The National Self Build & Renovation Centre

Self Build Handbook | Issue 3 | 2023

Make your dreams **a reality**

nSBRC

0345 223 4455 | **nsbrc.co.uk**

Lydiard Fields, Great Western Way, Swindon, Wiltshire, SN5 8UB (M4, J16)

BETTER SUSTAINABLE HOMES

Est. 2007

FLEMINGHOMES

bespoke timber frame homes
to the wind and watertight stage

SPELLING OUT OUR FLAGSHIP COMPANY VALUES

www.fleminghomes.co.uk

DESIGN • PLANNING • BUILDING REGULATIONS
CONSTRUCTION DESIGN & ENGINEERING • MANUFACTURE • ERECTION

Build It AWARDS 2022 SHORTLISTED

2020 WINNER Awards

Build It AWARDS 2019 WINNER

Build It AWARDS 2017 WINNER

TIMBER DEVELOPMENT UK MEMBER

bmtrada

NaCSBA

A very warm welcome to the **National Self Build & Renovation Centre**

We believe people deserve better homes. We can help you create your better home by delivering our three key promises:

- We'll **inspire** you by showcasing the very best building methods, trends and technologies.
- We'll **inform** you with our range of shows, workshops, courses and educational tours.
- We'll always offer **impartial** advice you can trust.

A whopping 759 people completed our visitor survey this summer – our third annual survey - and we've analysed and compared the data to understand the main motivations and barriers people are facing in 2023.

Here's a brief snapshot of some of our key findings:

Two thirds of people completing the survey were in the 55-74 age bracket and 38% are retired, while 29% are employed, working full-time and over 20% are self-employed.

69% are building a brand-new home with just under a third working on existing properties. Of those completing a new build, 40% intended to be 'very hands on' during the project and the most typical total budget (for plot and build) is £350,000-£500,000 with 14% having a total budget of under £250,000 and 6.4% enjoying a budget of a £1million+.

We asked which building system people were choosing to build with, and while 17% were still undecided, Timber Frame came out as the most popular system again, with 24.3%, followed closely by pre-fabricated timber panels at 23%. Also popular are traditional masonry (14%) and Insulated Concrete Formwork (ICF) at 11.2%. There was also a strong interest in sustainable materials and attaining 'Passivhaus' standards.

The two big motivations for people undertaking a self build project are:

1) **Attaining a higher quality home than a standard new build.**
2) **A home that is more sustainable and environmentally friendly.**

Indeed, it is fairly damning statistic that 91% of people we surveyed would not want to buy a new build home, but would rather not move (47%) or buy and existing (second hand) property (44%).

The biggest barriers faced by people are:

1) **Gaining planning permission**
2) **Finding a suitable plot of land**

We know that finding that perfect plot is a significant hurdle for potential self-builders to clear and of the 33% of people still searching for their plot, a third of them had been searching for over three years! That said, two-thirds had found their plot, with 25% of those building in place of their existing property, or having inherited a plot.

Finally, we asked about the impact the cost of living crisis had on people. 55% said it had affected their plans, but encouragingly of this group, just 1.4% had abandoned their plans. What we were particularly pleased to see was 18.4% of the same group had planned to install more energy saving measures. Self-builders have a unique opportunity to 'design out energy consumption' and therefore future-proof against uncertain energy bills. This principle of 'fabric first' has clearly been understood by self-builders, with 91% of people telling us they had budgeted for higher levels of insulation.

It was lovely to see that 53% of people had visited the centre twice or more and it is always a pleasure to meet people who first found us while plot hunting, who have gone on to create their perfect homes, often using many of our fantastic exhibitors. You can view many examples of this on the case study section of our website.

Thank you for visiting the NSBRC. Remember, we are here six days a week, to help you achieve your own better, more sustainable, home.

Harvey Fremlin MCIM
Managing Director
and Employee Owner

Supporting custom and self build NaCSBA GOLD PARTNER 2023 www.nacsba.org.uk

BETTER SUSTAINABLE HOMES Est. 2007

Visitor Information

Essential information that you will find useful during your visit to the centre

INFORMATION POINTS AND ORIENTATION

The Centre is packed full of useful information and the maps throughout this handbook can help you find your way around. There are various courses, workshops and events that are run at the Centre and online, details of which are at the front of the handbook.

