



# THERMALITE AIRCRETE BLOCK GUIDE

**THERMALITE**



**THERMALITE**

a Forterra brand

# LIGHTWEIGHT, SUSTAINABLE & THERMALLY EFFICIENT

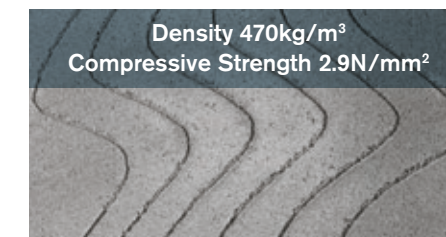
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The colours in this brochure are as true as can be obtained by the normal printing process. Forterra is committed to a programme of continuous product development and reserves the right to alter specifications without prior notification.

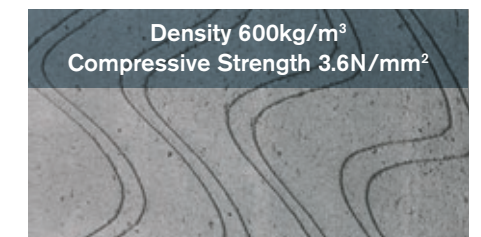
## PRODUCT IDENTIFICATION

All Thermalite blocks are manufactured with scratch marks to help you quickly and easily identify the technical performance of each block. This is unique to Thermalite and is particularly useful when the products are in build. The products and corresponding scratch marks are shown below.



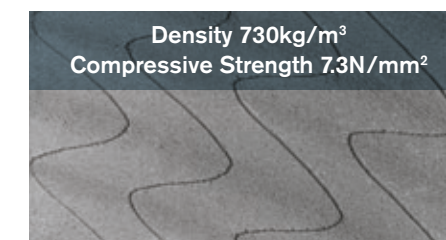
### 6 SCRATCH MARKS

Turbo



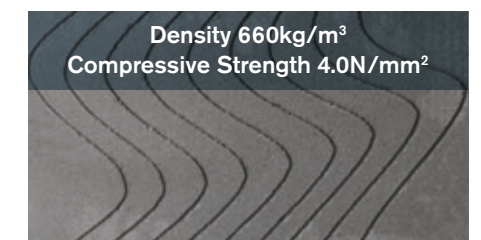
### 8 SCRATCH MARKS

Shield  
Trenchblock 3.6 Tongue & Groove



### 4 SCRATCH MARKS

Hi-Strength 7  
Hi-Strength 7 Trenchblock Tongue & Groove



### 9 SCRATCH MARKS

Floorblock  
Party Wall





## THERMALITE IS AN EXCEPTIONALLY SUSTAINABLE BUILDING MATERIAL

It contributes to the construction of environmentally efficient buildings from the ground up.

Whether you're building internal or external walls, foundations or block and beam floors, Thermalite's excellent thermal insulation properties make U-value targets easier to achieve and can help reduce CO<sub>2</sub> emissions during a building's life.

It's the closed micro-cellular structure, featuring tiny pockets of trapped air that give Thermalite its distinctive features: high thermal and sound insulation, lightness for handling, high compressive strength, and fire resistance of the products in the Thermalite range.



### MANUFACTURE

#### Recycled content

Manufactured from up to 80% pulverised fuel ash, a waste product from UK power stations

#### Responsible sourcing

BES 6001 Responsible Sourcing of Materials

#### Minimal waste

Process waste is crushed or recycled into the next mix or used in other concrete products

#### Quality management

ISO 9001 Quality Management System  
ISO 14001 Environmental Management System



### DESIGN

#### Part L compliance

Cost-effective solutions for current and future Part L requirements

#### Low air permeability

Contributes to low airtightness building fabrics

#### Thermal bridging

Robust and flexible details which help reduce heat loss through thermal bridges

#### U-values

Low thermal conductivities contribute to low wall U-values



### END OF LIFE

#### Recyclable

Can be fully recycled to create new construction materials

**THERMALITE**  
SUSTAINABILITY  
AT ITS CORE



### VISIT

#### forterra.co.uk

For more details on our sustainability updates, credentials and recent achievements



### BUILD

#### High thermal insulation

Contributes to reducing heat loss through the envelope

#### High sound insulation

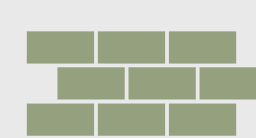
Insulating against noise from adjoining buildings and external sources

#### Durable

Exceeds build life expectancy

#### Thermal mass

Stores heat which helps reduce extremes of internal temperature within a building



### CONSTRUCTION

#### Health and safety

Meets CDM regulations

Thermalite Trench Block Tongue & Groove is the first UK-manufactured block with handholds

