

40606 - 3CR Main Works
Technical Submittal
3CR-LTR-BW-MF-XX-TEC-O-0017

Document Title:	Concrete blocks for external walls of Annex building.
Document Number:	3CR-LTR-BW-MF-XX-TEC-O-0017
Reason for Issue:	For approval
Revision:	C01

Revision No.:	Date:	Description:
C01	15 11 2024	For approval

Project Name:	3CR Annex	Document Number:	3CR-LTR-BW-MF-XX-TEC-O-0017	
Project Address:	Johnson Matthey, Orchard Road, Royston, Hertfordshire SG8 5HE			
Project Manager:	Sigitas Michailovskis	Issue Date:	15 11 2024	

Material or Supplier Proposal:

For the attention of:

Fluor

The following material or supplier is proposed for use in the completion of the Project. The following information is provided for your review and approval prior to the commencement, installation or use on the Project.

Material or Supplier:	E.H Smith LTD	Product Name:	Concrete block
Material or Supplier Address:	12 Windover Road Huntingdon Cambridgeshire PE29 7EB	Source: [e.g. Quarry, Plant, Specified Manufacturer]	

Contract Reference,
Specification or Clause:

Material or Supplier Description
& Supporting Selection Detail:

Concrete blocks for external walls of Annex building.

General Comments:

Fairface Classic

The subtle beauty of burnished natural aggregates.
A subtly burnished finish brings out all the deeply embedded beauty of the natural aggregates. For projects where reduced glare is a consideration this finish offers an understated beauty for internal or external walls.

Certification attached (Mandatory)

Certification type

☐ Declaration of Performance/Conformity

☐ CE Marking

☒ Data sheet

☐ ISO 9001 / ISO 14001

☐ Kitemark

☐ Other (please specify) – drawing

Issued for Approval by:

Name: Sigitas Michailovskis

Position: Project Manager

Signed: S.M

Date: 15 11 2024

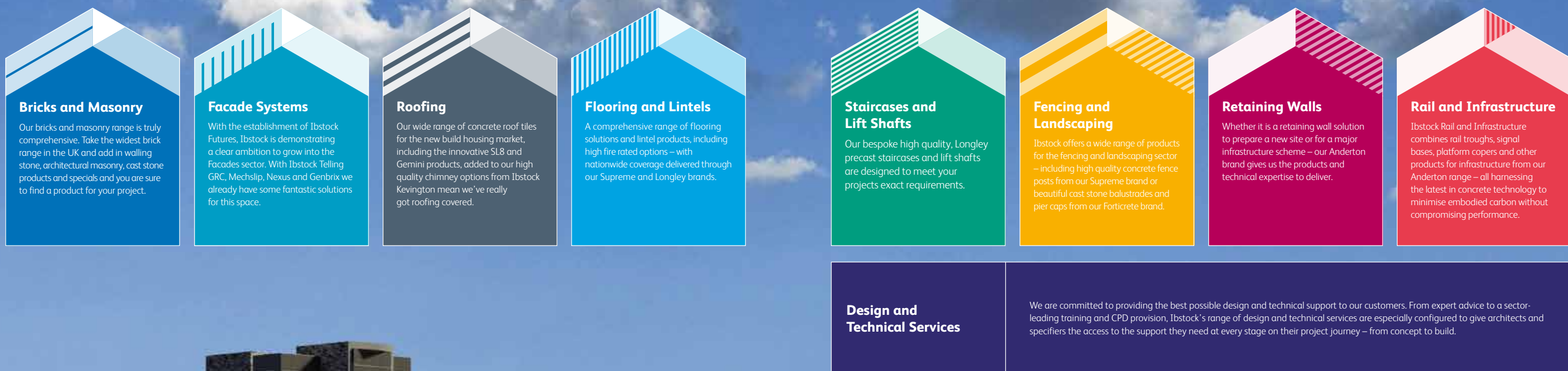
Materials or Supplier Approval or Rejection:				
For the attention of:	FLUOR			
The above material or supplier as proposed for use in the completion of the Project has been reviewed in line with the sample, technical data, certification, specification, references etc. as supplied, and the material or supplier is:				
☐ Approved	☐ Approved [with comments]	☐ Approved [with conditions]	☐ Rejected	
Comments, Conditions or Reasons for Rejection:				
Approval or Rejection Issued by:	Name:	Representing:	Signed:	Date:

WE ARE
Masonry and more.