THE COFFEE HOUSE 10:00 - 15:00

Situated to the left of the entrance of the Centre as you go into the main hall, the coffee house is open from 10:00 - 15:00 and serves coffees, teas and light snacks. **A polite notice:** only food purchased from the coffee house can be consumed in the Centre.

TOILETS

The Centre has two main toilet facilities:

- Entrance Area toilets - located adjacent to the main coffee shop area
- Build It Theatre toilets - located at the side of the theatre.

Disabled toilets are located in each facility. Baby changing is located in the entrance area toilets.

CHILDREN

Children are welcome to accompany you to the Centre.

Safety Note - the Centres exhibits are real elements of buildings showing cutaways and exposed materials. Please keep children supervised both for their safety and the enjoyment of other visitors. If you have a children's buggy or pushchair then all areas of the centre are accessible.

SMOKING

The Centre is no smoking throughout.

PHOTOGRAPHY

Photography for personal use is allowed within the Centre. No photographs may be used for any public or commercial purposes whatsoever without our prior permission. If you would like to use any images please email **marketing@nsbrc.co.uk**. However we do encourage you to bring your camera and take advantage of the chance to see the inner layers of the various products and structural methods that are on display in the educational zone's exhibits.

HOTELS

There are three hotels within a short walk from the Centre.

WEBSITE

For the latest information about the Centre please consult:
www.nsbrc.co.uk

HELPDESK

The Free Helpdesk offering impartial technical advice is staffed Wednesday to Sunday each week.

OPENING TIMES

Please always check the Centre website before visiting:
www.nsbrc.co.uk
for up-to-date opening hours

The Centre is open:
Tuesday - Saturday 10:00 - 17:30,
Sunday 10:00 - 16:30 *
* Closed to the public on Mondays for business conferencing/ Bank Holiday Mondays

About **Team NSBRC**

Since 2014 the NSBRC has been owned and operated by 'The Homebuilding Centre Limited' an employee-owned business.

Our tails were wagging this summer as we supported the Big Dog Art Trail in Swindon.

From 15 July to 3 September, 30 super-sized balloon dogs (or 'Swindogs') and 42 super-cute 'Swinpups', designed by professional artists, schools and community groups, created a free and accessible trail through some of Swindon's best-loved landmarks, parks and public spaces.

Over 23,000 people went walkies along the world's first balloon dog art trail, as these amazing sculptures brought a burst of colour to our home town.

Helping to raise vital funds to care for local seriously ill children and their families, we joined several local and national businesses, as one of the trail sponsors, in support of Julia's House, the Wiltshire's children's hospice charity.

Our sculpture 'Sparky' was designed by Alice Irvine, a third-year BA Illustration student at Swindon's New College. The colour gradient is based on energy efficiency charts, moving from reds representing less energy efficient buildings, to greens representing more energy efficient ones. The pattern of the houses and buildings drawn over the top of the design represents the journey to make homes more energy efficient. We used Sparky to help spread awareness of practical and affordable options to reduce energy bills for residents of Swindon with every visitor to the dog receiving a free 'energy efficient home guide'.

When we heard there was an opportunity to be involved, and to support our local community as well as the fabulous team at Julia's House, we had to sign up! Many of our team have enjoyed discovering the amazing array of beautifully painted dogs with their families over the summer and we all fell in love with our dog.

The Art Trail concluded with the thrill of a grand auction in September! We were determined to 'bring Sparky home' and were delighted that we were able to make a significant bid to, not only secure Sparky's return to the NSBRC, but also provide a financial boost to such a deserving charity. It has been a pleasure to be involved in this event and Sparky will no doubt be the star of many a selfie at the NSBRC!

Enjoy your visit and good luck with your project.

Team NSBRC

You can find out more about the wonderful work of Julia's House at: **juliashouse.org**

Published by

CONSTRUCTIVE MEDIA.

