



THERMALITE AIRCRETE BLOCK GUIDE

THERMALITE

THERMALITE

a **Forterra** brand

LIGHTWEIGHT, SUSTAINABLE & THERMALLY EFFICIENT

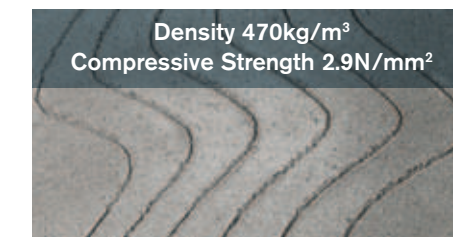
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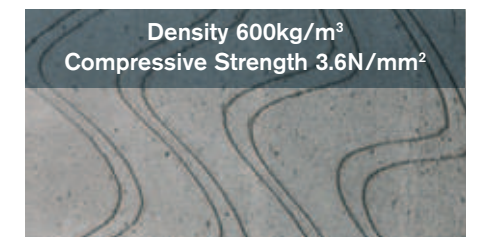
PRODUCT IDENTIFICATION

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.



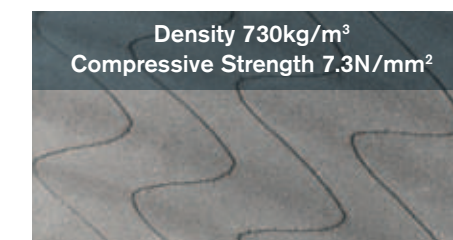
6 SCRATCH MARKS

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 A 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 CO₂ 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

The waste from the process is crushed and recycled to be used in either the next mix or 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



VISIT

forterra.co.uk

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

THERMALITE
SUSTAINABILITY
AT ITS CORE



BUILD

High thermal insulation

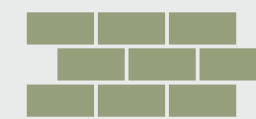
Contributes to reducing heat loss through the envelope

High sound insulation

Insulating against noise from adjoining buildings and external sources

Thermal mass

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



CONSTRUCTION

Health and safety

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

CO₂ and Transport

Low density contributes to reduced transport CO₂ per tonne



**STRONG
LIGHTWEIGHT
EFFICIENT
FAST
SUSTAINABLE
VERSATILE**



TURBO

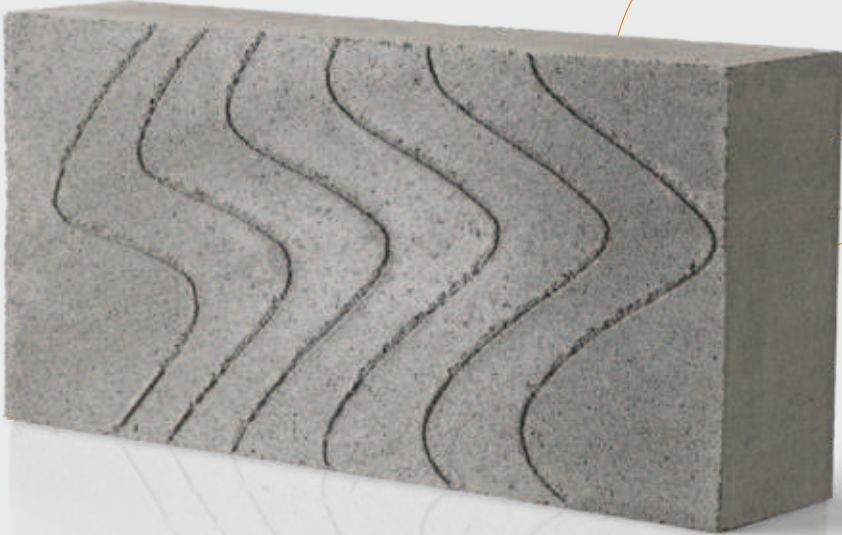
EXTERNAL WALLS • FOUNDATIONS • PARTITIONS

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/mm²

**THERMAL
CONDUCTIVITY**
0.11W/m.K (Protected)

DENSITY
470Kg/m³



Specifications

Face dimensions 440 x 215 (mm)	Thickness (mm) *	100	140	150 [†]	190 [†]	200 [†]	215
	Weight (kg) *	6.1	8.5	9.1	11.5	12.1	13