Ibstock
At the heart of building

ARCHITECTURAL
MASONRY RANGE

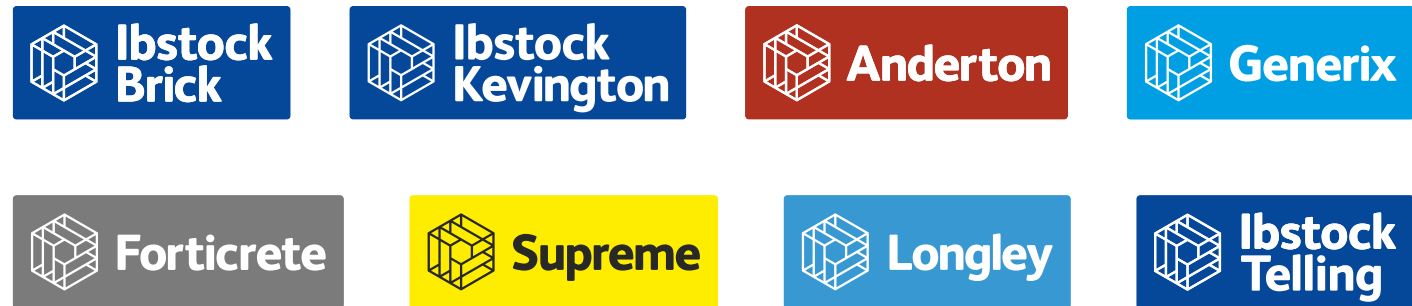


WE ARE
at the heart of building.

We offer a diverse range of building products, solutions and expert technical and design services that enable our customers to create inspirational spaces and places.

Everything we do revolves around our valued customers and we continuously strive to exceed their expectations. We pride ourselves on leading for new, innovative and sustainable products and solutions, both for today and for a new era of building.

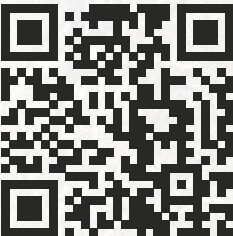
WE ARE at the heart of building. WE ARE Ibstock.



www.ibstock.co.uk

OUR SUSTAINABILITY COMMITMENT

Our guiding purpose is to build a better world by being at the heart of building. To achieve this, we have developed an Environmental, Social and Governance Strategy, our ESG Strategy 2030, simplifying the way we articulate our goals and ambitions.