#### Reduced waste on site

Easy to cut, saw, chase and drill using hand tools

#### A1 non-combustible material

Reducing the risk of fire onsite during the construction

#### CO<sub>2</sub> and Transport

Low density contributes to reduced transport CO<sub>2</sub> per tonne





**STRONG  
LIGHTWEIGHT  
EFFICIENT  
FAST  
SUSTAINABLE  
VERSATILE**



# TURBO

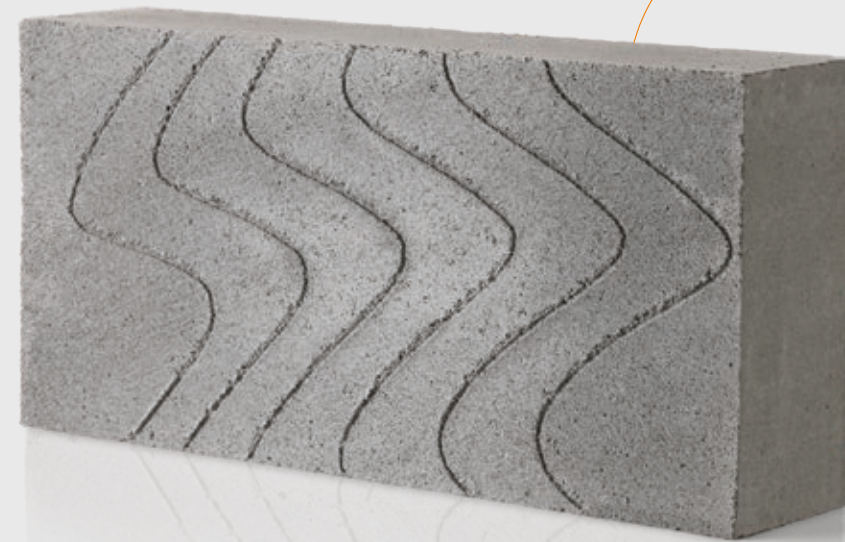
EXTERNAL WALLS • FOUNDATIONS • PARTITIONS

Turbo block is the most thermally efficient block in the Thermalite range. It is an ideal choice for two storey external walling applications requiring low U-values.

**COMPRESSIVE  
STRENGTH**  
2.9N/mm<sup>2</sup>

**THERMAL  
CONDUCTIVITY**  
0.11W/M.K

**DENSITY**  
470KG/M<sup>3</sup>



## Specifications

Face dimensions 440 x 215 (mm)	Thickness (mm) *	100	140	150 <sup>†</sup>	190 <sup>†</sup>	200 <sup>†</sup>	215
	Weight (kg) *	5.5	7.7	8.2	10.4	10.9	11.8

<sup>†</sup> Manufactured to special order only.

\* Block weights based on 23% moisture content (typical received), moisture equilibrium approximately 3% (protected) and 5% (exposed).

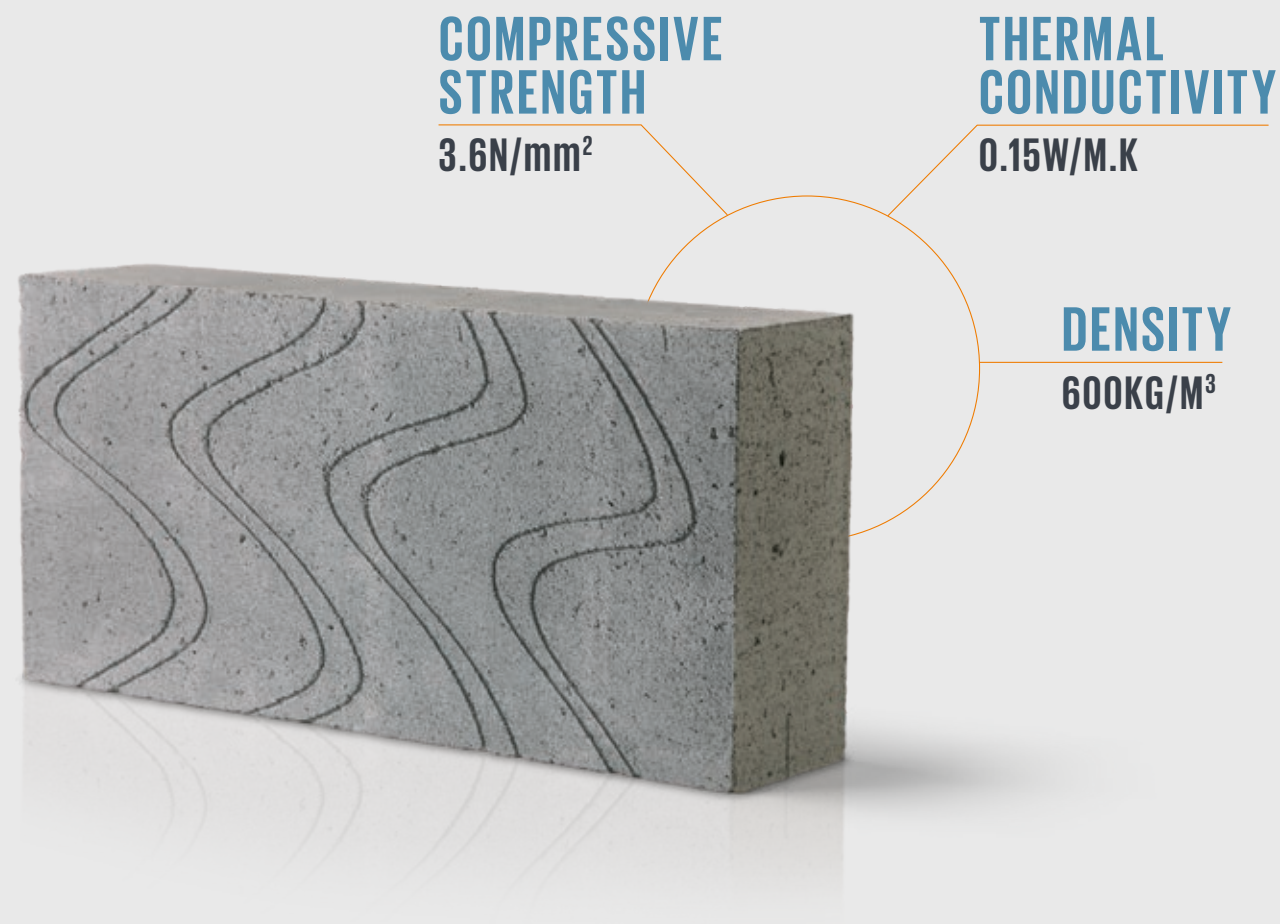
**FOR TECHNICAL INFORMATION VISIT: [FORTERRA.CO.UK/THERMALITE](http://FORTERRA.CO.UK/THERMALITE)**



# SHIELD

EXTERNAL WALLS • FOUNDATIONS • PARTITIONS • SEPARATING WALLS

Shield block is very versatile and can be used in a variety of applications including external walls, foundations, partitions and separating walls.