50 George Street, Pontypool NP4 6BY
Tel: 01495 740050
Email: nsbrc@constructivemedia.co.uk

Cover Image
Courtesy of Total Home Environment
www.totalhome.co.uk

The home of Self Build Custom Build & Renovation

nSBRC National Self Build & Renovation Centre

Lydiard Fields,
Great Western Way,
Swindon, SN5 8UB
www.nsbrc.co.uk

contents

Centre Map

Potton Show House

Nudura House

Roofs

Brick Library

Groundworks

Plant & Site Set-Up

Coffee Shop

Scotframe House

COLOUR KEY

New Build Educational Zone

Professional Services Hub

Sovereign Theatre

Finishes

Helpdesk

Scotframe House

Potton House

Dale House

BuildStore

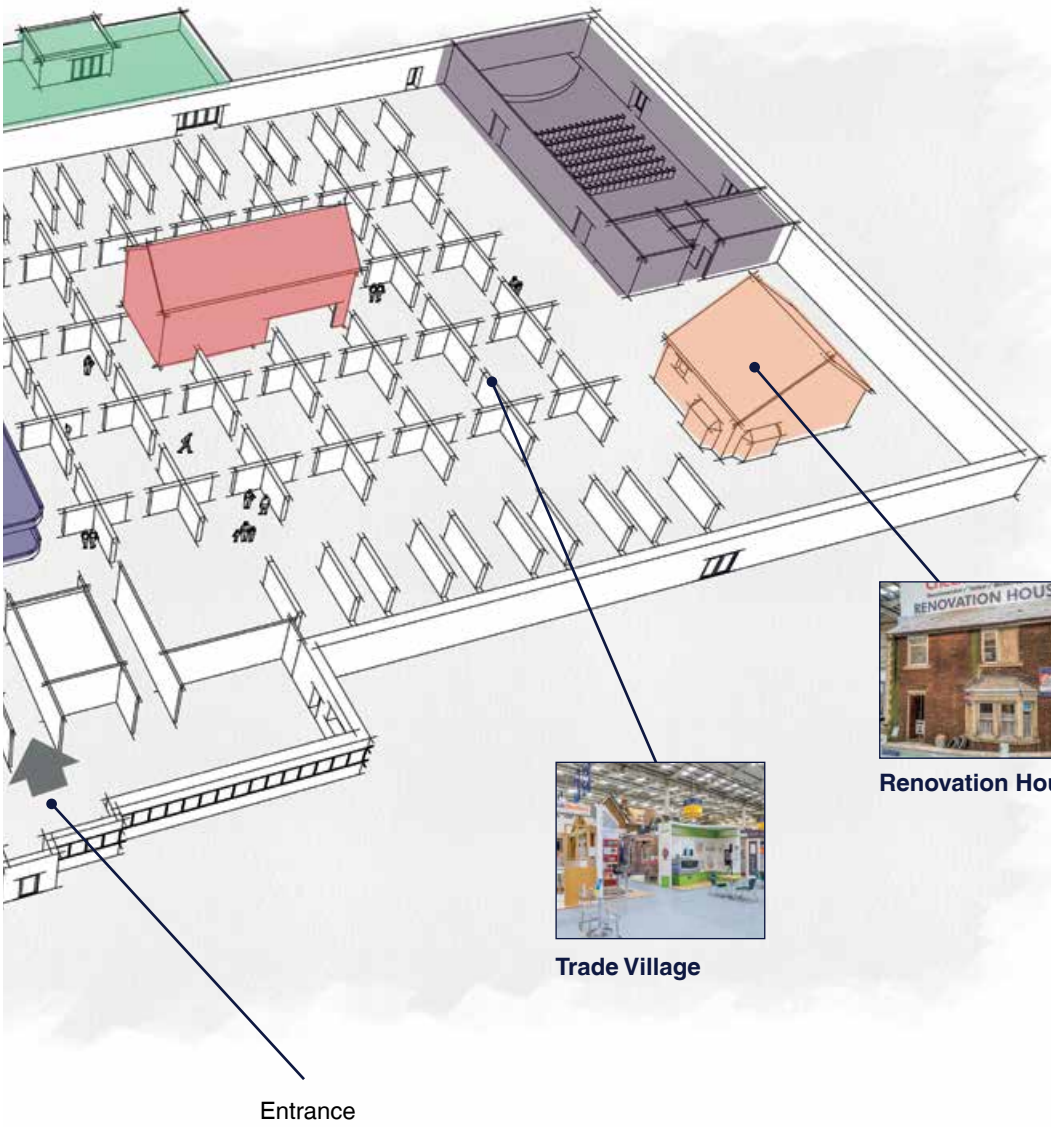
Outdoor Living

Nudura House

Renovation House

Bradfords Building Supplies

Build It Theatre



2023/2024 Events

The National Self Build & Renovation Show

Eco Workshop

Passivhaus Workshop

Guide to Finding Land

Internal Finishes Workshop

OCTOBER 2023

Mon	Tue	Wed	Thur	Fri	Sat	Sun
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

