

The **R&B** BUILD Advantage

June 2008



build with ease






H+H UK is the UK's largest manufacturer of aircrete products. The company manufactures the market-leading Celcon range of blocks and the H+H range of aircrete products.

The Rå Build method of construction offers good value through cost savings as well as a fast, efficient and sustainable construction.

The All-in-One Building Solution



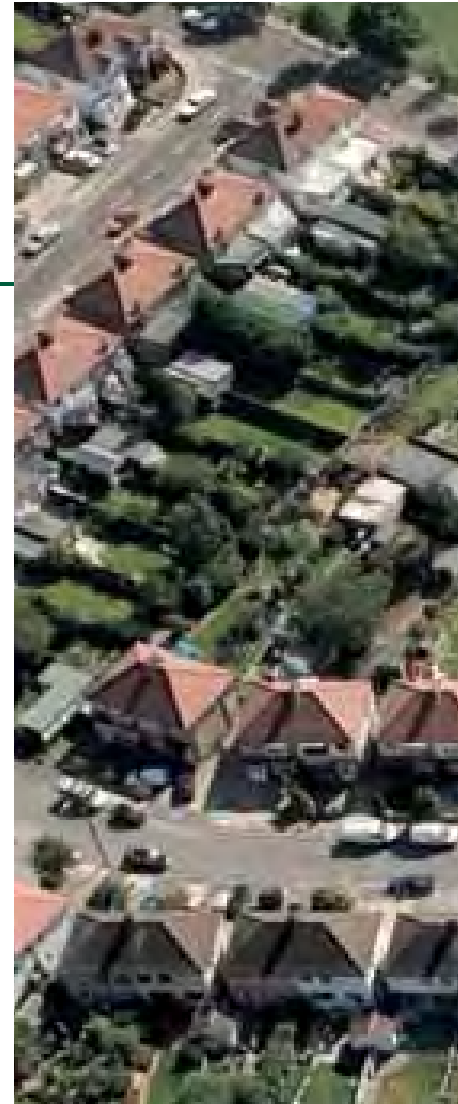
The Rå (pronounced 'raw') Build method is a revolutionary approach to building that utilises some of the most innovative building materials and processes available to produce cutting-edge, eco-friendly buildings.

The method offers a super-quick construction, aided by the multi-skilled Recommended Contractors knowledge of the products and required working practices that provide quality finished weather-tight masonry shell in just a few days.

Using robust aircrete masonry, Rå Build delivers cost-effective, superior quality without the delays and logistical problems often associated with other types of construction. Low on waste, the system saves time and money by combining H+H's Thin joint system, a recognised Modern Method of Construction, with the impressive benefits of H+H Aircrete.

Rå Build is a high-performance, all-in-one solution that is readily available and reliably delivered. Meeting all the required Building Regulations (thermal, sound, structure and fire) the method is recognised by the NHBC and Zurich for their warranties.

Rå Build has been utilised with equal success on both small and large developments, offering great productivity benefits.



Rå Build – Effective

The Rå Build method utilises H+H's Thin Joint System combined with other proprietary materials such as engineered I-Joists to form intermediate floors with roof trusses, felt and fly battens.

The structure of a Rå Build is constructed with H+H's Jumbo Units built using the Thin Joint System. Designed to meet our own exacting quality standards, our Jumbo Units achieve dimensional tolerances in line with EN-771-4 thin layer mortar category A which exceed those of general-purpose mortar blocks. Consistent quality is ensured through BS EN 9001.

Rå Build upper floors are typically designed using engineered I-Joists. The result is a predictable and enduring floor performance that meets all the relevant standards and Building Regulations, including the latest requirements for acoustic sound regulations.

The Recommended Contractors utilise these product benefits to their full potential, with excellent understanding of the materials and the required building processes, ensuring projects progress without any delays.

