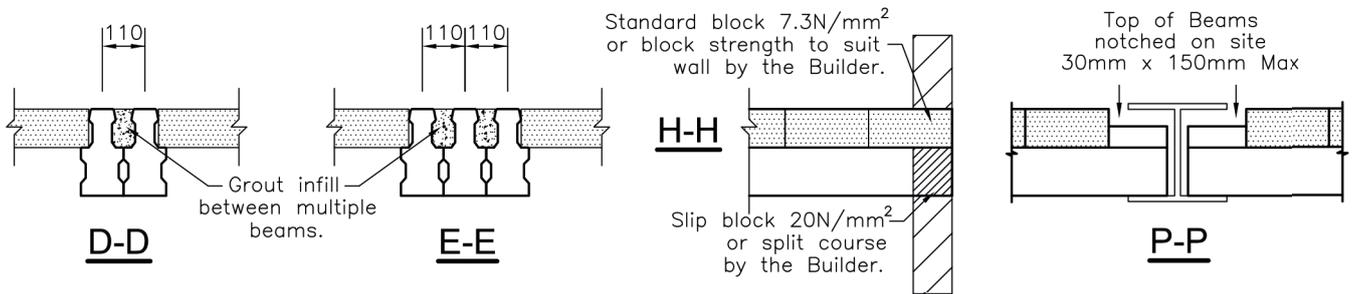
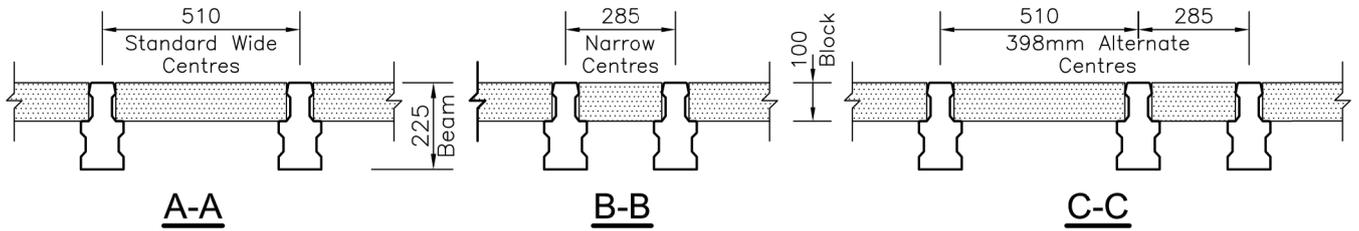
Aggregate: 4/10mm (Flintstone) to BS EN 12620

Fire Resistance: 1 Hour Maximum (limited by section width) to BS 8110-2:1985

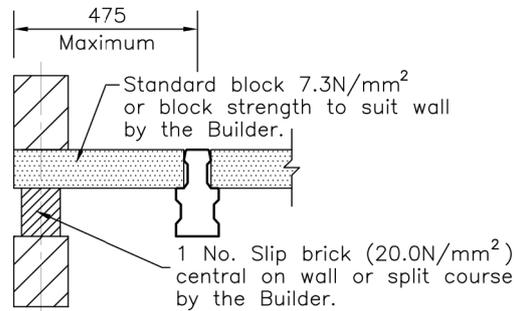


		Self-Weight kN/m ² (Joist, Blocks and Grout)					
Block Type	Block Density	Single Beams		Double Beams		Triple Beams	
Lightweight	600 kg/m ³	S510	1.06	D620	1.52	T730	1.84
		S398	1.19	D508	1.72	T618	2.07
		S285	1.43	D395	2.05	T505	2.40
Medium	1450 kg/m ³	S510	1.78	D620	2.11	T730	2.34
		S398	1.88	D508	2.26	T618	2.51
		S285	2.06	D395	2.50	T505	2.75
Dense	2000 kg/m ³	S510	2.24	D620	2.49	T730	2.67
		S398	2.32	D508	2.61	T618	2.80
		S285	2.46	D395	2.79	T505	2.98

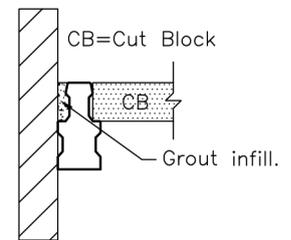
T225 Beam & Block Technical Details



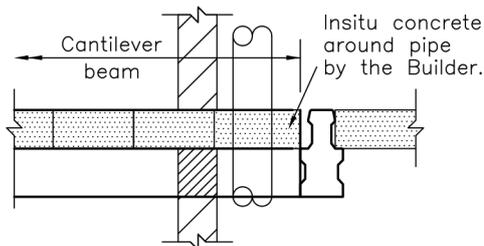
F-F (100mm Wall)



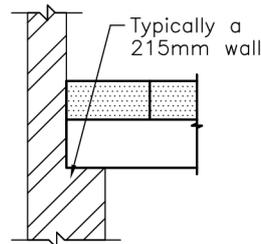
F-F (140mm Wall)



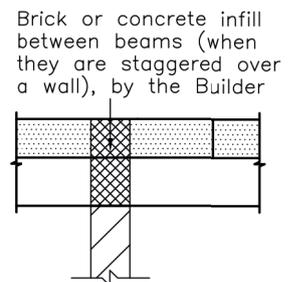
G-G



L-L



T-T



Y-Y

Section Properties

Area Ac	18,160 mm ²
Nab	127.14 mm
Inertia	73,390,737 mm ⁴
Zt	577,235 mm ³
Zb	749,971 mm ³