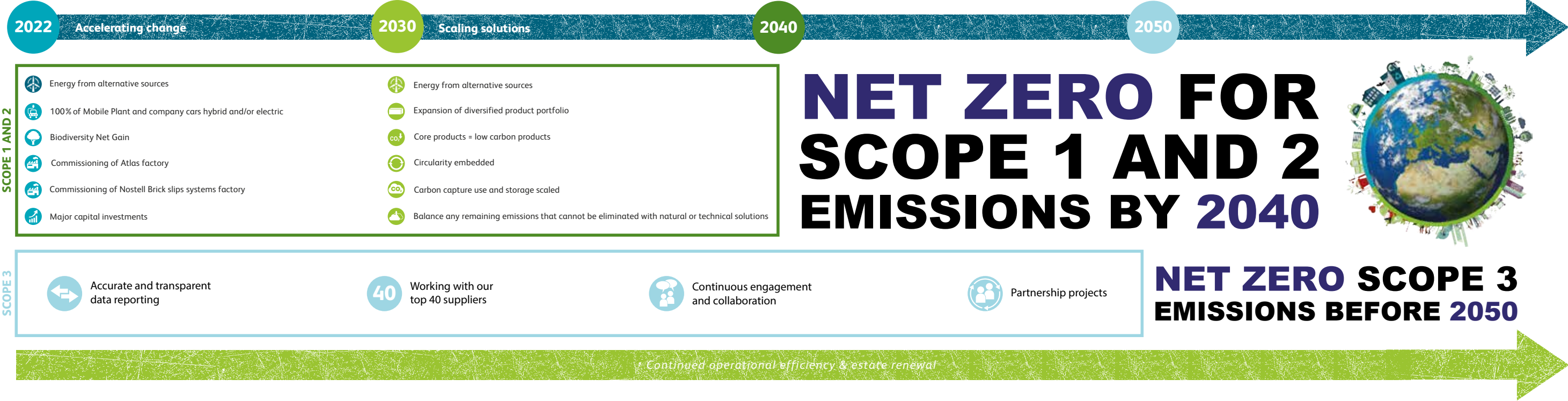


Please scan the QR code to find out more.

- Carbon reduction**
Reduce absolute Carbon (Scope 1 and 2) by 40 % against 2019 baseline.
- Water efficiency**
Reduce mains water use by 25 % per tonne of production against a 2019 baseline.
- Biodiversity net gain**
Achieve Biodiversity Net Gain across our estate using Biodiversity Metric 2.0.
- Product innovation**
Achieve 20 % sales turnover from new products and solutions that deliver customer value and improved sustainability.
- Dematerialisation**
Reduce raw materials consumption with a focus on plastics, secondary aggregate and cementitious replacements.
- Circular economy**
Embed circular economy principles into the business, prioritising zero waste and driving demand for secondary materials markets.



- Health, safety & wellbeing**
Ensure all our employees can be at their best more of the time through our health, safety and wellbeing strategies.
- Inspiring futures**
Provide development and growth for all, with every employee developing their skills annually and 10 % in Earn and Learn positions.
- Employee experience**
Increase female senior leadership representation to 40 % by 2027 as part of our proactive approach to diversity and inclusion.



WE ARE

Masonry and more.

With over 30 years of manufacturing expertise in Architectural Masonry, our range provides decorative concrete facing blocks and specials, which provide a modern, cost effective building solution.

The decorative concrete facing blocks are maintenance free and are available in a wide selection of colours and textures, with up to 40% recycled materials used across the range.

We are proud to design a range of Architectural Masonry which delivers up to a 25% reduction in embodied carbon per tonne vs traditional concrete mixes*

* This figure was calculated and verified by our concrete materials team.

Just some of the benefits to specifying Ibstock Architectural Masonry include:

- The products are suitable for internal and external use
- Less wet trades are required on site
- The range can be used below DPC and up to DS-3 conditions
- Excellent fire resistance
- One block per 6 bricks is needed, therefore less mortar is required

Recycled material content by range

PRODUCT RANGE	COLOUR	SECONDARY AND RECYCLED CONTENTS
DCM	Autumn	15%
DCM	Bathstone	20%
DCM	Damson	15%
DCM	Hallmark Diamond White	0%
DCM	Flint	20%
DCM	Hamstone	20%
DCM	Ivory	10%
DCM	Pewter	15%
DCM	Sandstone	20%
DCM	Sports Green	20%
DCM	Sports Blue	20%
DCM	Spruce	15%
DCM	Straw	20%
DCM	Steel Grey	20%
DCM	Terracotta	20%
DCM	Yorkstone	20%
Novastone	White	40%

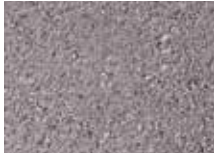
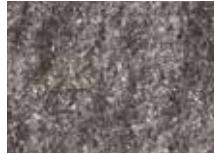
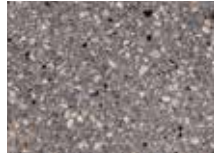
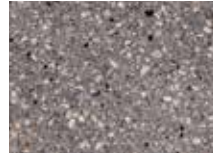
AR Residence
Linear Ivory Shot-blasted