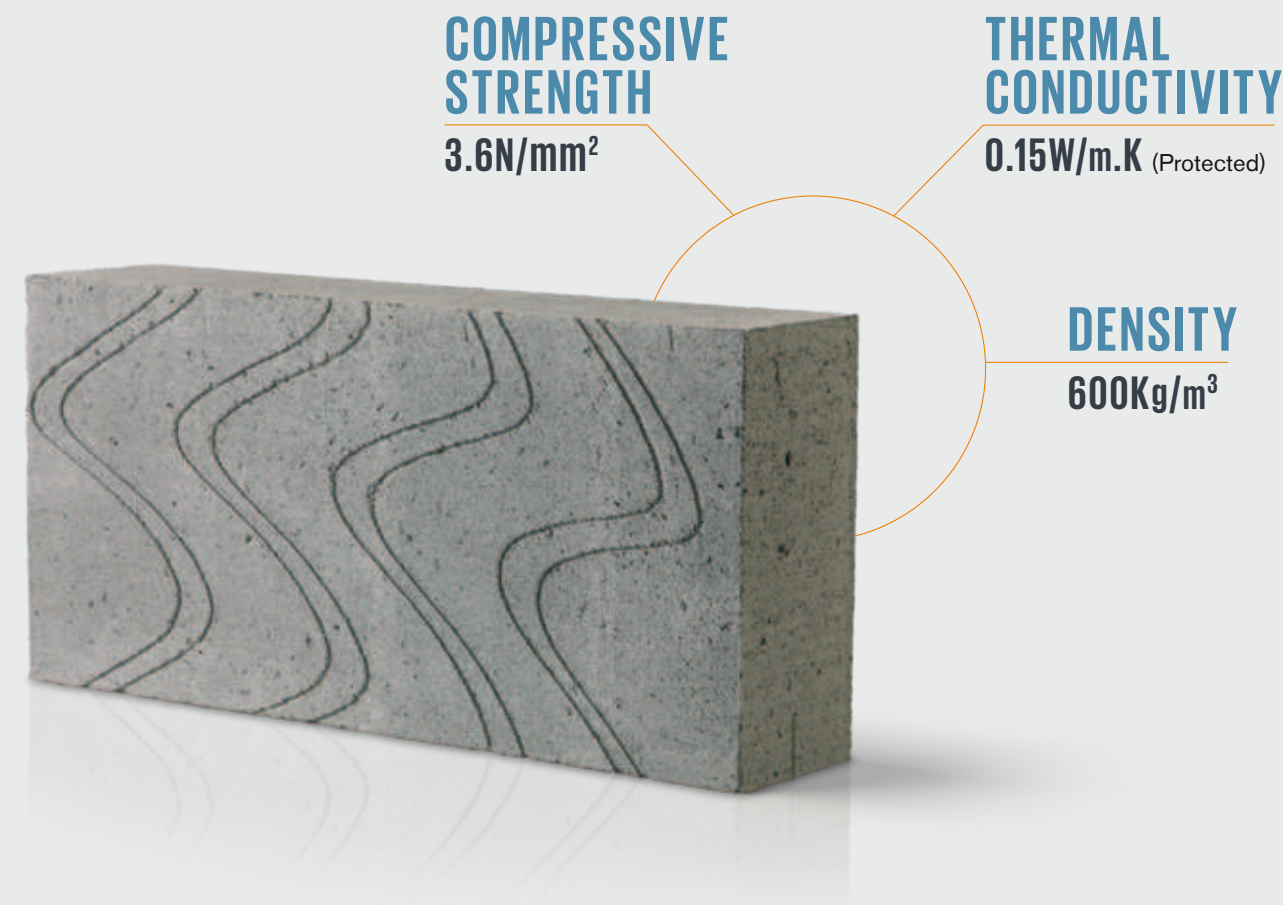
[†] Manufactured to special order only.
* Block weights based on gross density plus 50kg/m³ @ 23% moisture content (typical received), moisture equilibrium approximately 3% (protected) and 5% (exposed).

FOR TECHNICAL INFORMATION VISIT: [FORTERRA.CO.UK/THERMALITE](https://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 [†]	215 [†]
	Weight (kg) *	3.8	5.7	7.6	10.6	11.3	15.1	16.3