Complementary Products



Celcon Foundation Blocks

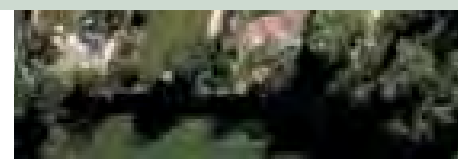
Used in a range of thicknesses below DPC, Celcon Foundation Blocks are third party certified for use below ground and suitable for the support of cavity or solid walls, and suspended floors, including beam and Celcon Floor Block floors or the Flooring System. With benefits including saving time and money:

- Cost effective
- Faster
- Stronger
- Easier
- Lighter
- Safer
- Sustainable



The Flooring System

Produced using the latest aircrete manufacturing technology, the Flooring System offers all the benefits of a suspended floor with all the attributes of H+H Aircrete. Reinforced elements are cut to length at our factory and, when used with Floor Edge Units, provide a robust and very flat floor that is quickly installed on site, offering excellent thermal insulation.







“Although the pre-site planning schedules for scaffolding etc. had to be changed originally to suit the system, once started on site there were no delays and the contractors produced a quality product in super quick time. It was quite amazing to see.”



Rå Build – Efficient

H+H's Thin Joint System is an on-site construction method that not only matches the speed of framed construction but also eliminates lead-times. H+H Jumbo Units, high quality accurately dimensioned aircrete products, combined with Celfix, pre-mixed and bagged thin layer mortar, specially developed for use with H+H products, are the key to the H+H Thin Joint System. Using this combination, a building can be constructed faster and to a better quality, enabling follow-on trades to begin work sooner in a weatherproof environment.

Using aircrete walling products within any scheme enhances the ratings achieved under the BRE's Green Guide to Specification with constructions achieving the highest ratings, and Very Good and Excellent ratings under the BRE's EcoHomes Assessment scheme.

H+H's Thin joint System is recognised by the Housing Corporation and English Partnerships as a Modern Method of Construction (MMC).

To optimise the benefits of the Rå Build method, H+H's Recommended Contractors involve themselves with developers at the project planning stage. They can provide labour-only or labour-and-materials services.

The advantages of using a Recommended Contractor can be readily measured in speed and build quality, with no logistical problems associated with co-ordinating different tradesmen for each stage of the build. Rå Build teams work quickly and efficiently to complete the shell of the building in a very short time, leaving it ready for internal and external finishing immediately – as there is no need to allow for settlement as with some frame systems.



Rå Build – Dependable

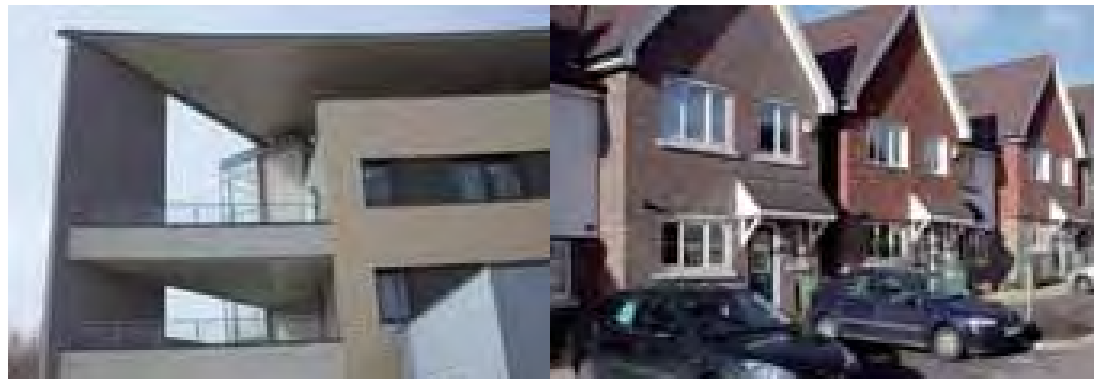
Rå Build is constructed by Recommended Contractors who are specially trained in the use of the products and have an excellent track record of competence and quality of workmanship.