## Specifications

Face dimensions 440 x 215 (mm)	Thickness (mm) *	50	75	100	140	150	200 <sup>†</sup>	215 <sup>†</sup>
	Weight (kg) *	3.5	5.2	7.0	9.8	10.5	14.0	15.0

<sup>†</sup> Manufactured to special order only.

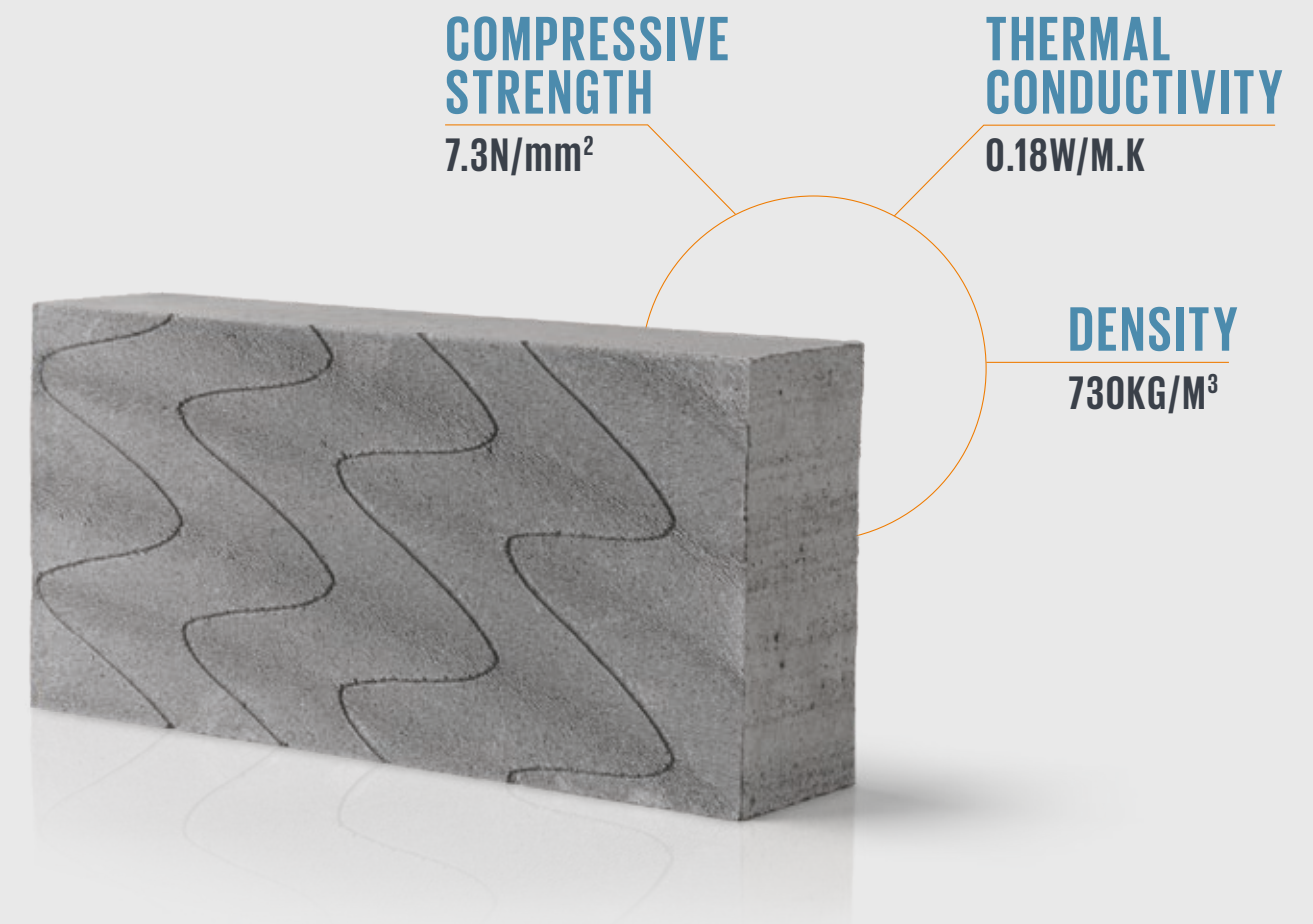
\* Block weights based on 23% moisture content (typical received), moisture equilibrium approximately 3% (protected) and 5% (exposed).

FOR FURTHER ADVICE CONTACT OUR TECHNICAL TEAM: 0330 123 1018

# HI-STRENGTH 7

EXTERNAL WALLS • FOUNDATIONS • PARTITIONS • SEPARATING WALLS

Hi-Strength 7 block has been specifically designed for applications such as flats of three storeys and above, offices, supermarkets and retail parks, where loading conditions require a 7.3N/mm<sup>2</sup> building block.



## Specifications

Face dimensions 440 x 215 (mm)	Thickness (mm) *	100	140	150 <sup>†</sup>	190 <sup>†</sup>	200 <sup>†</sup>	215
	Weight (kg) *	8.5	11.9	12.7	16.1	17.0	18.3

<sup>†</sup> Manufactured to special order only.