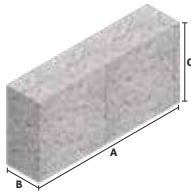
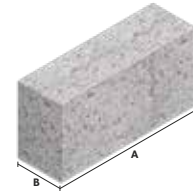
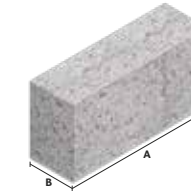
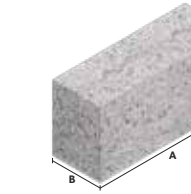
Royal Russell School, Croydon
Polished Venezia in Bathstone

THE CLASSIC RANGE

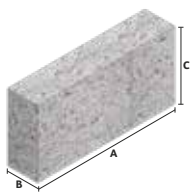
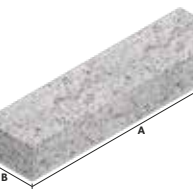
Tradition defined. Our most popular sizes and finishes, for that timeless look.

COLOURS	FAIRFACE	SHOT-BLASTED	SPLITFACE	POLISHED VENEZIA™	POLISHED FLORENTINE®
Pewter Recycled content: 15%					
Steel Grey Recycled content: 20%					
Flint Recycled content: 20%					
Ivory Recycled content: 10%					
Bathstone Recycled content: 20%					
Sandstone Recycled content: 20%					

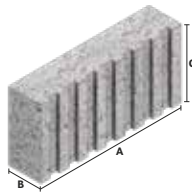
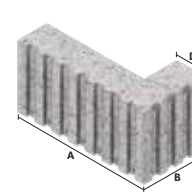
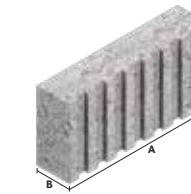
STANDARD BLOCKS

					
D1	H1	H2 - Hi-Light	K1	P1	B1
A B C WEIGHT	A B C WEIGHT	A B C WEIGHT	A B C WEIGHT	A B C WEIGHT	A B C WEIGHT
440mm 100mm 215mm 19.8KG	440mm 140mm 215mm 28.0KG	440mm 140mm 215mm 19.0KG	390mm 90mm 190mm 14.0KG	390mm 140mm 190mm 21.8KG	440mm 100mm 65mm 6.26KG
		Not available in Novastone			Linear not available in Novastone or Fairface

SPLITFACE BLOCKS

	
S4	S1
A B C WEIGHT	A B C WEIGHT
440mm 95mm 215mm 18.9KG	440mm 107.5mm 65mm 6.9KG

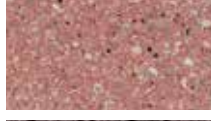
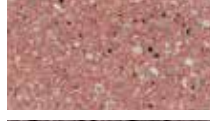
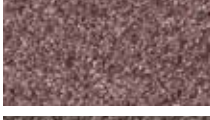
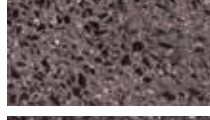
RIBLOC

		
E57	E58	E51
A B C WEIGHT	A B+C D WEIGHT	A B C WEIGHT
440mm 100mm 215mm 18.7KG	440mm 215mm 100mm 23.7KG	390mm 90mm 190mm 13KG
Not available in Novastone	Not available in Novastone	Not available in Novastone

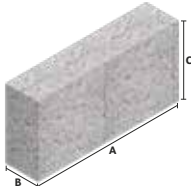
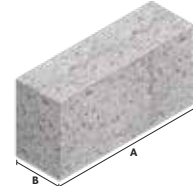
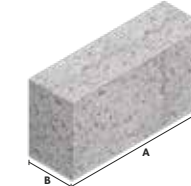
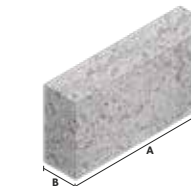
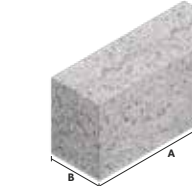
*Not recommended for large expanses of block work

THE PREMIER RANGE

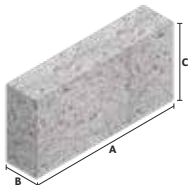
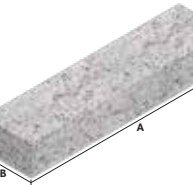
Available in a range of sizes and finishes for guaranteed kerb appeal, every time.