Material Properties

Fcu	55 N/mm ²
Fci	35 N/mm ²
Fct	-3.3 N/mm ²
Et	27 kN/mm ²
Ew	31 kN/mm ²
Es	200 kN/mm ²

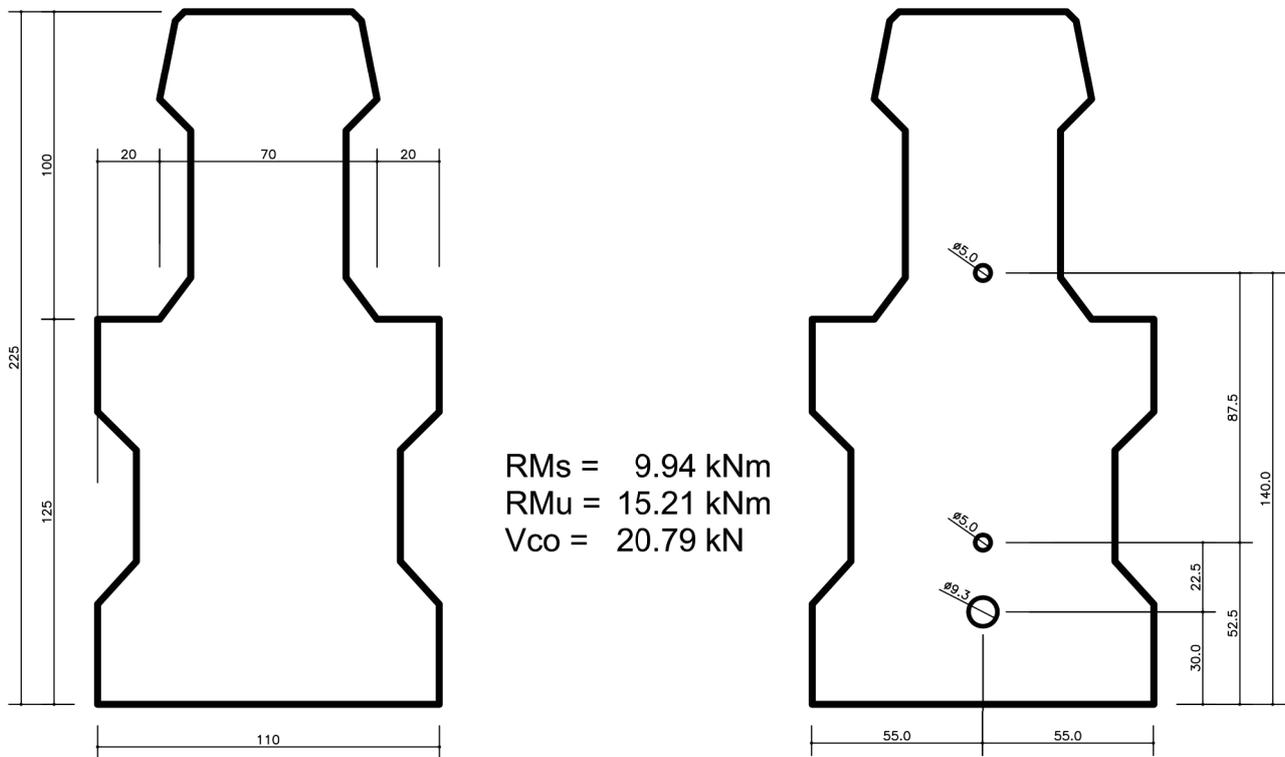
Beams: Manufactured in 50mm increments.
 Design to BS 8110-1:1997 Class 2 members.

Prestressing Tendons: 5mm Wire to BS 5896 / 2 wire - 1770 - 5 - PI - relax 2
 9.3mm Strand to BS 5896 / 3 strand - 1770 - 9.3 - PI - relax 2

Cement: CEM I 42,5 R to BS EN 197-1

Aggregate: 4/10mm (Flintstone) to BS EN 12620

Fire Resistance: 1 Hour Maximum (limited by section width) to BS 8110-2:1985



RM_s = 9.94 kNm
 RM_u = 15.21 kNm
 V_{co} = 20.79 kN

		Self-Weight kN/m ² (Joist, Blocks and Grout)					
Block Type	Block Density	Single Beams		Double Beams		Triple Beams	
Lightweight	600 kg/m ³	S510	1.35	D620	2.01	T730	2.46
		S398	1.57	D508	2.32	T618	2.80
		S285	1.96	D395	2.81	T505	3.30
Medium	1450 kg/m ³	S510	2.07	D620	2.60	T730	2.97
		S398	2.26	D508	2.86	T618	3.25
		S285	2.59	D395	3.27	T505	3.65
Dense	2000 kg/m ³	S510	2.54	D620	2.98	T730	3.29
		S398	2.70	D508	3.21	T618	3.53
		S285	2.99	D395	3.56	T505	3.88

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If you have any questions about how beam and block flooring could be the solution you're looking for, we would love to hear from you. A member of our team will be happy to answer any of your queries and help you achieve your project goals.