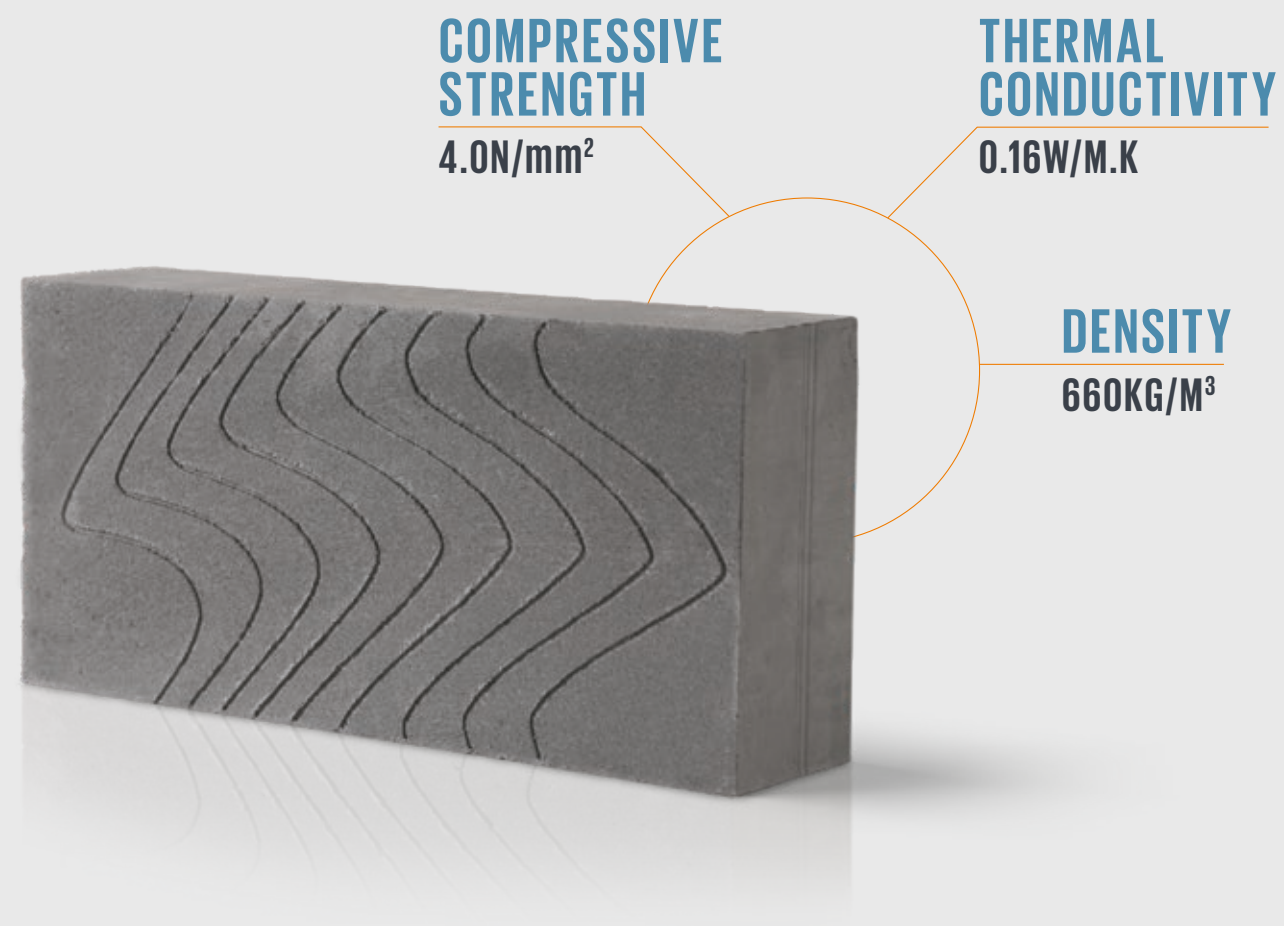
\* Block weights based on 23% moisture content (typical received), moisture equilibrium approximately 3% (protected) and 5% (exposed).

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# PARTY WALL

SEPARATING WALLS • EXTERNAL WALLS • PARTITIONS • FOUNDATIONS

Party Wall blocks give high levels of sound reduction when constructing separating (cavity) walls between buildings.



## Specifications

Face dimensions 440 x 215 (mm)	Thickness (mm) *	100	215
	Weight (kg) *	7.7	16.5

† Manufactured to special order only.