COLOURS	FAIRFACE	SHOT-BLASTED	SPLITFACE	POLISHED VENEZIA™	POLISHED FLORENTINE®
Yorkstone Recycled content: 20%					
Hamstone Recycled content: 20%					
Straw Recycled content: 20%					
Terracotta Recycled content: 20%					
Damson Recycled content: 15%					
Autumn Recycled content: 15%					
Spruce Recycled content: 15%					
Sports Green Recycled content: 20%					

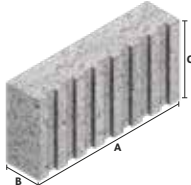
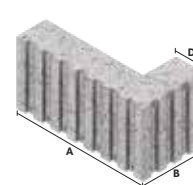
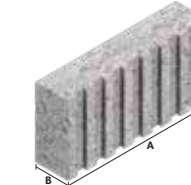
STANDARD BLOCKS

					
D1	H1	H2 - Hi-Light	K1	P1	B1
A B C WEIGHT	A B C WEIGHT	A B C WEIGHT	A B C WEIGHT	A B C WEIGHT	A B C WEIGHT
440mm 100mm 215mm 19.8KG	440mm 140mm 215mm 28.0KG	440mm 140mm 215mm 19.0KG	390mm 90mm 190mm 14.0KG	390mm 140mm 190mm 21.8KG	440mm 100mm 65mm 6.26KG
		Not available in Novastone			Linear not available in Novastone or Fairface

SPLITFACE BLOCKS

	
S4	S1
A B C WEIGHT	A B C WEIGHT
440mm 95mm 215mm 18.9KG	440mm 107.5mm 65mm 6.9KG

RIBLOC

		
E57	E58	E51
A B C WEIGHT	A B+C D WEIGHT	A B C WEIGHT
440mm 100mm 215mm 18.7KG	440mm 215mm 100mm 23.7KG	390mm 90mm 190mm 13KG
Not available in Novastone	Not available in Novastone	Not available in Novastone

*Not recommended for large expanses of block work

Bromley South Central
Splitface in Hallmark
Diamond White and Pewter

COLOURS

**Hallmark
Diamond
White**

Recycled
content:
0%

**Sports
Blue**

Recycled
content:
20%

**Novastone
White**

Recycled
content:
40%

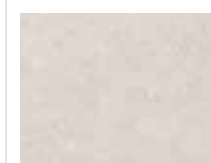
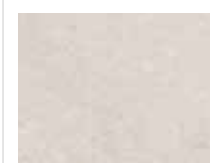
FAIRFACE



SHOT-BLASTED



SPLITFACE

POLISHED
VENEZIA™POLISHED
FLORENTINE®

STANDARD BLOCKS



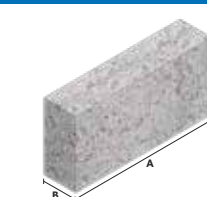
D1	A	B	C	WEIGHT
	440mm	100mm	215mm	19.8KG



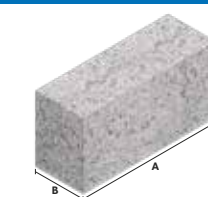
H1	A	B	C	WEIGHT
	440mm	140mm	215mm	28.0KG



H2 - Hi-Light	A	B	C	WEIGHT
	440mm	140mm	215mm	19.0KG
Not available in Novastone				



K1	A	B	C	WEIGHT
	390mm	90mm	190mm	14.0KG



P1	A	B	C	WEIGHT
	390mm	140mm	190mm	21.8KG



B1	A	B	C	WEIGHT
	440mm	100mm	65mm	6.26KG
Linear not available in Novastone or Fairface				

