

RapidBuild

RapidBuild uses the same skills and tools used in traditional masonry construction with the benefit of increased productivity, simplicity and quality.



MASONRY SINGLE SKIN WALL SUPPORT SYSTEM

Welcome to RapidBuild UK, the first traditional Blockwork independent single skin wall support system for cavity wall construction using traditional skill methods and materials

www.rapidbuilduk.com

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A unique building method which enables the inner leaf of the building to be constructed and roofed to felting level without the outer leaf. The inner skin stands independently connected to the scaffold and the roof is constructed to ensure the building is water tight which enables first fix trades to progress while the external leaf is being constructed.

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THE **RapidBuild** STORY SO FAR

RapidBuild, established in North Wales, has been supplying a unique building system to the construction and building trade throughout the UK since 2012.

Established during the recession RapidBuild looked at a series of offsite systems such as Timber Frame and SIPS. Market research indicated that a number of developers are not willing to break away from traditional masonry construction. Taking this into account RapidBuild came up with a novel idea which utilises the same material and process but in a different format to ensure speed, build quality and simplicity.

Experienced directors from different areas of construction, planning and marketing came together to progress the idea. With support from the Welsh Assembly and the Building Research Establishment (BRE), RapidBuild has been able to move the product forward commercially.

The idea evolved from on-site demonstration trials, using various options under the rigorous testing criteria of the BRE. Following a number of trials, including on site testing and physical laboratory testing, the product was approved by the BRE in January 2016.

RapidBuild meets NHBC standards and can help with insurance claims as the quality of the system and the ability to fit a breathable membrane in the cavity will eliminate water ingress within buildings. Following interest from a number of large builders in the UK, RapidBuild launched in Spring 2016.

THE RapidBuild METHODOLOGY

The RapidBuild methodology enables the inner leaf of a house to be built including roofing, windows and doors in a matter of days. This water tight construction enables the inside trade to start work typically within 8 working days from completion of the slab on a 3 bedroom 90 square metre house.

The technique involves the stabilisation of the single inner leaf through a series of novel braces attached to the scaffold. On completion of the inner leaf the insulation can be applied to the wall as well as a breathable membrane. This is a highly efficient process since there is no outer wall to obstruct the fixing. Additionally, windows and doorways can be installed with exceptional levels of seal.

This unique patented system has many advantageous benefits which overcome the problems associated with traditional masonry construction. The RapidBuild system is a **minimum of 30% faster** than traditional masonry construction. It is even faster than some timber frame construction and has increased build quality due to the two independent structures being built separately.

The RapidBuild system uses all materials from a traditional masonry construction but simply builds them in a different format, resulting in a higher quality finish and faster build. With BRE approved testing and meeting NHBC standards, RapidBuild is an ideal time-saving alternative system to traditional masonry construction.





Learn about the Four Simple Steps

The RapidBuild process is a breakthrough innovation in building. The 4-Step Process below demonstrates how different the process is to anything else on the market and provides a good understanding of the key aspects of the system that sets it apart from any other system on the market.

DESIGN

RapidBuild will design its system to work efficiently with the design of your house



PLANNING

RapidBuild will issue a detailed plan and technical drawings to illustrate how to build your property



MANAGEMENT

RapidBuild will illustrate how to order materials ahead and how to detail the work programme



BUILD

RapidBuild has an on site manager and technical support line to help with all aspects of the build



THE RapidBuild RANGE - EXTERNAL WALL BRACE



RBB

1- RapidBuild Brace

The longer section of the RapidBuild brace is inserted into the wall between the 2 holes and connected to the scaffolding. The smaller section of the brace has a round tubular piece of steel which fits inside the scaffolding pole and is then braced with the sleeve.

RBS

2-RapidBuild Sponge

The RapidBuild sponge shock absorber fits between 2 sections of the brace to act as a suspension unit when the scaffolding moves.

RBVB

3-RapidBuild Vertical Bar

Slide each RapidBuild vertical bar between the holes in the brace and base plate leaving equal sections at the top and bottom ready for the wedge to be installed.

RBW

4-RapidBuild Wedge

slot each RapidBuild wedge in each of the 2 holes in the brace and base plate on both sides and press firmly down. To ensure stability use a rubber hammer to wedge.

RBBP

5-RapidBuild Base Plate

The RapidBuild base plate slots into the wall directly below the brace.

RBC

6-RapidBuild Bolts, Nuts & Washers

(Consumables)

RapidBuild bolts, nuts and washers fit between the brace to hold the components together.