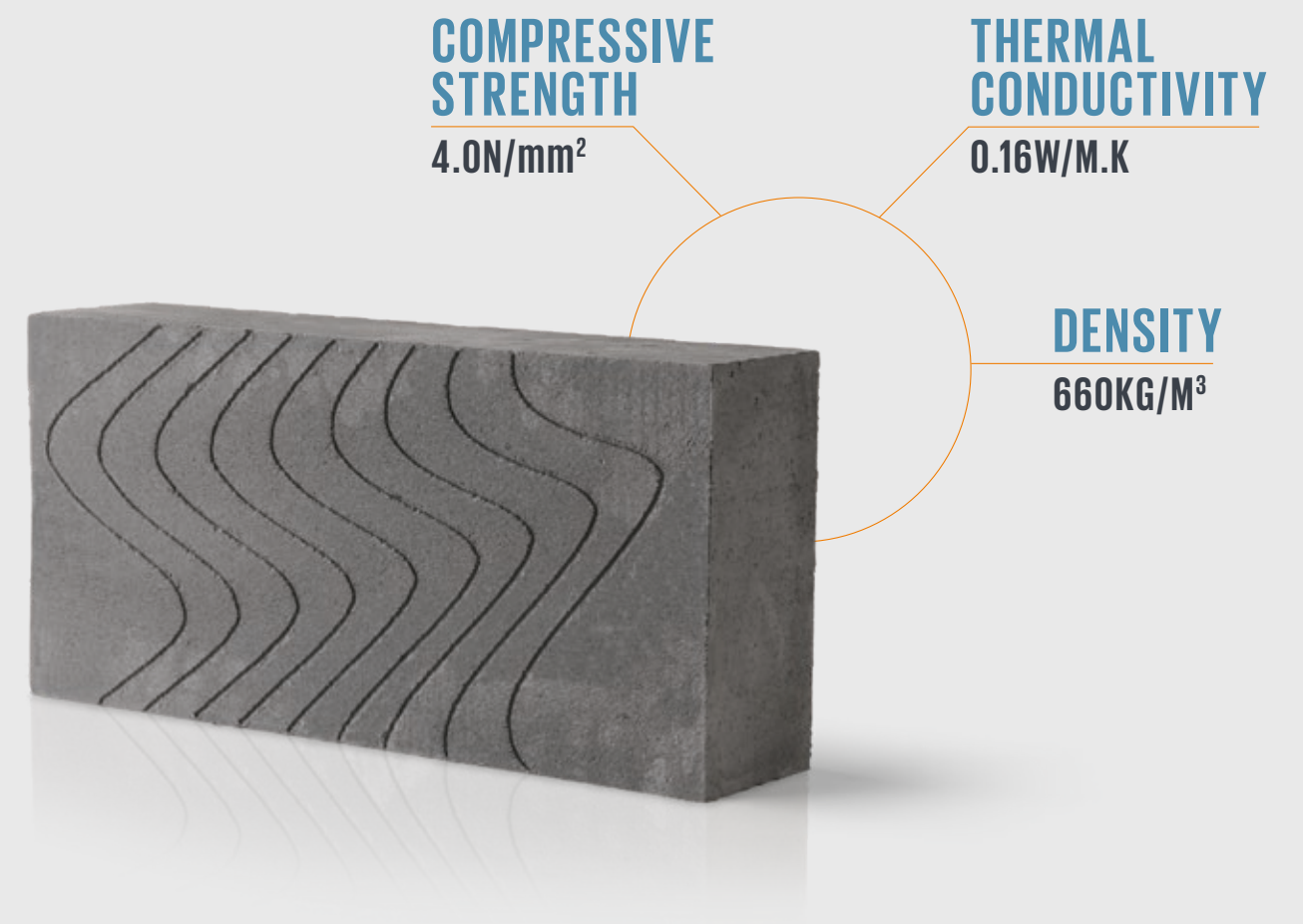
\* Block weights based on 23% moisture content (typical received), moisture equilibrium approximately 3% (protected) and 5% (exposed).

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# FLOORBLOCK

BEAM & BLOCK FLOORS

Floorblock is an efficient method of creating insulated floors. It is light in weight and designed for use with all proprietary T-beams where it can help to improve the thermal performance of the floor.



## Specifications

Face dimensions 440 x 215 (mm)	Thickness (mm) *	100
	Weight (kg) *	7.7

† Manufactured to special order only.

\* Block weights based on 23% moisture content (typical received), moisture equilibrium approximately 3% (protected) and 5% (exposed).