SPLITFACE BLOCKS

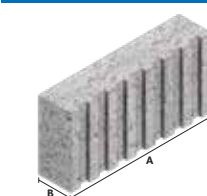


S4	A	B	C	WEIGHT
	440mm	95mm	215mm	18.9KG

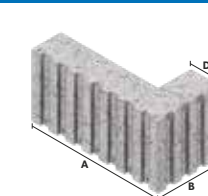


S1	A	B	C	WEIGHT
	440mm	107.5mm	65mm	6.9KG

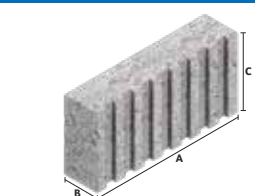
RIBLOC



E57	A	B	C	WEIGHT
	440mm	100mm	215mm	18.7KG
Not available in Novastone				



E58	A	B+C	D	WEIGHT
	440mm	215mm	100mm	23.7KG
Not available in Novastone				



E51	A	B	C	WEIGHT
	390mm	90mm	190mm	13KG
Not available in Novastone				

THE EXCLUSIVE RANGE

For those extra special projects, where aesthetics and innovation are key.

WE ARE Linear bricks and more.

You won't believe the lengths we go to...

ELEGANT, COLOURFUL AND WONDERFULLY LONG CONCRETE BRICKS

Available in lengths up to 440mm in 65mm height, Linear allows you to accentuate the linearity of the façade to create a range of dramatic new effects that take architecture to a new level.

Many different textures and colours means no compromises when it comes to choosing exactly the appearance you want.

DESIGNING WITH LINEAR BRICKS

Linear opens up a completely new aesthetic for buildings, whilst still maintaining the durability and low maintenance attributes associated with one of our most enduring building materials.

The different dimensions can be easily accommodated with just a little extra thought, yet give you additional flexibility to create a unique canvas for your building.



SPECIALS AVAILABLE

90-DEGREE QUOINS

 D16 <table> <tr> <th>A</th><th>B</th><th>C</th><th>D</th><th>WEIGHT</th></tr> <tr> <td>440</td><td>215</td><td>215</td><td>100</td><td>25.2KG</td></tr> </table> Measurements in mm	A	B	C	D	WEIGHT	440	215	215	100	25.2KG	 D16BN <table> <tr> <th>A</th><th>B</th><th>C</th><th>D</th><th>WEIGHT</th></tr> <tr> <td>440</td><td>215</td><td>215</td><td>100</td><td>25.0KG</td></tr> </table> Measurements in mm Half quoin available ref D15BN	A	B	C	D	WEIGHT	440	215	215	100	25.0KG	 H16 <table> <tr> <th>A</th><th>B</th><th>C</th><th>D</th><th>WEIGHT</th></tr> <tr> <td>440</td><td>215</td><td>215</td><td>140</td><td>32.5KG</td></tr> </table> Measurements in mm	A	B	C	D	WEIGHT	440	215	215	140	32.5KG	 S16 <table> <tr> <th>A</th><th>B</th><th>C</th><th>D</th><th>WEIGHT</th></tr> <tr> <td>440</td><td>215</td><td>215</td><td>100</td><td>24.1KG</td></tr> </table> Measurements in mm Available as cut and bond only	A	B	C	D	WEIGHT	440	215	215	100	24.1KG
A	B	C	D	WEIGHT																																							
440	215	215	100	25.2KG																																							
A	B	C	D	WEIGHT																																							
440	215	215	100	25.0KG																																							
A	B	C	D	WEIGHT																																							
440	215	215	140	32.5KG																																							
A	B	C	D	WEIGHT																																							
440	215	215	100	24.1KG																																							

CILL BLOCKS

D21

A	B	C	D	E	WEIGHT
440	40	60	100	115	17.1KG

Measurements in mm

D28

A	B	C	D	E	WEIGHT
440	40	100	100	115	23.2KG

Measurements in mm

TROUGH LINTELS

D28

A	B	C	D	E	WEIGHT
35	100	440	215	40	13.2KG

Measurements in mm
Not available in Novastone, Florentine or Venezia

H28

A	B	C	D	E	WEIGHT
43	140	440	215	68	17.0KG

Measurements in mm
Not available in Novastone, Florentine or Venezia

Splitface quoins cut & bond only.
Trough lintels not available in Florentine, Venezia, Novastone or Splitface finish.