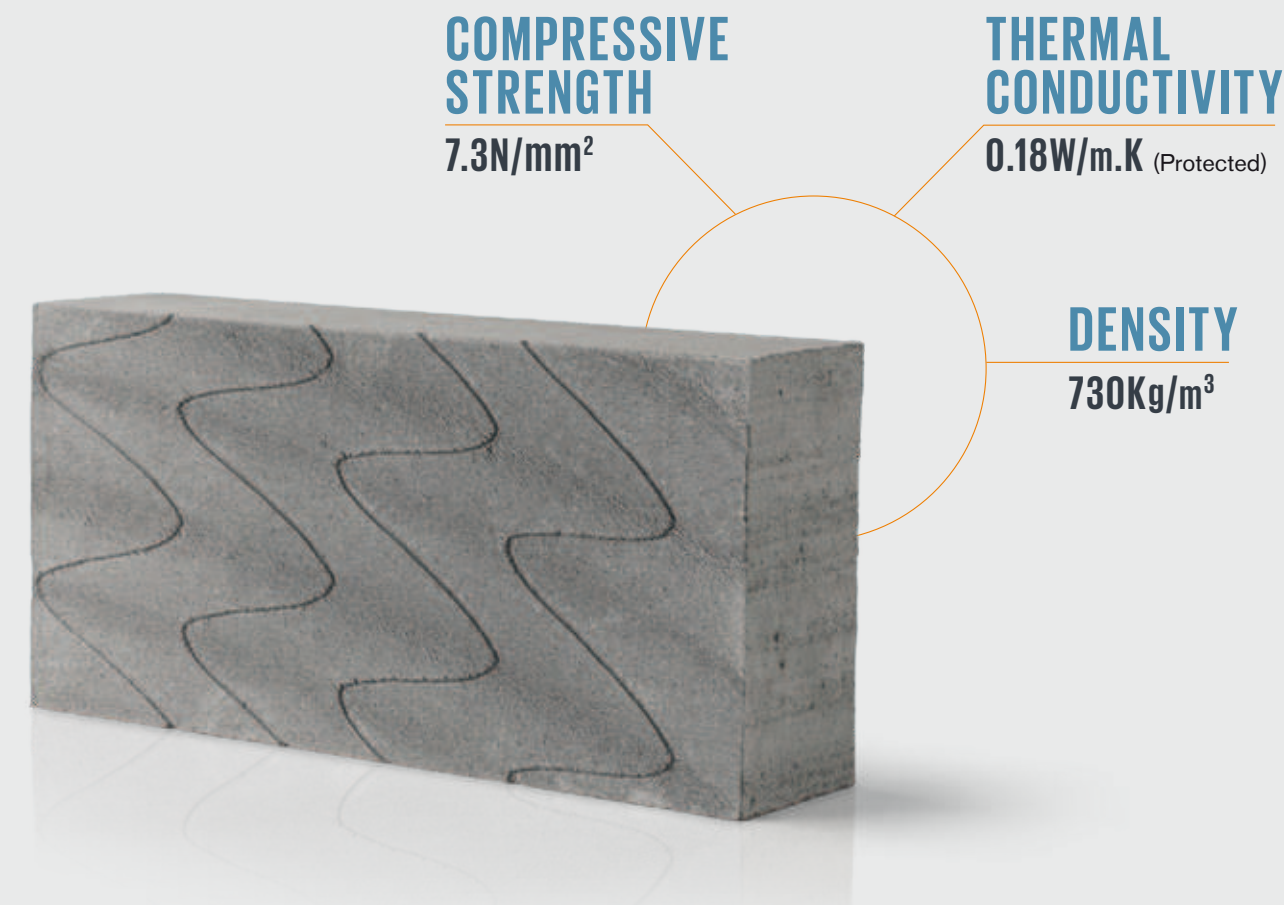
[†] Manufactured to special order only.
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FOR FURTHER ADVICE CONTACT OUR TECHNICAL TEAM: 0330 123 1018

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/mm² building block.



Specifications

Face dimensions 440 x 215 (mm)	Thickness (mm) *	100	140	150 [†]	190 [†]	200 [†]	215
	Weight (kg) *	9.1	12.7	13.6	17.2	18.2	19.5