THE RapidBuild RANGE - INTERNAL WALL BRACE

RBBP

7-RapidBuild Base Plate

The RapidBuild base plate slots into the wall directly below the brace. The base plate is also used at higher stages on the internal wall brace only.

IVB

8-RapidBuild Internal Vertical Bar (1m, 1.5m & 2m)

Slide each RapidBuild internal vertical bar between the holes in the brace and base plate leaving equal sections at the top and bottom ready for the wedge to be installed.

RBW

9-RapidBuild Wedge

Slot each RapidBuild wedge in each of the 2 holes in the brace and base plate on both sides and press firmly down. To ensure stability use a rubber hammer to wedge.



Plans & Detailed Specification

RapidBuild will design its system to work within the design of your property. A full detailed plan and specification will be issued to illustrate all key attributes of the system prior to commencement on site.



Optional Products

Poro Lintels - Brickforce - UPV Windows and Doors - Breathable Membrane - Thermal Blocks

Concrete Blocks - Hop Up Brackets - Cavalok Cavity Closers - Insulation - Cavity Trays

DPC - Concrete Lintels - Dunbrik Chimney Throat and Liners - Tie Wires - Roof Trusses

RapidBuild THE PROCESS

RapidBuild offers a unique building system which allows the internal skin to be built typically within 8 working days to allow internal trades to begin which speeds up the building programme by a minimum of 30% improving quality and performance

The RapidBuild System has 15 steps to ensure ease of build quality and efficiency. The steps are easy to follow and do not require any additional tools or skills.

The 15 Simple Steps

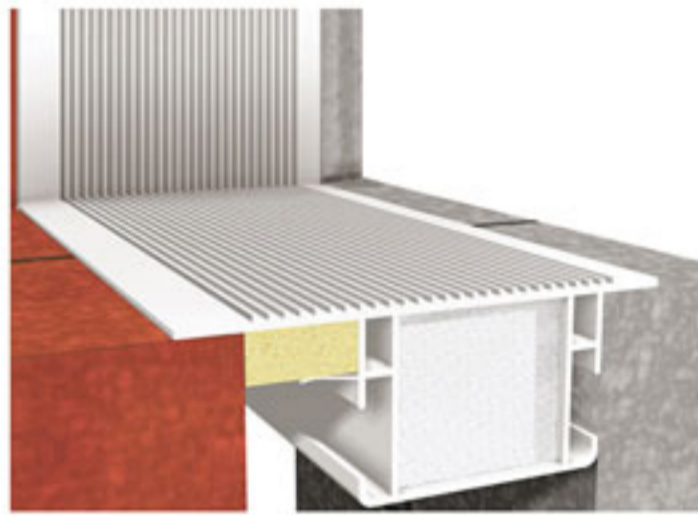
- Step 1 - Erect Scaffolding
 - Step 2 - Lay Ring Beam on DPC Level
 - Step 3 - Build Concrete or Thermal Blocks
 - Step 4 - Fit Rapidbuild Components
 - Step 5 - Fit Cavity Closers
 - Step 6 - Fit Poro Keystone Lintels
 - Step 7 - Fit Joists and Brick Ring Beam
 - Step 8 - Fit Roof Trusses
 - Step 9 - Fit Fascias and Soffits
 - Step 10 - Fit Roof Felt and Batten
 - Step 11 - Install Windows
 - Step 12- Fit Cavity Wall Insulation
 - Step 13 - Fit Breathable Membrane
 - Step 14 - Fit Roof Tiles
 - Step 15 - Lay Face Bricks
- *Internal Trades to begin within 8 days*





RapidBuild Essential Products and Techniques

RapidBuild utilises a number of essential approved products and techniques to ensure the system works efficiently and correctly. RapidBuild uses the same skills and tools used in traditional masonry construction with the benefit of speed and efficiency.



Ring Beam

The Ring Beam is an essential part of the RapidBuild process. The Ring Beam is laid around the inner leaf on top of the brickwork footing which consists of a single course of bricks at DPC level.

Cavity Closer

The Cavalok Cavity Closer is a specific design to enable the windows to be fitted independently to the inner blockwork shell enabling the building to be watertight.

Poro Lintel

The Keystone Poro Lintel is a two part lintel. The inner leaf is supported through a standard Keystone Box lintel whilst the outer leaf support comes from the uniquely designed outer lintel.



Brickforce

Brickforce is a crack control and strengthening wire based product which is required at specific points within the RapidBuild design. The product will be specified depending on design.