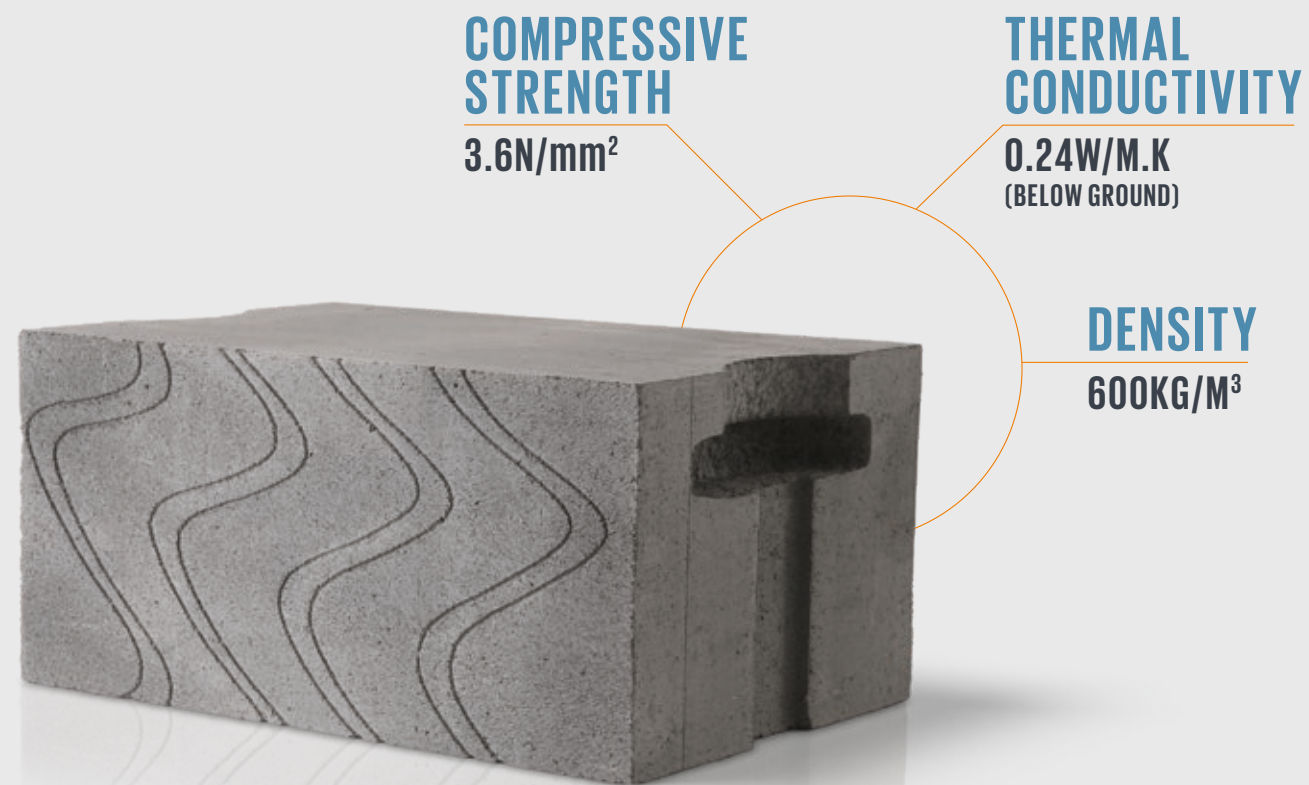


# TRENCHBLOCK 3.6

## TONGUE & GROOVE

### FOUNDATIONS

Trenchblock 3.6 T&G is a revolutionary Thermalite block for constructing solid foundation walls. Offering handholds for easy lifting, along with tongue and groove joints which avoid the need for mortar in perp ends.



### Specifications

Face dimensions 440 x 215 (mm) 440 x 140 (mm) <sup>†Δ</sup>	Face Dimensions (mm) *			440 x 140 <sup>†Δ</sup>		
	<b>Thickness (mm) *</b>	255 <sup>†</sup>	300	355	255	300
<b>Weight (kg) *</b>	17.8	20.9	24.8	11.6	13.6	16.1

<sup>†</sup> Manufactured to special order only.

\* Block weights based on 23% moisture content (typical received), moisture equilibrium approximately 3% (protected) and 5% (exposed).

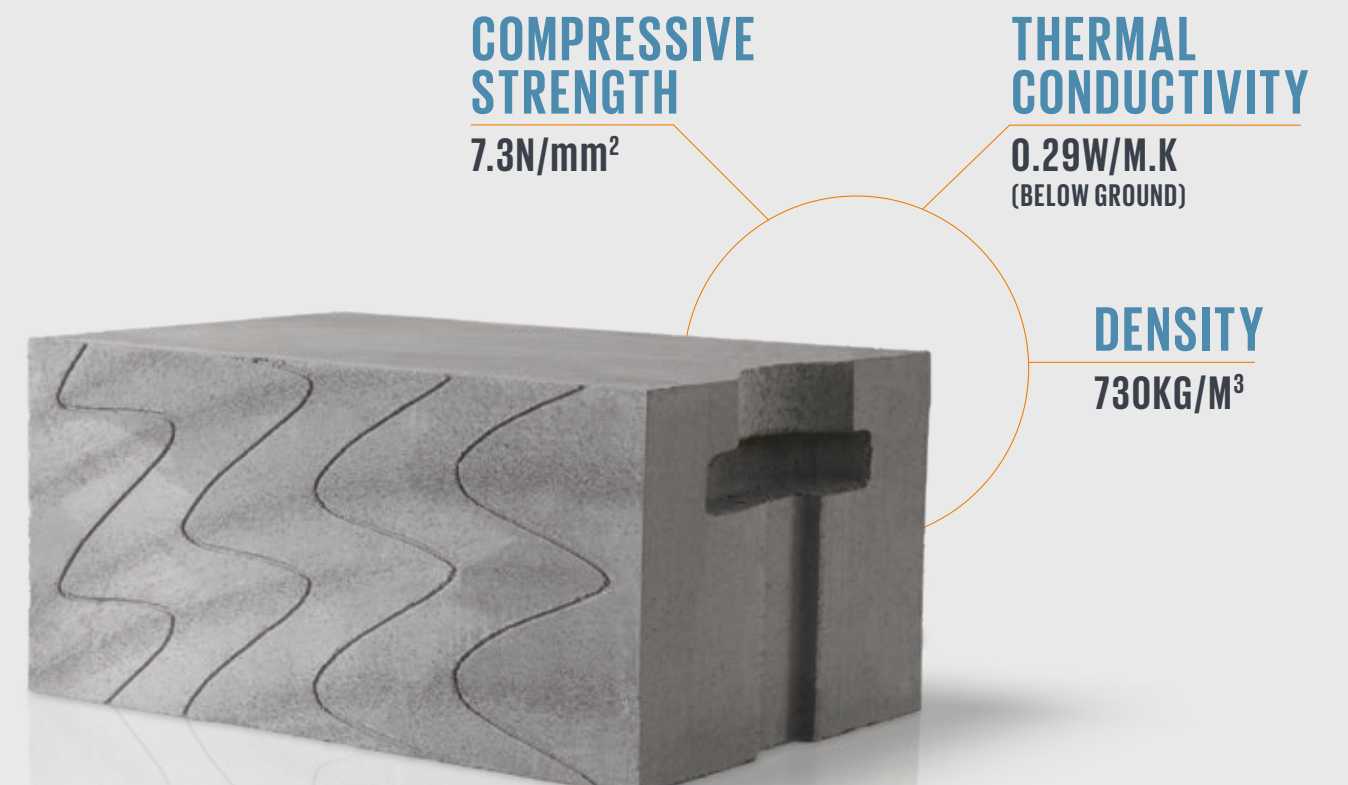
Δ All 140mm high trenchblocks are supplied without hand holds and tongue & grooves - they have flat ends.

# HI-STRENGTH 7 TRENCHBLOCK

## TONGUE & GROOVE

### FOUNDATIONS

Hi-Strength 7 Trenchblock T&G offers all the benefits of the 3.6N/mm<sup>2</sup> block, but with a compressive strength of 7.3N/mm<sup>2</sup>. It can be used in foundation applications for buildings up to three storeys high.