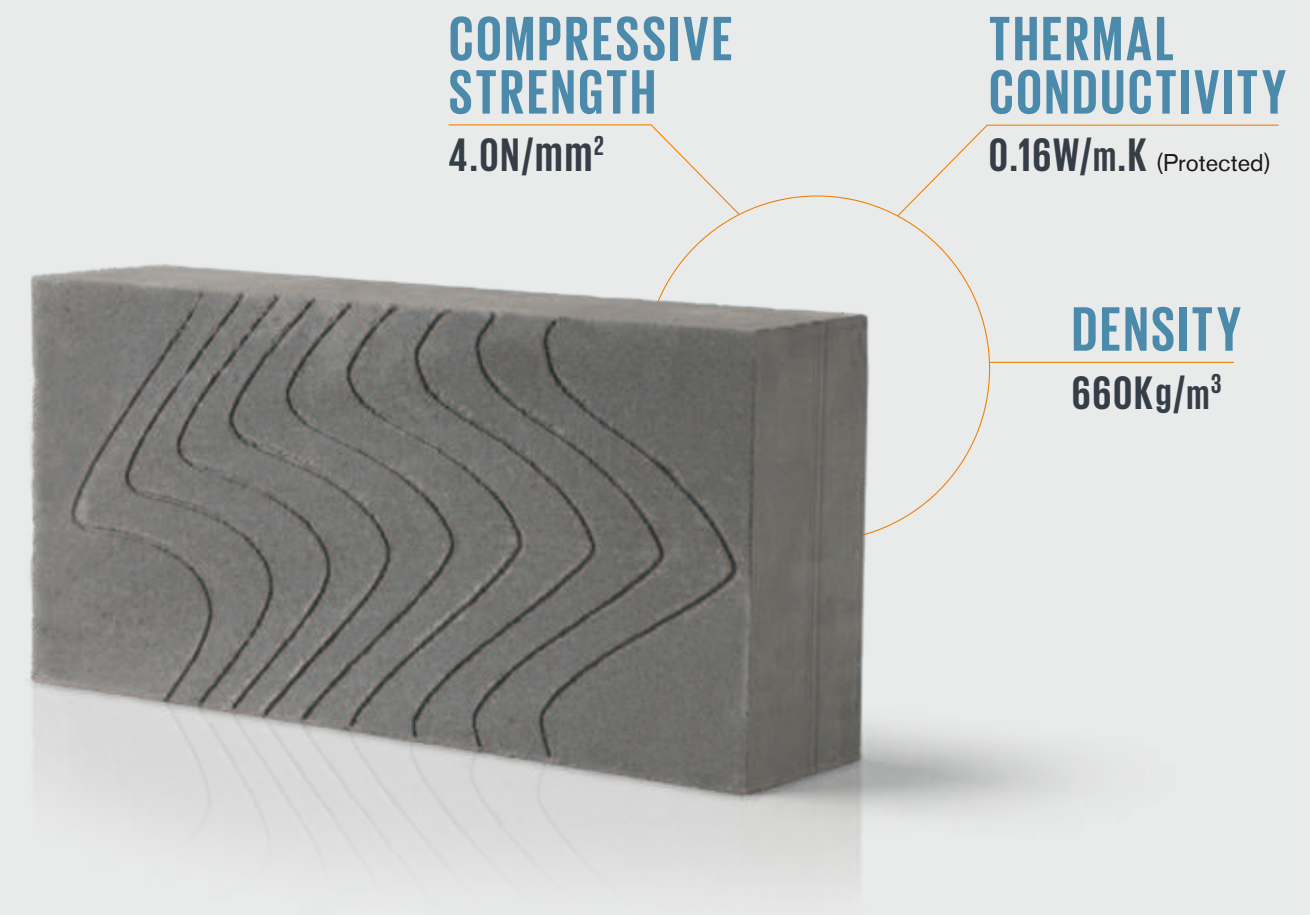
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PARTY WALL