NOVEMBER 2023

Mon	Tue	Wed	Thur	Fri	Sat	Sun
		1	2	3	4	5
6	7 * Part 1	8	9	10	11 Retrofit Solutions	12
13	14 * Part 2	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

DECEMBER 2023

Mon	Tue	Wed	Thur	Fri	Sat	Sun
				1	2 * *	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25 Christmas	26	27	28	29	30	31

JANUARY 2024

Mon	Tue	Wed	Thur	Fri	Sat	Sun
1 New Year's Day	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

FEBRUARY 2024

Mon	Tue	Wed	Thur	Fri	Sat	Sun
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17 Design & Planning	18
19	20	21	22	23	24	25
26	27	28	29			

MARCH 2024

Mon	Tue	Wed	Thur	Fri	Sat	Sun
				1	2	3
4	5	6	7	8	9	10
11	12	13 **	14	15	16	17
18	19	20 **	21	22	23	24
25	26	27	28	29	30	31

Please see our website for the most up to date course dates and information **nsbrc.co.uk**

Ask an Architect
Building Systems Workshop
The Self Build Course
Bank Holiday Closures
Guide to Project Management
Guide to Energy Efficiency
Guide to Renovation Projects
Guide to Managing Money

APRIL 2024

Mon	Tue	Wed	Thur	Fri	Sat	Sun
1 Easter	2	3	4	5	6 Heat & Energy	7
8	9	10	11	12	13 **	14 Easter
15	16	17	18	19	20	21
22	23	24	25 **	26	27	28
29	30					

MAY 2024

Mon	Tue	Wed	Thur	Fri	Sat	Sun
		1	2 **	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

JUNE 2024

Mon	Tue	Wed	Thur	Fri	Sat	Sun
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22 Build Sys & PM	23
24	25	26	27	28	29	30

JULY 2024

Mon	Tue	Wed	Thur	Fri	Sat	Sun
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27 **	28
29	30	31				

AUGUST 2024

Mon	Tue	Wed	Thur	Fri	Sat	Sun
			1	2	3	4
5	6	7	8	9	10 Heat & Energy	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29 **	30	31	

SEPTEMBER 2024

Mon	Tue	Wed	Thur	Fri	Sat	Sun
						1
2	3	4	5 **	6	7	8
9	10	11 **	12	13	14	15
16	17	18 **	19	20	21	22
23	24	25	26	27	28	29
30						

*Online sessions via Zoom

**We run a 50/50 split of in-person & virtual sessions

The National Self Build & Renovation Show

Create your **perfect home**

January 26th-28th

The popular 'National Self Build & Renovation Show' returns in January, offering something for everyone interested in creating a well-designed, healthy and efficient home.

The show is an exciting, friendly and inspirational event. It's the perfect opportunity to discover how the concept of 'self building' your own home works or to simply explore the options for injecting new life into your existing home.

The show offers a packed three days of **live demonstrations**, **free seminars** and **case studies** along with an **unrivalled line up of experts** on hand to share their advice and knowledge.

From planning news to budgeting, plot finding and building regulations, the free talks are a great way to pick up a wealth of valuable information, for both newcomers and skilled professionals alike.

Over 200 exhibitors will be showcasing their latest products and technologies, with experienced representatives on hand to demonstrate, answer questions and offer their professional advice.

Our free guided tours of the NSBRC's fantastic educational zones are the perfect way to help visualise these products as part of your finished project.

The NSBRC's own team of impartial experts along with architects, project managers, designers, planners and eco consultants, will be on hand to meet for one-on-one sessions throughout the show. Offering free advice, they will happily talk through your ideas with you, no matter how big or small.

Show highlights:
» 200+ exhibitors
» Free one-to-one expert consultations
» Live 'Question Time' style panel debates
» Guided tours of the NSBRC's fantastic life-size educational exhibits
» Free NSBRC Course Taster Sessions

FREE Tickets
The Show runs from Friday 26th - Sunday 28th January with tickets £12 per adult.
NSBRC visitors can book today for FREE at our front desk or on our website www.nsbrc.co.uk.