Their understanding of the products and build process involved reduces waste of both time and materials on-site, whilst offering a quality finished build. The Recommended Contractors accelerate build-speed by using Lean Process techniques to eliminate dead time. They also increase efficiency through continuous working processes that allow labour to be concentrated on fewer plots at a time.

The products used in the Rå Build method are widely adopted as preferred methods of construction. Thin Joint or thin layer construction makes up the majority of aircrete construction in Germany, Poland and Scandinavia and is now widely used in the UK.

All the products used in Rå Build construction hold third party BBA certification, and the solutions meet all relevant Building Regulations (thermal, sound, structure and fire). The system is recognised by the National House Building Council (NHBC) and Zurich for their warranties, and has gained Local Authority Building Control (LABC) Type Approval for easy compliance with Building Control.

Offering a robust masonry shell construction, Rå Build offers the maximum life expectancy of the completed units with a reduction in any maintenance required.





“This was a great development, built ahead of time and on budget, the units were sold by the time they were meant to be completed. The quality of the results achieved through testing for air tightness and acoustics only add to my conviction of my choice.”



Rå Build – Preferred

The Rå Build method enables you to deliver the masonry construction end-users prefer in the time it would normally take to build a framed construction.

The efficiency of the method minimises wastage on site and reduces the reliance of the construction programme on weather, thereby maximising cost-effectiveness.

The H+H Thin Joint System uses sustainable products. H+H Aircrete is manufactured from up to 80% recycled material whilst the system itself and the use of Recommended Contractors reduce site wastage.

The Rå Build method uses local Recommended Contractors who are specially trained and are regularly assessed. Rå Build comfortably satisfies all areas of the Building Regulations and has been used in constructions achieving all of the highest levels of the code for sustainable homes (levels 3,4,5 & 6).

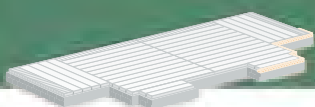
You have the added reassurance that all products used in the construction of a Rå Build are BBA certified.

“One of the major benefits of the Rå Build method is its 'buildability', you have no lead time and anything you can build traditionally you can also build with Rå Build. It is very quick and easy whilst removing the time lag between trades on-site.”



Step 1

Starting with the ground works complete, the Rå Build contractor takes responsibility for the site to build you a weather-tight masonry shell.



Step 2

The thin joint walls are initially bedded on a levelling course of traditional mortar. Once this first course is complete the build progresses without delay, quickly building the internal leaf of the external walls and any required partition walls to first lift. With the workability of H+H Aircrete, any openings are easily formed for windows or doors.



Step 3

With the first lift complete, the floors are installed using I-joists either built in to the walls or on joist hangers finished with weather deck or similar products.



“It goes up quicker, it’s a lot cleaner and the wastage is kept to a minimum. Before you know it you’re running the walls in, it’s that fast - seeing is believing”



Step 4



The build then continues apace with the second lift soon complete, with any gable ends built or spandrel panels positioned. The roof trusses are installed with felt and fly battens completing the Rå Build structure (which completes the Recommended Contractor’s work); handing the weather-tight masonry shell over to allow completion of the external leaf of the envelope whilst internally the first fix can start.

Step 5

So if you wish to have a masonry build that is effective, efficient, dependable, preferable and secure, contact H+H Rå Build team on:

01732 886 444

Rå Build – Proven



The Rå Build method saved three months on the construction time of show homes at David Wilson Homes, Oxley Park, Milton Keynes. The show homes were completed well ahead of schedule, enabling the selling process to start in September rather than the original project estimate of Christmas.

With the materials (ex-stock), work on site started within days of purchase of the site from English Partnerships. With Rå Build there is no need to pre-order or book into a manufacturing schedule.

The Rå Build Recommended Contractor, in this case Minett Group of Northampton, quickly and efficiently built a weatherproof, high-quality aircrete shell.

This means that trades were able to start work on the inside of the house while the brickwork cladding was still going up. David Wilson Homes were **so pleased with the speed and quality of the Rå Build show homes that they used it for the whole of the development**, a total of 41 homes which are now complete and occupied.