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) *	8.3	17.8

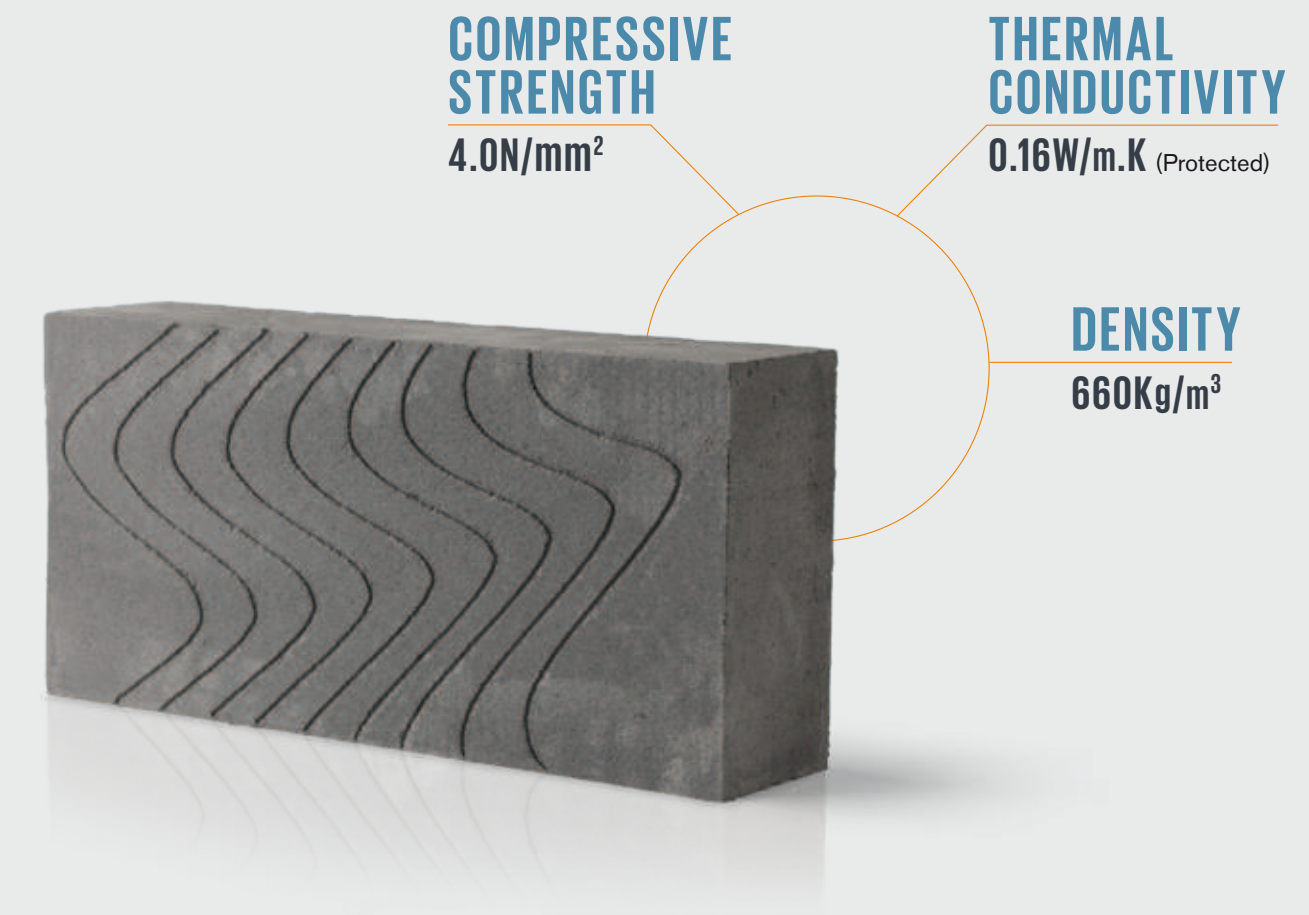
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FLOORBLOCK

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) *	8.3

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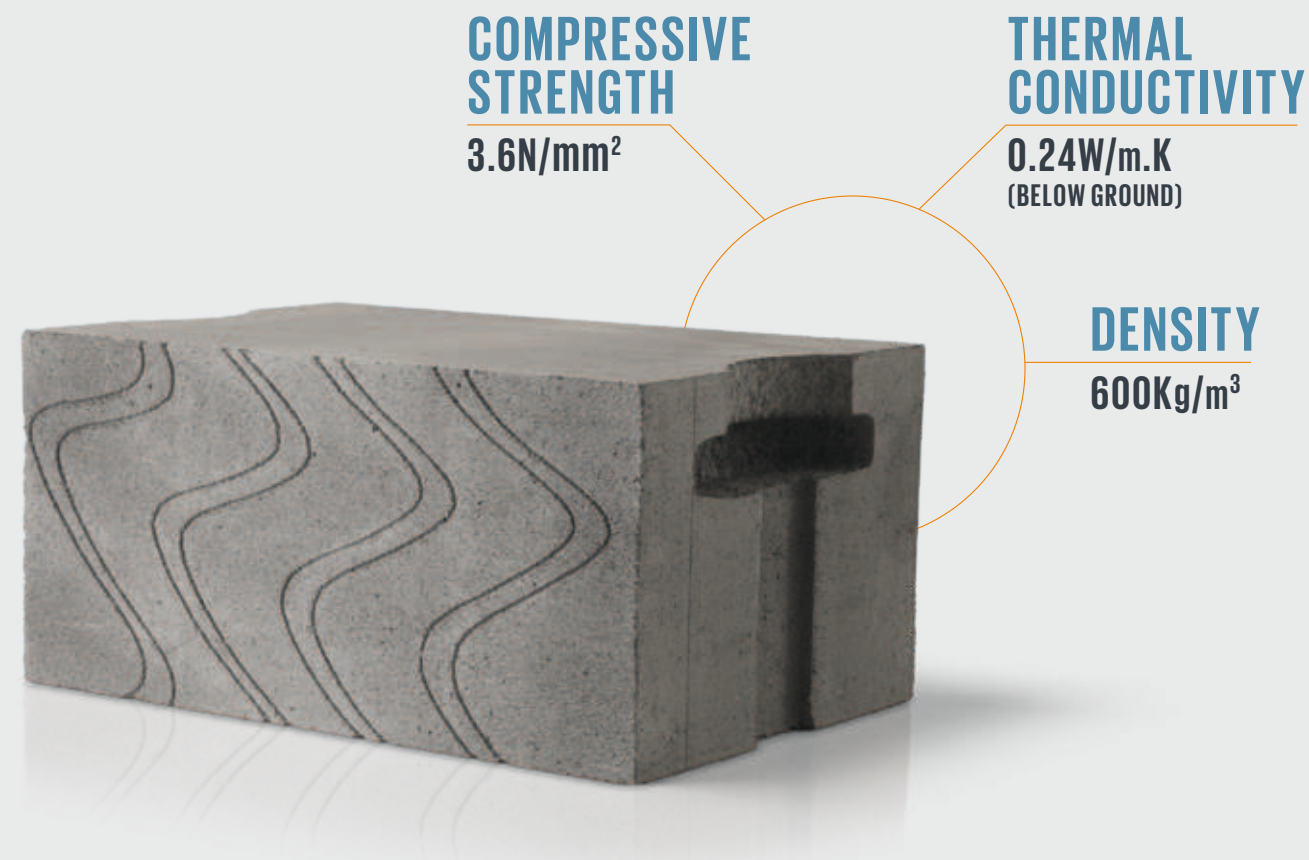
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TRENCHBLOCK 3.6