The National Self Build & Renovation Show

BETTER SUSTAINABLE HOMES
Est. 2007

Create your **perfect home**

January 26th-28th

- **67,000 sq ft exhibition space**
- **Over 200 exhibitor displays**
- **Home improvements and extensions**
- **Energy efficiency advice**
- **Theatres with free seminars**
- **Real life case studies**
- **Guided educational tours**
- **FREE parking**

nSBRC
National Self Build & Renovation Centre

More info & **FREE** tickets at **nsbrc.co.uk** *(£12pp on the day)*

Fri & Sat: 9am - 5pm. **Sun:** 9am - 4pm. **Swindon M4 Junction 16**

The Self Build Course

We're delighted to offer a 3 day course for those contemplating a self build project.

Before you build your home, build your knowledge!

Covering 11 topics in total the informal workshops make use of the superb practical exhibits available in the Centre to provide attendees with a level of knowledge which guarantees their projects will run more smoothly.

"I have learned more in three days than I would have done in years on my own"

3 DAY
SELF BUILD COURSE
£395
inc VAT per person

"This course has provided me with a wealth of information about all aspects of self building, with helpful and knowledgeable presenters. It's great value for money and I now have a self build bible. I highly recommend it!"

National Self Build & Renovation Centre

Training & Education

Day 1

Budgeting & Finance
This first session is dedicated to methods of raising finance and the importance of setting a budget and controlling costs throughout the project.

Finding & Evaluating Land
Finding a building plot is never easy, but there are ways and means to find that elusive dream plot.

Design & Specification
This session will look at how to get the best design for your dream home.

Building Systems & Construction Methods
We'll take you on a comprehensive tour of the build process, covering everything from clearing and setting up your site, laying the foundations and options for building the superstructure and roof.

Day 2

Planning Permission & Permitted Development
Our Planning Expert will explain the intricacies of the planning process and how you can optimise your chances of getting approval for your dream home.

Building Regulations
We'll explain about building control procedures and the importance of building regulations.

Trades, Contracts & Tendering
We'll discuss the best way to find tradesmen, the trades you'll be hiring, when you'll need them and what they do.

Project Management & Site Set Up
Starting with the basic principles of managing the people involved in your build, through to budgets, basic contracting techniques, buying materials and site management.

Day 3

Eco Fundamentals
Our eco expert shows you how to lessen the impact your project could have on the environment; he looks at the incentives available and drivers for using various eco technologies, comparative fuel costs and helps you understand how to calculate the payback terms. He'll also consider the latest legislative requirements of Passive House, SAP ratings, and other potential incentives.

Eco Design, Planning & Management
We will look at the different elements of the building to make sure they are designed, specified and installed to maximise their potential.

Internal Services
Our eco expert will discuss the usage of current eco-tech options in your new home

2023/2024 Course Dates

7th - 9th October 2023
18th - 20th November 2023
13th - 15th January 2024
9th - 11th March 2024

For further information and to book:
Call **0345 223 4455** or visit **nsbrc.co.uk**

The NSBRC Guide to Project Management

This course is essential to anyone considering their first self build project. Covering everything from budgeting, insurance and site management through to health & safety, snagging and VAT reclaim.

We're with you every step of the way!

1 DAY COURSE

£165

Per Person Including VAT

£85

Per Device for Virtual Course Including VAT

"It was a great course. Although I am not actually working on a project at the moment, I have a potential project on the back burner. The course has given me some inspiration and if I decide to go ahead with it, I shall definitely be revisiting the course. Thank you very much."

National Self Build & Renovation Centre

Training & Education

Course Topics:

Project Management Basics

» Sequencing your Build
» Project Management Options
» Build Routes
» Programme Management

Budgeting

» Setting and Establishing a Budget
» Controlling Expenditure
» Insurances and Warranties
» VAT Reclaim

Trades and Materials

» Sourcing and Managing Trades
» Getting a Price
» Contract Options
» Sourcing Materials
» Quality Control

Site Preparation and Set up

» Site Management
» Avoiding the Pitfalls
» Health and Safety
» Completion

"A really good course, very professionally delivered and brilliantly illustrated with real life anecdotes by a highly credible presenter"

2023/2024 Course Dates

21st October 2023	24th February 2024
2nd December 2023*	13th April 2024**
*Online session via Zoom	**50/50 in-person & virtual

For further information and to book:
Call **0345 223 4455** or visit **nsbrc.co.uk**

The NSBRC Guide to Managing your Energy Efficient Home

Build your knowledge, Reduce your bills!