Other specials either cut from a standard block or in a cut and bonded format are available upon request.

WE ARE Hi-Light® blocks and more.

The revolutionary Hi-Light® block has been designed to provide all the benefits associated with dense masonry, yet is up to 25 % lighter than an equivalent solid masonry unit.

With a cellular underside but a solid top surface to provide a full bed for mortar, Hi-Light® complies with Health and Safety recommendations and provides complete cover under CDM regulations.



Southern General
Hospital, Glasgow
Novastone White

Telephone 03332 343 434

FINISHES

FAIRFACE

The original and still the leader in the field.

Fairface masonry offers the benefits of a structural product and finish in one. Its quality finish, dimensional stability, range of subtle, natural colours and economy against competitive materials maintain its position as the leader in its field.



Example:
Fairfaced Yorkstone

SPLITFACE

Emulating the rugged appeal of natural hewn stone.

Cost-effective and offering flexibility, Splitface adds a prestigious appearance to any building, whether creating complete, imposing structures or in combination with other Ibstock products, in feature panels and bands.



Example:
Splitface Autumn

POLISHED FLORENTINE®

Affordable prestige inside or out.

Use this to create broad expanses of reflective, decorative walling or in combination with other products to provide impressive highlights - glass finish. Please note, the overall size of a polished block may vary to that stated. Polishing blocks can take up to 2mm off the overall size of a block. This needs to be allowed for in the setting out.



Example:
Polished Florentine® Straw

SHOT-BLASTED

Provides a weathered appeal.

Shot-blasted masonry adds a natural weathered appeal. With a broad selection of 'special' shapes and sizes as standard, Shot-blasted offers an almost limitless variety of options.



Example:
Shot-blasted Sports Green

BURNISHED VENEZIA™

The subtle beauty of burnished natural aggregates.

A subtly burnished finish brings out all the deeply embedded beauty of the natural aggregates. For projects where reduced glare is a consideration this finish offers an understated beauty for internal or external walls.



Example:
Burnished Venezia™ Steel Grey

NOVASTONE

A fine textured masonry finish with time-weathered appeal.

Novastone is a range of components which will give you that natural, weathered appeal from the day they are laid, enabling brand new buildings to blend into established surroundings with impressive ease.



Example:
Novastone White

PROFILES

STANDARD

The most popular profile.

This versatile profile provides a multitude of design possibilities through the range of size and finish options available.



Example:
Sandstone Standard in Shot-blasted finish

LINEAR

Elegant, colourful and wonderfully long concrete bricks.

The Linear range has been created to give architects the flexibility to create ever more distinctive exteriors, whilst still retaining its beauty, longevity and traditional feel.



Example:
Sandstone Linear in Shot-blasted finish.

RIBLOC®

Bold geometric planes create light and shade.

Ribloc masonry, with its eight ribbed appeal, creates clean lines and a geometric uniformity which will give an imposing appearance to any building. Its ribs provide controlled weathering characteristics.



Example:
Sandstone Ribloc® in Shot-blasted finish

TWINBLOC™

A 'stack-bonded' appearance with structural integrity.

Twinbloc masonry is the fast, sure, economical way to create the impressive appeal of 'stack bonding'. Created to standard block proportions, Twinbloc incorporates a carefully gauged central groove to give the appearance of two half blocks when laid and yet, as it is laid stretcher-bond, it provides the inherent strength of any DCM wall removing the need for bed-joint reinforcement to stabilise the wall in the majority of situations.



Example:
Sandstone Twinbloc™ in Fairface finish

AIRBLOC

A discrete ventilation block.

Innovations in the manufacturing process of our DCM allows us to offer a product that solves the issue of incorporating adequate ventilation into a cavity wall. The purpose made air block is available in all finishes allowing the same external façade to be maintained.