Simon Minett Director of Minett Group commented, "by completing the show homes as a trial **we were quickly and easily able to show the benefit of Rå Build** to David Wilson Homes. Their decision to complete the remainder of the site using the system and us speaks volumes, giving them a cost effective and efficient building system."





H+H UK's Rå Build method is making a major contribution to the success of an eco-home project in Malmesbury, Wiltshire.

Fred Salter is a specialist, quality housebuilder who, on a site at Lea near Malmesbury, is building five traditional Cotswold stone houses, making use of the very latest in eco-friendly construction techniques to provide homes that will be environmentally friendly, not only to build but also to live in.

Four of the homes have four bedrooms and the fifth has three bedrooms, each with two en-suite bathrooms and a warm roof which buyers can adapt as a fifth bedroom or home office. Rå Build was chosen for the shell of each home. The H+H Thin Joint System with Jumbo Units were used for the interior leaf of the external wall and partitions, the Flooring System at ground floor with proprietary intermediate floors and roofs. The Rå Build method was chosen for its speed of construction, combined with excellent thermal insulation as well as its environmental credentials, with up to 80% of the raw materials being recycled.

Fred Salter, the developer, who has already moved into the first house commented: "There is no doubt in my mind that we have to build more eco-friendly homes and the interest we have had in this development shows the level of public interest. We have been very impressed by the Rå Build method.

"It is very fast and provides excellent thermal insulation whilst also being environmentally friendly. I would certainly use it again. It's also very flexible; with Rå Build, if you want to move the position of a window or door you can, but with timber frame you can't alter the frame once it's been manufactured."



Rå Build – Proven



JH Hallam of Oadby, Leicestershire, one of the East Midlands' longest established building contractors complete a six home Rå Build project for Eastern Shires Housing Association at Whetstone, Leicestershire.

Having received off and on-site training by the H+H UK demonstrator team and attending an iLevel Trus Joist training course helped Hallam achieve the good quality work they had set as their target. Using a mixed team of skilled and semi-skilled labour, the quality of the construction won praise from the client.

Chris Smith of Hallam commented: **“We really believe that Rå Build has a great future.** Being able to use a mix of skilled and semi-skilled labour is a great advantage at times when skilled labour is in short supply. We learnt a great deal initially and have been **able to gain major cost savings** on future projects.”





Norman Hinckes of Masonry Frame Systems was convinced by the potential of Rå Build from the outset. They have based their business around offering Rå Build throughout South-East England.

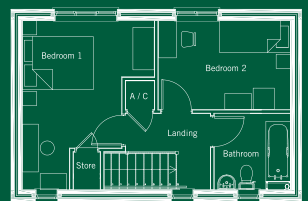
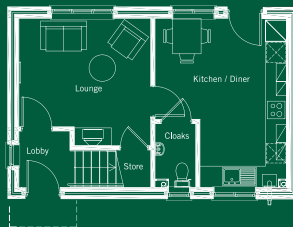
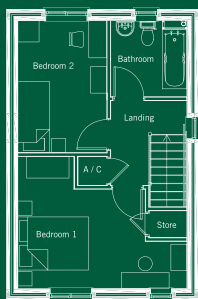
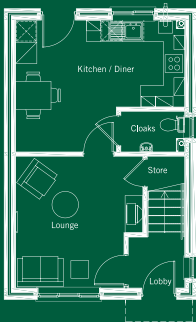
“The key benefits,” says Norman, “are speed and quality of build. We reckon that a weatherproof envelope for the average 2-3 bed semi-detached home can be built in about ten days, with the facing brickwork or exterior cladding taken off the critical path completely. On top of this, the thermal insulation properties of aircrete are excellent, so the system helps towards achieving thermal compliance with the Building Regulations.”