There are so many options for heating and energy efficiency services in our homes today - so where do you go for independent advice on what is right for you and your home?

This no-nonsense guide is presented by David Hilton who has a master's degree in architecture and is also an experienced active heating and ventilation engineer. David will cut through the jargon, green-wash and sales hype to help you define what you need in your home, what products make sense and which trades put them in.

"This course was superb, a masterclass from start to finish. Dave's knowledge is encyclopaedic and he shared it with such enthusiasm (and humour!) - who knew that heating could be such fun?! Thanks everyone, this course could not have been any better, it was an education in itself, all we needed to know and far far more."

nSBRC
National Self Build & Renovation Centre

Training & Education

- **WHY** do I want an energy efficient home?
- **WHAT** exactly is an energy efficient home?
- **WHICH** products do I need?
- **WHEN** do they get installed?
- **WHO** puts them in?
- Defining and Designing Heating & Ventilation Systems
- Jargon Busting – including: Types of Technologies: Boiler Replacement, Heat pumps, & much more!
- Energy Sources, Fuel Costs & Relative Efficiency
- Plumbing Systems & Dealing with Trades
- Innovation & The Future

This is the course you didn't know you needed – until now.

2023/2024 Course Dates

7th & 14th November 2023*
*Online session via Zoom

N.B. Under development – new dates announced soon – please register your interest by emailing courses@nsbrc.co.uk

1 DAY COURSE
£165
Per Person Including VAT
£85
Per Device for Virtual Course Including VAT

For further information and to book:
Call **0345 223 4455** or visit **nsbrc.co.uk**

The NSBRC Guide to Renovation Projects

Renovate the past... build your future!

Our Renovation Course is delivered by NSBRC Helpdesk Expert David Hilton. David is an authority in sustainable building and energy efficiency, with extensive knowledge in building fabrics and heating systems.

The Course is classroom-based and discusses how you can effectively manage your project, the processes you will encounter and which trades you should use. David will also guide you through the NSBRC's own fantastic Renovation House where you can watch the theory come to life.

Our Training Courses are designed to build your knowledge and confidence so that you are equipped to make informed decisions during your project.

"It's a sign of how good this course is that we have no house to renovate but still found it hugely beneficial, full of information and know-how that we can now apply to the wider task of house-building. Dave is such a great presenter and communicator which made the whole experience come to life. A wonderful course, thank you!"

nSBRC
National Self Build & Renovation Centre

Training & Education

The day covers many key subjects including:

Part one: Super structure:

» Building Systems & Fabrics
» Building Regulations & Legislation
» Damp-proofing, cracking & subsidence

Part two: First and second fix:

» Re-design and re-configuring
» Plumbing & Services
» Kitchens & Bathrooms
» Can I do it?
» What's the disruption?
» What's the cost?
» What's the time frame?

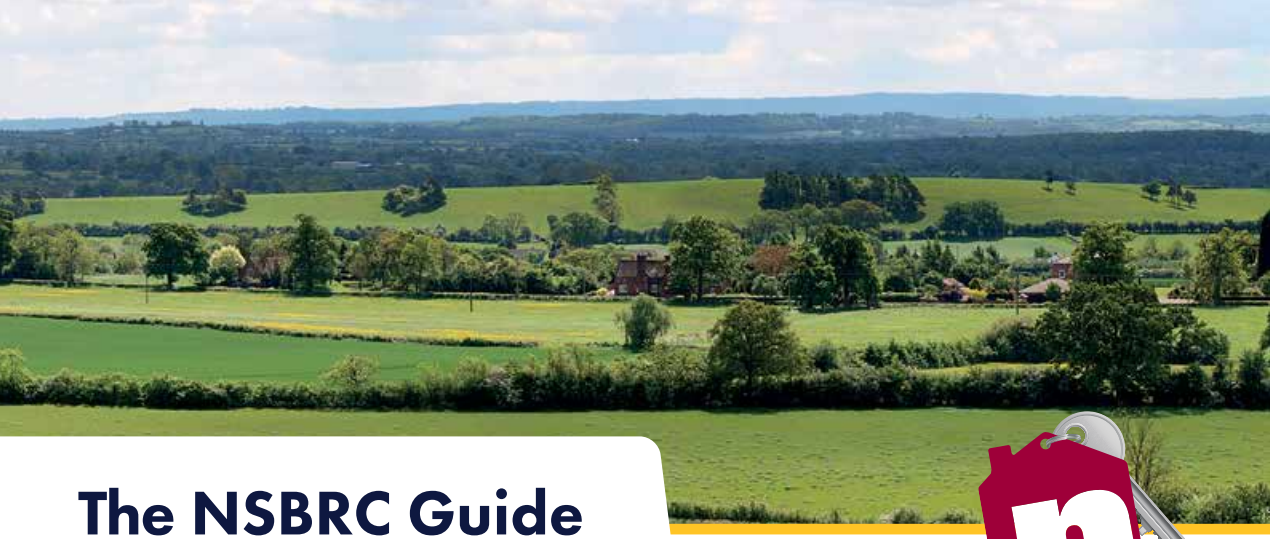
"An excellent course giving a thorough overview of eco renovation."