Joist Ring Beam

The Joist Ring Beam is an essential part of the RapidBuild process. The Ring Beam is laid above the joists which consists of a single course of bricks to give a level base for the blocks above.

Wall Membrane

(Optional but Recommended)

The waterproof Breathable Wall Membrane is fixed to the cavity wall insulation to give the building a complete waterproof barrier and hugely improved air test results.

RapidBuild ON SITE

The 15 Steps

Step 1 - Scaffolding Design

The scaffolding is erected to RapidBuild technical drawings and specification.



Step 2 - Ring Beam

The Ring Beam is laid around the inner leaf on top of the brickwork footing which consists of a single course of bricks at DPC level.



Step 3 - Building Blocks

The Concrete or Thermal Blocks are built to joist height, the joists laid, a ring beam laid above joists and built to wall plate. Tie wires are installed at 900x450mm centres.



Step 4 - RapidBuild Components

The RapidBuild Components are fitted to the scaffolding and tied into the inner wall structure. This gives total stability to the internal structure.



Step 5 - Cavity Closer

The Cavity Closers are installed and tied into the blockwork allowing additional strength to fit the window into the internal skin.



Step 6 - Poro Lintels

Poro-Cav Lintel features a unique 'thermal break plate' that aids the thermal performance of the wall. The inner leaf is supported through a standard box lintel whilst the outer leaf support comes from the uniquely designed outer lintel.



Step 7 - Joist Ringbeam

The Ring Beam of coursing brick is laid above the joists as an additional Ring Beam to give extra stability and an accurate level to build the 3rd and 4th lift to wall plate.



Step 8 - Roof Trusses

Roof Trusses are installed once the blockwork reaches wall plate and the wall plate is fitted.



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A unique building method enables the inner leaf of traditional construction of the building to be constructed and roofed to felting level without the outer leaf. The inner skin stands independently connected to the scaffold with the roof constructed to enable the building to be water tight for first fix trades to progress while the external leaf is being constructed.

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Step 9 - Fascias and Soffits

The Fascias, Soffit Boards and Bargeboards are fitted once the roof trusses have been fully installed. The soffits will be fitted leaving a 25mm gap to ensure the outer bricks can be laid up to them.

Step 10 - Membrane (Roof)

The felt membrane and batten is laid on the roof once the trusses have been fully installed to ensure a waterproof layer.



Step 11 - Windows

The Window installation takes place once the blockwork, roof trusses and felt and batten have been completed.

Step 12 - Cavity Insulation

The Cavity Insulation is fitted to the blockwork with ease and ensures no mortar droppings are behind the panels.



Step 13 - Membrane (Walls)

The breathable Membrane is fitted to the insulation with a spray adhesive to ensure an extremely high performance for air testing and a total waterproof barrier

Step 14 - Roof Tiles

The Roof Tiles are installed once the trusses have been installed, felt & battened, fascias, soffits and bargeboards fitted



Step 15 - Face Bricks & Internal Trades

The face bricks are built following the line of the inner blockwork. The facing bricks can be laid when all internal trades are taking place allowing for a faster and better quality build. As the inner blockwork skin has been laid the outer facing bricks will require a much lower skilled brick layer as they have a building line to work to.



Training and Support

RapidBuild has a number of training centres and on site demonstration areas which cover all areas of the RapidBuild System to ensure the system is used efficiently and correctly

Understanding The RapidBuild System is essential when undertaking a new project. Our training courses are designed to ensure the user fully understands how to implement the system effectively allowing the building method to work to its full potential

Training

Training is important when using the RapidBuild System. Group sessions are available at our training centres throughout Wales and the North West of England. Each participant will be issued with a certificate following the completion of the course.

On Site Support

We offer on site demonstration days and on site support where needed from our Construction Director if required.

Technical Support

We offer full technical advice on installation and also via our technical advice line. Prototype videos are available on our Website.

RapidBuild ACCREDITATION

Approvals

Following a number of tests from the BRE including on site testing and physical laboratory testing the product was approved in January 2016

RapidBuild meets NHBC standards and can help with claims as the quality of the system and the ability to fit a breathable membrane in the cavity will eliminate water ingress within buildings. With interest from a number of large builders in the UK, RapidBuild launched in Summer 2016.



In Association

Rapidbuild is working closely with a number of manufacturers with approved products which we recommend to use with our system.