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 perpend.



Specifications

Face dimensions 440 x 215 (mm)	Face Dimensions (mm) *			
	440 x 215			
	Thickness (mm) *	255†	300 ⚠	355 ⚠
	Weight (kg) *	19.3	22.7	26.9

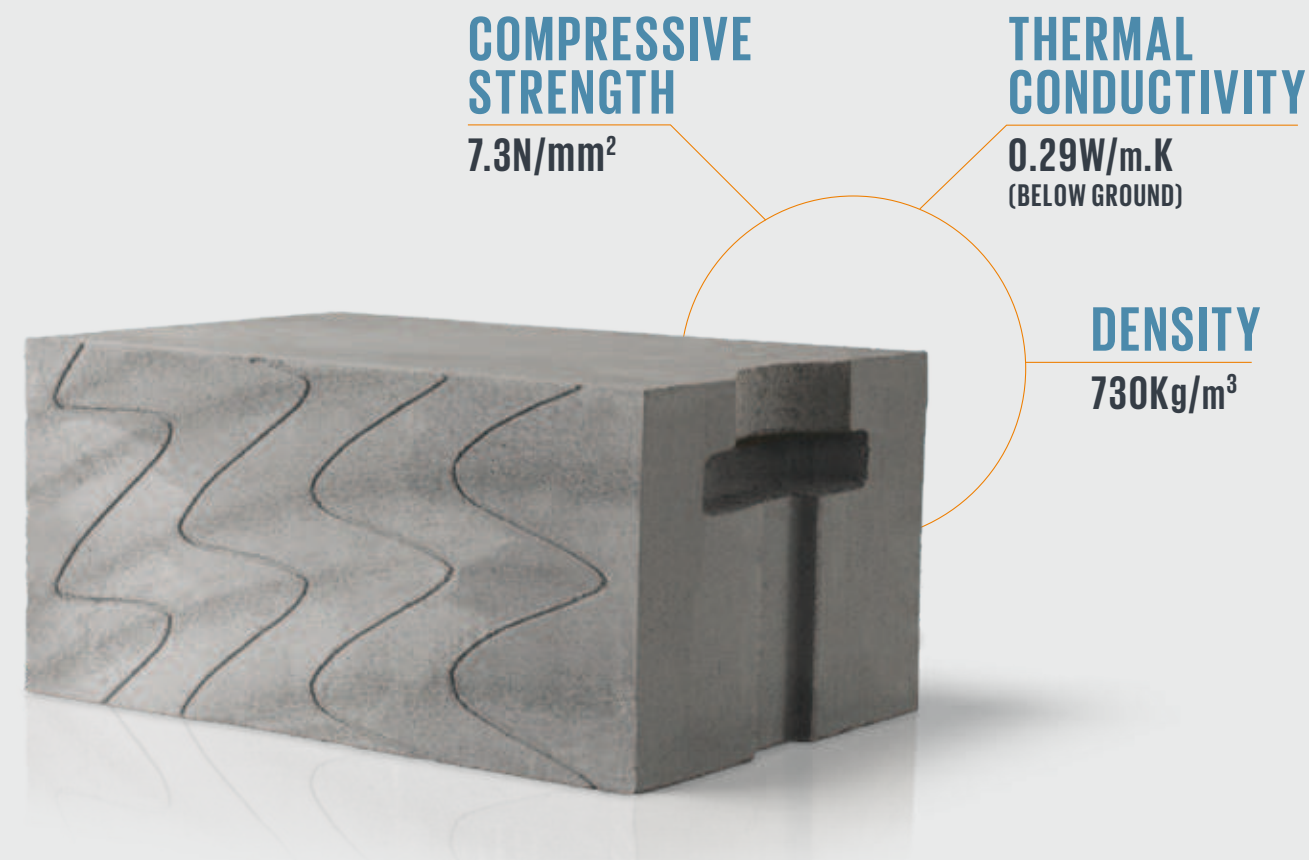
† Manufactured to special order only. ⚠ CAUTION HEAVY ITEMS >20kg
* Block weights based on gross density plus 50kg/m³ @ 23% moisture content (typical received), moisture equilibrium approximately 3% (protected) and 5% (exposed).