### Specifications

Face dimensions 440 x 215 (mm) 440 x 140 (mm) <sup>†Δ</sup>	Face Dimensions (mm) *			440 x 140 <sup>†Δ</sup>		
	<b>Thickness (mm) *</b>	255	300	355	255	300
<b>Weight (kg) *</b>	21.7	25.5	30.2	14.1	16.6	19.6

<sup>†</sup> Manufactured to special order only.

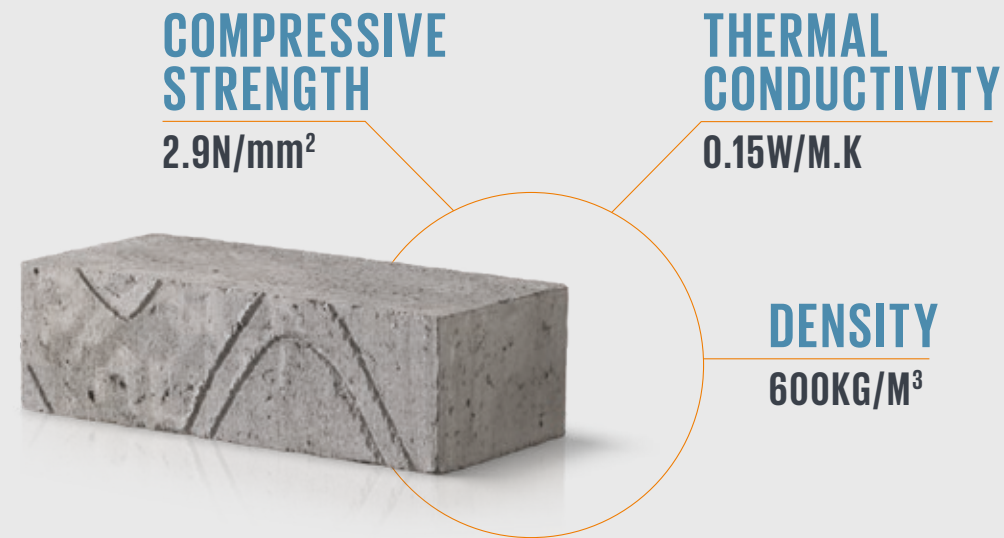
\* Block weights based on 23% moisture content (typical received), moisture equilibrium approximately 3% (protected) and 5% (exposed).

Δ All 140mm high trenchblocks are supplied without hand holds and tongue & grooves - they have flat ends.

# COURSING BRICK 2.9

BONDING • COURSING • INFILL • MAKING UP

Coursing brick units are Thermalite blocks, produced in standard brick sizes, for use in bonding and infill to ensure a uniform thermal performance throughout the wall.



## Specifications

FACE DIMENSIONS 215 x 65 (mm)	Thickness (mm) *	100	115 <sup>†</sup>	125 <sup>†</sup>	140	150 <sup>†</sup>
	Weight (kg) *	1.0	1.2	1.3	1.4	1.6

<sup>†</sup> Manufactured to special order only.

\* Block weights based on 23% moisture content (typical received), moisture equilibrium approximately 3% (protected) and 5% (exposed).

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# HI-STRENGTH 7 COURSING BLOCK

BONDING • COURSING • INFILL • MAKING UP

Coursing block units are Hi-Strength 7 Thermalite blocks produced in standard brick height and block length. Designed for use in bonding and infill to ensure a uniform thermal performance throughout the wall.



## Specifications

Face dimensions 440 x 65 (mm)	Thickness (mm) *	100	140
	Weight (kg) *	2.6	3.6

<sup>†</sup> Manufactured to special order only.

\* Block weights based on 23% moisture content (typical received), moisture equilibrium approximately 3% (protected) and 5% (exposed).

FOR TECHNICAL INFORMATION VISIT: [FORTERRA.CO.UK/THERMALITE](http://FORTERRA.CO.UK/THERMALITE)



## CASE STUDY ROSE MEADOWS



**Client:** Bellway

**Project:** a development of 227 two, three, four and five-bedroom homes and apartments in Cheshire

**Thermalite products used**

**Foundations:** Thermalite Trenchblock Tongue & Groove

**Ground floor walls:** Thermalite Shield

**Upper floor walls:** Thermalite Turbo

Andrew Millard of Bellway explains why Bellway selected products from the Thermalite range of aircrete blocks: "We chose Trenchblock Tongue & Groove for the foundations over traditional methods for a couple of reasons. Firstly, it's very effective in helping us to achieve the U-values required and, secondly, it is quick and easy to install, which helps to reduce build time. The decision to use Thermalite Shield for the ground floor walls and Turbo for the upper floor walls was based on the respective compressive strength of the two products."

# TECHNICAL SERVICES

**THERMAL PERFORMANCE  
SOUND INSULATION  
U-VALUE CALCULATIONS  
VISIT [FORTERRA.CO.UK](http://FORTERRA.CO.UK)**

**Forterra's technical team has a wealth of experience and expertise to help you make your project a success.**

For general construction advice or information about a product's performance, and industry best practice on how to use it, the team is on hand to answer your questions at every stage of your build.

If your project has hit a wall, the team's problem-solving skills are second to none. By involving them from a project's earliest stage, they are able to use their true value engineering know-how to help you make your architectural design concept reality while keeping budgets under control.