THE RapidBuild CASE STUDY 1

Project: : 6 bedroom Detached Home - (2830 Sqft / 263 Sqm)

Location: Colwyn Bay

Contractor: Penrhyn Homes

A six bedroom detached house built with the RapidBuild System over 4 months. This construction was built from DPC to watertight in 12 days ready for internal trades to begin first fix.



THE RapidBuild CASE STUDY 2

Project: : 3 Bedroom Dormer Bungalow - (1030 Sqft / 96 Sqm)

Location: Rhos on Sea

Contractor: Self Build (Mr and Mrs Aldridge)

A three bedroom detached dormer bungalow built with the RapidBuild System over 2 months. This construction was built from DPC to watertight in 9 days ready for internal trades to begin first fix.



Day 10 The building is watertight within 9 days ready for the **Face Bricks & Internal Trades** to begin.



RapidBuild VERSUS TRADITIONAL CAVITY WALL

	RapidBuild	Traditional Cavity Wall
Cost	5% cheaper	N/A
Inspections	Easier to inspect	Difficult to inspect all areas
Air Tightness	High levels of tightness	Average scores
Insulation	High quality	Good quality
Quality	High build quality	N/A
Speed of Build	Minimum of 30% faster	N/A
Scaffolding Visits	Only one visit	Multiple visits
Weather Conditions	Scaffold can be covered	Can be rained off
Mortar Droppings	50% less droppings	High amounts of droppings
Cavity Trays	Better quality	Can be missed and punctured
Breathable Membrane	No water ingress	Potential water ingress
Skill Levels	Lower skill levels	Higher Skill levels



RapidBuild VERSUS TIMBER FRAME BUILD

	RapidBuild	Timber Frame
Cost	15% cheaper than timber frame	More expensive than traditional build
Thermal Mass	More thermal mass	75% of walls consist of insulation
Settlements	No settlement	At storey levels and cills' levels
Shrinkage	No shrinkage	Potential for cracks and shrinkage
Life Span	80 Years	60 Years
Flexibility of Design	Flexibility of design	Changes difficult
Speed Of Build	Faster than some timber frame systems	Quick but long lead times
Lead Times	Instant lead times	Lengthy lead times

WHY USE |RapidBuild?



WHY SHOULD HOUSE BUILDERS USE |RapidBuild?

- Speed Of Build
- Cash Flow
- A Minimum of 30% more Houses
- Watertight typically in 8 days
- Improved Insulation
- Improved Quality
- Increased Lifespan
- No Claims for Water Ingress



WHY SHOULD CONTRACTORS USE |RapidBuild?

- Health and Safety
- Less Skills Required
- Approved by BRE and accepted by NHBC
- Excellent Thermal Mass
- No Shrinkage
- No Movement
- Instant Lead Times
- Speed of Build



WHY SHOULD BRICKLAYERS USE |RapidBuild?

- Speed of Build
- Ease of Laying
- All Weather Conditions
- Cleaner Working Environment
- Materials are readily available instantly through builders' merchants
- Offers opportunity to compete on speed against Timber Frame
- Higher Quality Brickwork with less slots in the cavity and full joints
- Training and Technical Advice



WHY SHOULD SELF BUILDERS USE |RapidBuild?

- Peace of Mind
- No Hassle
- Reduced Remedial Actions
- Traditional Materials and Skills
- Approved Method
- Alternative to Timber Frame
- Cost Effective
- Speed of Build