HI-STRENGTH 7 TRENCHBLOCK

TONGUE & GROOVE

FOUNDATIONS

Hi-Strength 7 Trenchblock T&G offers all the benefits of the 3.6N/mm² block, but with a compressive strength of 7.3N/mm². It can be used in foundation applications for buildings up to three storeys high.



Specifications

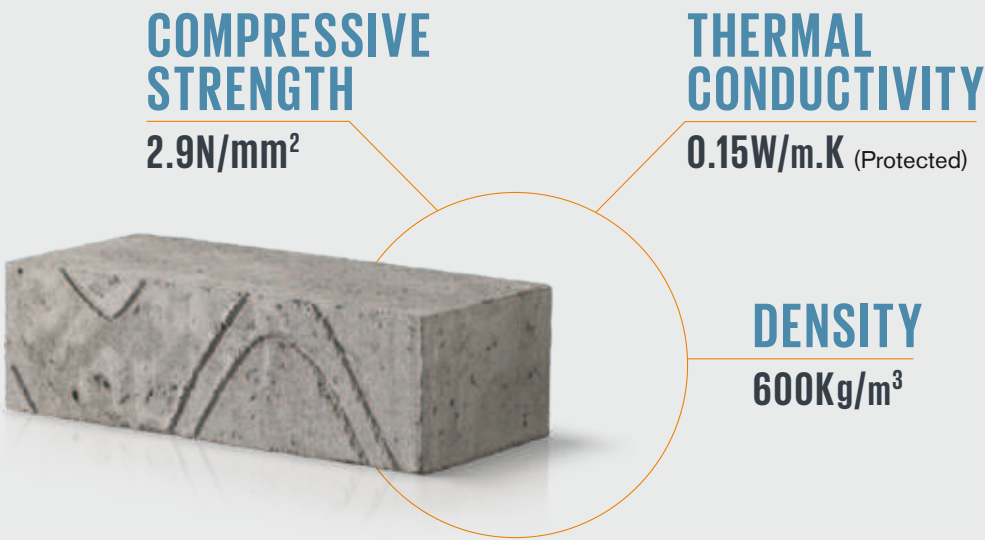
Face dimensions 440 x 215 (mm)	Face Dimensions (mm) *			
	440 x 215			
	Thickness (mm) *	255† ⚠	300 ⚠	355 ⚠
	Weight (kg) *	23.2	27.2	32.2

† Manufactured to special order only. ⚠ CAUTION HEAVY ITEMS >20kg
* Block weights based on gross density plus 50kg/m³ @ 23% moisture content (typical received), moisture equilibrium approximately 3% (protected) and 5% (exposed).

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	140
	Weight (kg) *	1.1	1.6

† Manufactured to special order only.
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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) *	2.7	3.8

† Manufactured to special order only.
* Block weights based on gross density plus 50kg/m³ @ 23% moisture content (typical received), moisture equilibrium approximately 3% (protected) and 5% (exposed).

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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](https://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.