Example:
Sandstone Airbloc in Shot-blasted finish

BULLNOSE

Standard 100mm thick block with a 50mm radius bullnose on one end.



Example:
Yorkshire Bullnose in Shot-blasted finish

BULLNOSE QUOIN

Standard 100mm thick Quoin with a 50mm radius bullnose.



Example:
Yorkstone Bullnose Quoin in Shot-blasted finish

FINISHES	BULLNOSE		BULLNOSE QUOIN	
	FAIRFACE	✓		✓
	SHOT-BLASTED	✓		✓
	SPLITFACE			
	BURNISHED VENEZIA™	✓		✓
	POLISHED FLORENTINE®	✓		✓
	NOVASTONE	✓		✓

	STANDARD	LINEAR	RIBLOC®	TWINBLOC™	AIRBLOC
FAIRFACE	✓		✓	✓	✓
SHOT-BLASTED	✓	✓	✓	✓	✓
SPLITFACE	✓	✓	✓	✓	✓
BURNISHED VENEZIA™	✓	✓	✓	✓	✓
POLISHED FLORENTINE®	✓	✓	✓	✓	✓
NOVASTONE	✓			✓	✓



PROJECT: CONSETT ACADEMY AND LEISURE CENTRE

LOCATION:
Consett Leisure Centre,
Medomsley Road, Consett DH8 5HU

PROJECT DESCRIPTION:
New Academy and Leisure Centre

ARCHITECT:
Seymour Harris

- PRODUCTS USED:**
- Splitface Yorkstone and specials 428m² and 250 specials
 - Textured Yorkstone and specials 225m² and 1550 specials
 - Florentine Pewter and specials 670m² and 1100 specials
 - Splitface Pewter and specials 330m² and 50 specials
 - Shot-blasted Pewter 123m²



ARCHITECTURAL MASONRY SPECIFICATION

MEAN COMPRESSIVE STRENGTH (AIR DRY)	WATER ABSORPTION
Solid: 17.5N/mm ² Hollow/Cellular: 10.4N/mm ²	<4g/m ² .s Tested to BS EN 772-11:2011
GROSS DRY DENSITY	WATER VAPOUR PERMEABILITY
Solid: 2100 kg/m ³ Tested to BS EN 772-13 Cellular & Hollow: Please refer to Masonry Design Guide *For gross dry densities, please refer to table 3 in the Forticrete Masonry design guide	5/15µ based on Table A.3 BS EN 1745:2012
MANUFACTURING TOLERANCE	REACTION TO FIRE
Please refer to the Masonry Design Guide	Euroclass A1 based on Commission Decision 2000/605 EC amending 96/603 EC
CATEGORY	SHEAR BOND STRENGTH
1	0.15 N/mm ² Shear bond strength (tabulated from EN 998-2:2010 Annex C)
THERMAL CONDUCTIVITY	CONFIGURATION
Solid: 1.11 W/mK(λ10,dry,unit) Based on BS EN 1745:2012 p=50% Group 1 Tabulated value, Model S1 Group 2 Calculated values, Model P4, BS EN ISO 6946 Method (see 'Declaration of Performance' for individual block types)	To EN 1996-1-1 Solid: Group 1 Hollow/Cellular: Group 2
DURABILITY AGAINST FREEZE-THAW	DIMENSIONAL STABILITY
PASS (based on PD 6697)	<0.45mm/m Tested to BS EN 772-14:2002
	POLISHED FLORENTINE
	The overall size of a polished block may vary to that stated. Polishing blocks can take up to 2mm off the overall size of a block. This needs to be allowed for in the setting out.



PROJECT: INTERNAL OFFICES, LONDON

LOCATION:
Kings Cross, London

PROJECT DESCRIPTION:
Internal offices in Kings Cross

ARCHITECT:
AHMM Architects In London

- PRODUCTS USED:**
- Florentine Ivory



HEAD OFFICE

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Ibstock
At the heart of building