THE BENEFITS

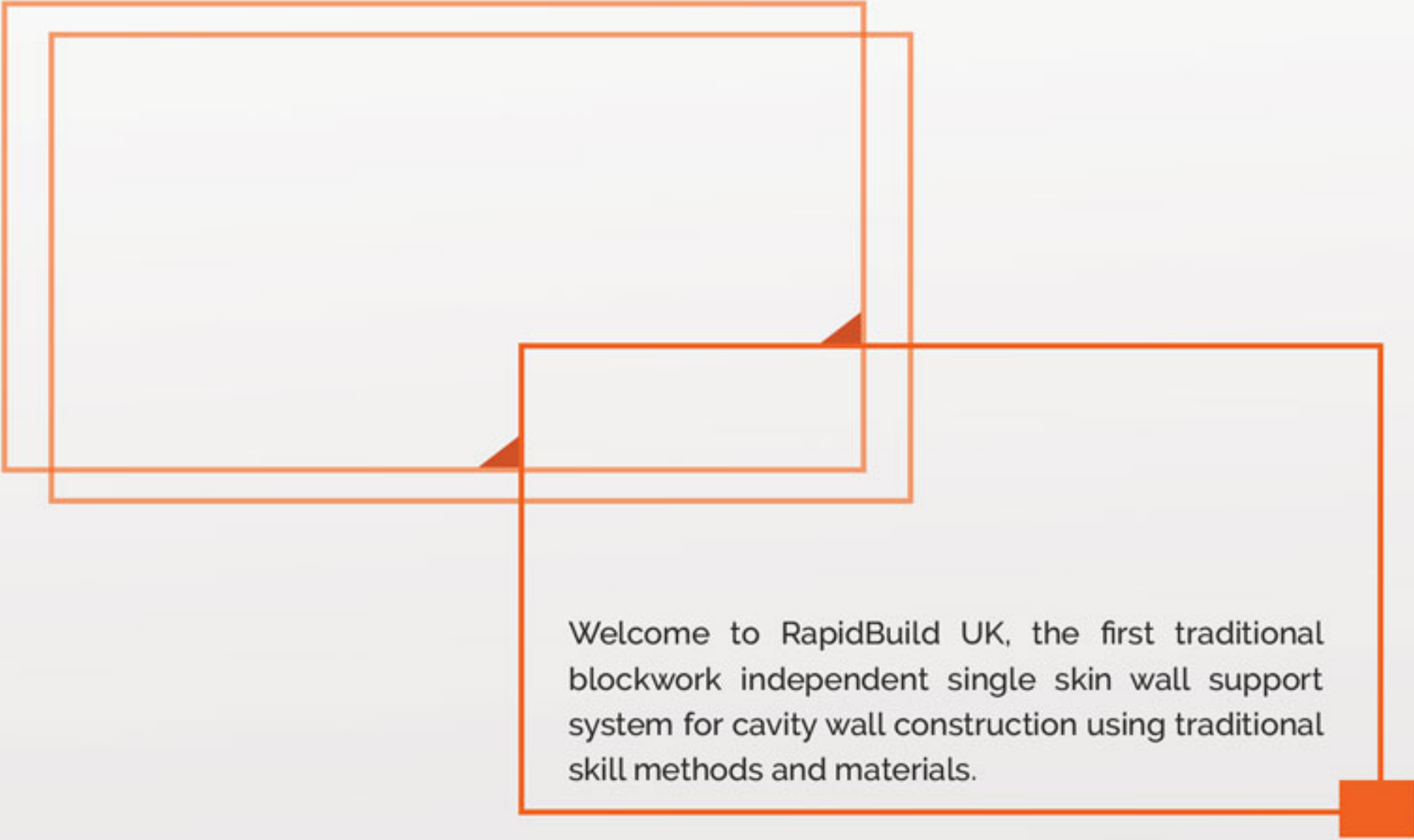
PUT YOUR TRUST IN US,
AND LET US DELIVER

The Benefits

- Improved life span - due to quality of system
- Reduced claims - due to increased quality and breathable membrane layer
- Quicker Labour - Due to both skins being built independently
- Cash flow impact - due to increased speed of build
- Build in all weather - the ability to cover the scaffolding as it is fully erected
- Lower skill levels - easier to build bricks as you have the blockwork line to work to.
- Quality of brickwork/blockwork - due to style of system
- Ability to build a minimum of 30% more houses per year with the same team - due to increased speed of build
- Less wastage - due to each leaf being built individually
- Increased air tightness results - due to breathable membrane
- Increased insulation performance - due to quality of build
- Lower risk of mortar droppings - due to each leaf being built individually
- Single scaffolding visit - only one visit required
- HSE Claim - no blow downs due to braced block wall

NHBC Inspection Benefits

- All brickwork can be inspected on both sides ensuring there are full joints
- All tie wires are easy to inspect
- All cavity trays are easy to inspect
- Weep holes are easy to inspect
- Breathable membrane reduces water ingress
- Eaves insulation are easy to inspect
- Quality of insulation is easy to inspect
- Cavity closer ties are easy to inspect
- Joists joints are easy to inspect
- Wall penetrations are easy to inspect
- Lower risk of mortar droppings - due to each leaf being built individually
- Total inspection of inner blockwork once watertight
- General build quality easy to inspect



Welcome to RapidBuild UK, the first traditional blockwork independent single skin wall support system for cavity wall construction using traditional skill methods and materials.

MASONRY SINGLE SKIN WALL SUPPORT SYSTEM

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RapidBuild
Productivity Simplicity Quality