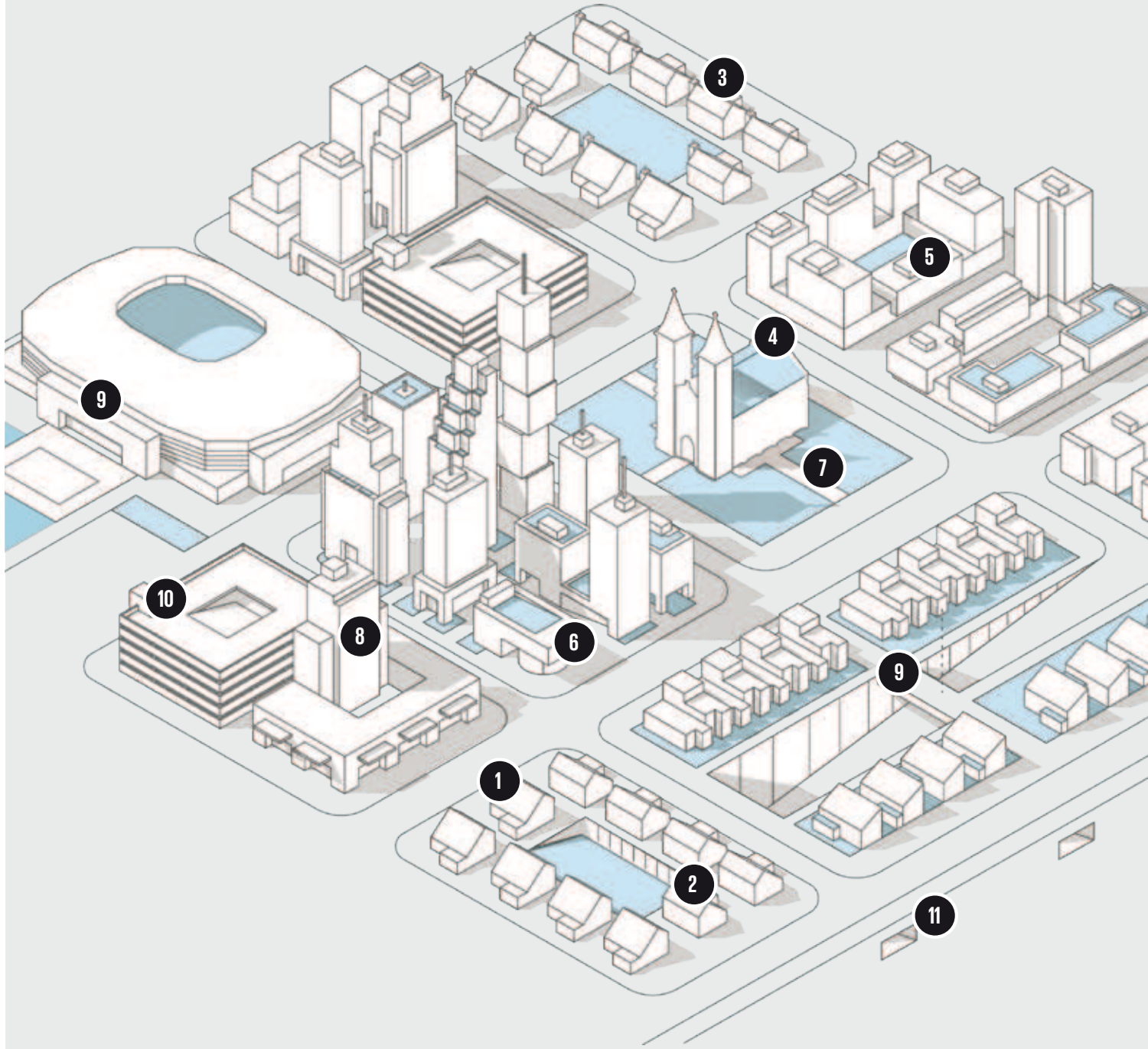
The team can arrange official U-value assessments, supply technical specifications and product declarations for all the products in the Thermalite range.

**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.



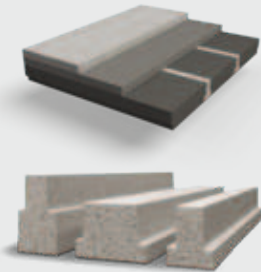
1. BRICKS AND BLOCKS

LONDON BRICK
ECOSTOCK
BUTTERLEY
THERMALITE
CONBLOC



2. PRECAST CONCRETE

JETFLOOR
BEAM AND BLOCK



3. CHIMNEY AND FLUE SYSTEMS

RED BANK



4. RIDGE TILES AND FINIALS

RED BANK



5. AIR BRICKS AND CAVITY WALL BRIDGING DUCTS

RED BANK



6. SPECIAL SHAPED BRICKS

CRADLEY



7. PERMEABLE PAVING SYSTEMS

FORMPAVE



8. WALLING AND CLADDING SYSTEMS

SUREBRICK



9. PRECAST CONCRETE

HOLLOWCORE



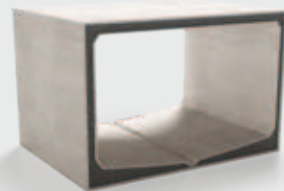
10. PRECAST CONCRETE

STAIRS AND LANDINGS



11. PRECAST CONCRETE

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 1,600 people across 16 manufacturing facilities in the UK.

We are one of the largest brick and aircrete block manufacturers in the country, and the only producer of the iconic London Brick. Other trusted brands include Thermalite, Conbloc, Ecostock, Butterley, Cradley, Red Bank, Bison Precast and Formpave.

forterra.co.uk

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