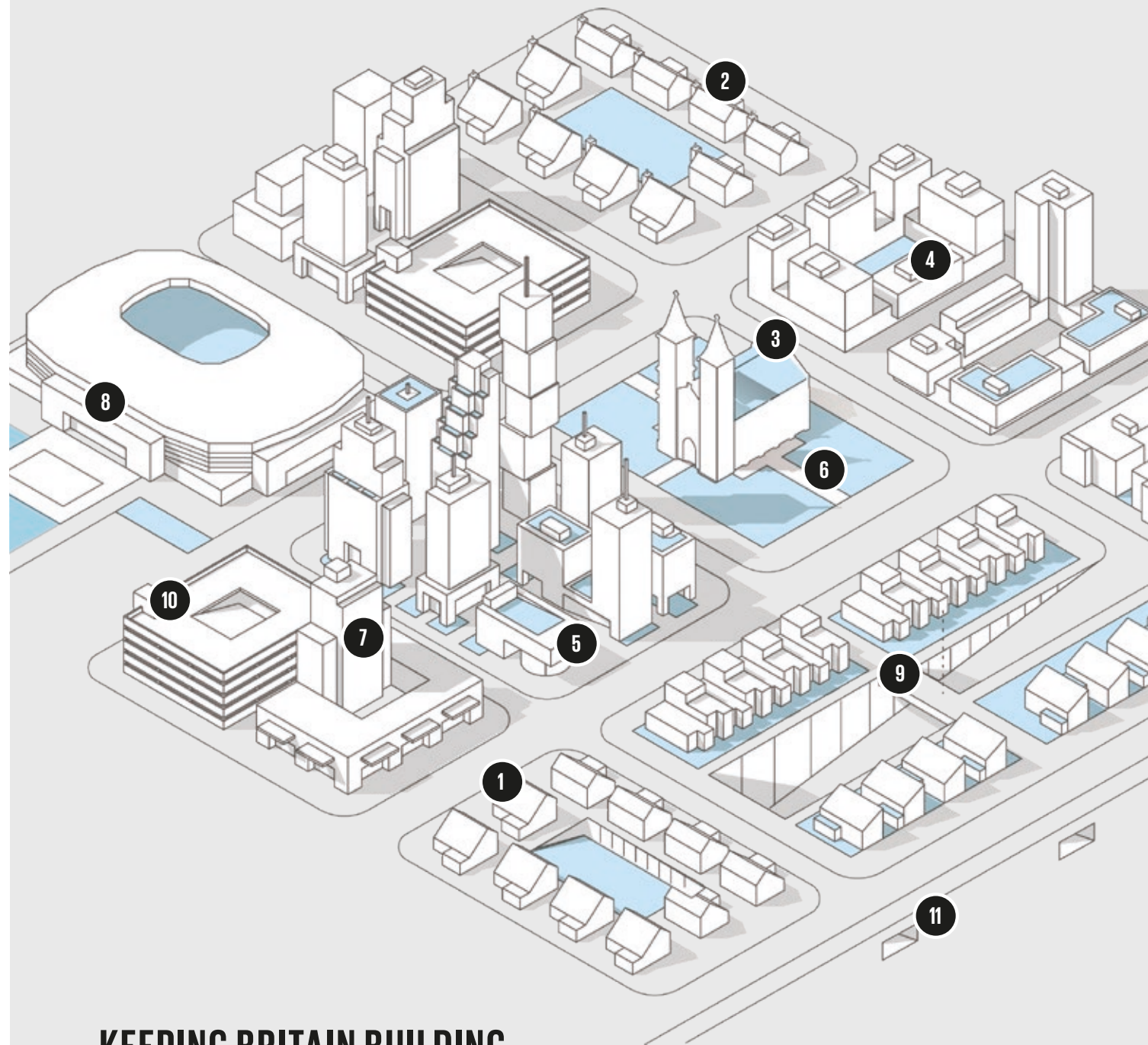
The team can arrange official U-value assessments, supply technical specifications and product declarations for all the products in the Thermalite range.

**FOR FURTHER ADVICE CONTACT OUR  
TECHNICAL TEAM: 0330 123 1018**



# THE COMPLETE FORTERRA RANGE

Our extensive product range covers all your construction requirements, from initial ground work through to finished build.



KEEPING BRITAIN BUILDING

## 1. BRICKS AND BLOCKS

LONDON BRICK  
ECOSTOCK  
BUTTERLEY  
THERMALITE  
CONBLOC



## 2. CHIMNEY AND FLUE SYSTEMS

RED BANK



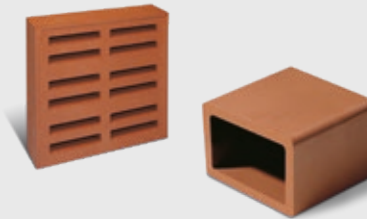
## 3. RIDGE TILES AND FINIALS

RED BANK



## 4. AIR BRICKS AND CAVITY WALL BRIDGING DUCTS

RED BANK



## 5. SPECIAL SHAPED BRICKS

GRADLEY



## 6. PERMEABLE PAVING SYSTEMS

FORMPAVE



## 7. WALLING AND CLADDING SYSTEMS

SUREBRICK



## 8. PRECAST CONCRETE

JETFLOOR  
BEAM AND BLOCK  
HOLLOWCORE



## 9. PRECAST CONCRETE

OMNIA BRIDGE DECK



## 10. PRECAST CONCRETE

STAIRS AND LANDINGS



## 11. PRECAST CONCRETE

RETAINING WALLS  
BOX CULVERTS



TALK TO OUR SPECIALISTS ON  
**0370 5626500**

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Forterra is a leading manufacturer of a diverse range of clay and concrete building products, used extensively within the construction sector, and employs over 1,800 people across 17 manufacturing facilities in the UK.

It is the second largest brick and aircrete block manufacturer in the country, and the only producer of the iconic London Brick. Other trusted brands from Forterra include Thermalite, Conbloc, Ecostock, Butterley, Cradley, Red Bank, Bison Precast and Formpave.

**[forterra.co.uk](https://forterra.co.uk)**

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