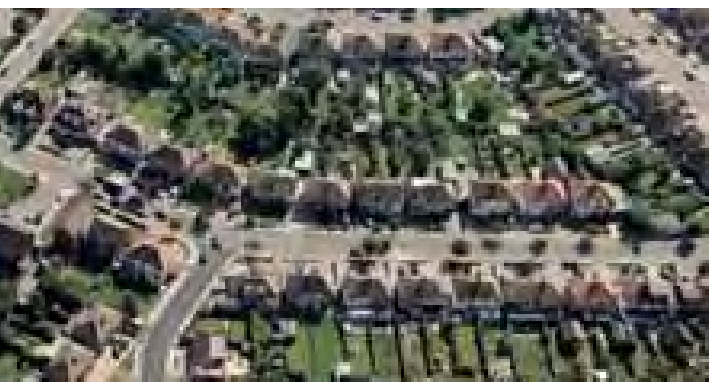
On one project to build six family homes in Wimbledon, the use of the Rå Build method **cut 12 weeks off the original contract period of 30 weeks** which delighted the client. Similar time savings have been achieved on the many other projects which Masonry Frame Systems has undertaken throughout the South-East. “The build was very clean and tidy and the quality of blockwork that a team of expert Thin Joint installers can achieve is truly impressive.”

The experienced, well-practiced, multi-skill teams from Masonry Frame Systems, who build the Rå Build shells, are carefully trained in Thin Joint construction. Together with the associated timber engineered floors and roof, this ensures construction proceeds quickly and to a high quality. They have a vested interest in this – any problems with the installation cannot be left to following trades, as they are the following trade. Other benefits of Rå Build include improved airtightness (a key requirement under the current Building Regulations) and reduced waste and defects. Thin Jointed aircrete construction is less susceptible to wet or cold weather during construction, and provides the robustness of masonry construction preferred by homeowners.

Concludes Norman Hinckes: **“I’m convinced this is the way ahead for housebuilding.** With the current housing shortage we have to build quality, sustainable homes more quickly, more efficiently and to better standards of insulation. Quite simply, Rå Build is the answer and I’ve backed the idea with my business model.”







Rå Build – Plan Compliant

Rå Build is a proven solution to meet the increasing demand for affordable housing throughout the UK. Working with leading construction & property consultants calfordseaden, H+H UK have produced a range of standard house types, designed to optimise construction efficiency.

Complying with Housing Corporation requirements, the standard house types offer developers a robust construction that meets or surpasses all the current Building Regulations, and which matches the speed of build offered by framed construction.

The seven standard house types can be used in a range of permutations to produce detached, semi-detached and terraced units. They have been designed to accommodate the following housing needs:

- 2 bedroom, 3 person (narrow and wide frontage)
- 2 bedroom, 4 person (narrow and wide frontage)
- 3 bedroom, 5 person (narrow and wide frontage)
- 4 bedroom, 6 person (narrow frontage)

For further information relating to the approved standard house types and their Housing Quality Indicators please visit www.hhcelcon.co.uk or contact us for our Plan Compliant House brochure

calfordseaden
construction & property consultants





Rå Build – Secure

The Rå Build method achieves a weather-tight masonry shell with none of the delays and logistical problems associated with conventional building techniques. As well as matching the speed of timber frame construction, the system eliminates the lead times which are associated with frame manufacture.

Rå Build increases efficiency through continuous working processes that allow labour to be concentrated in fewer plots at a time, while minimising wastage of materials and benefiting the environment.

Rå Build comfortably satisfies all areas of the Building Regulations and has been used in constructions achieving all the highest levels of the Code for Sustainable Homes (levels 3,4,5 and 6).

H+H's Thin Joint System, which is a key element of the Rå Build method, is recognised by the Housing Corporation and English Partnerships as a Modern Method of Construction (MMC). When combined with Celcon Foundations Blocks and the H+H Flooring System at ground floor level, the opportunities for achieving high ratings in the BRE's Green Guide to Specification and the BRE's EcoHomes assessment scheme are even further enhanced.





“I have always preferred masonry houses and it is good to know that the quality of workmanship that makes up the structure of our family home will be around for a long time in the future. An Englishman’s house is his Castle and castles are made of masonry”

For further information regarding
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