2023/2024 Course Dates

2nd December* 2023
6th April 2024
6th July 2024
7th September 2024
*Online session via Zoom

1 DAY COURSE
£165
Per Person Including VAT
£85
Per Device for Virtual Course Including VAT

For further information and to book:
Call **0345 223 4455** or visit **nsbrc.co.uk**



The NSBRC Guide to Finding Land & Appraising a Plot

This extensive in-depth and informative Masterclass will delve deeper into the challenging world of plot hunting to give you the expert advice and knowledge you need to find, and determine the suitability of your ideal plot. This course is run by Potton's Managing Director, Mark Stevenson.

You will leave with advice and tips on how to find and appraise a potential building plot.

"This was a FANTASTIC course, a goldmine of wisdom, you did a brilliant job, Mark – I've learnt so much and am now super eager to put it all into practice! Thanks Katy too, you make a great team! :)"

2023/2024 Course Dates

3rd November 2023
2nd February 2024
25th April & 2nd May 2024**
**50/50 in-person & virtual

1 DAY COURSE

£165
Per Person Including VAT

£85
Per Device for Virtual Course Including VAT

nSBRC
National Self Build & Renovation Centre

Training & Education

Course Contents:

Why are plots hard to find?
- The Right to Build legislation
- Competitors in land buying
- Understanding the competitor advantage

How to get started
- Understanding the difference between land and a building plot
- How much land do you really need
- What to look for when looking for a plot - different plot types
- Plots to avoid
- Specialist planning policies for exception plots

Top 20 ways to find a plot
- Case study examples
- How to identify plot ownership
- Replacement dwellings
- Replacement dwelling appraisal / Checklist
- Custom build plots
- Using online maps and plans
- How to make your own plot
- Live example of using online mapping to find a plot

The plot buying process explained
Legal considerations explained
- Option agreements explained
- How to assess the viability of a plot
- How to make sure you pay the right plot price
- Plot valuation excel model - live demonstration

Assessing the planning potential of a plot
- Planning appraisals - detailed considerations
- Obtaining pre-application advice
- How to prepare for a pre-application meeting
- Identifying plot construction risks
- Plot construction risks, detailed examples

Land yourself the perfect plot!

For further information and to book:
Call **0345 223 4455** or visit **nsbrc.co.uk**

The NSBRC Guide to Managing Money

Your home building project is likely to be one of the largest single spends in your lifetime. Looking after your finances, in a controlled and planned manner, will help keep you on track and on budget. Losing control of your cash can lead to stressful delays, unexpected costs and potentially an unfinished build with no money left.

The NSBRC Guide to Managing Money will give you the foundations for a successful, worry-free project allowing you to focus on the key decisions and enjoy the excitement of creating your new home. Ideal for anyone taking on a self build, renovation or large scale refurb for the first time, our new virtual course is delivered by an experienced presenter with a background in designing and building homes.

From **how to raise finance** to **budgeting**, **negotiating on prices** to **re-claiming VAT**, this course will **ensure you avoid costly mistakes** and **maximise what you can achieve** with the money you have available.

"A really helpful guide to keeping on top of budget. The presenter clearly has plenty of experience in this area and was very good at explaining things in understandable ways"

2023/2024 Course Dates

4th November 2023
3rd February 2024
13th & 20th March 2024**
**50/50 in-person & virtual

1 DAY COURSE

£165
Per Person Including VAT

£85
Per Device for Virtual Course Including VAT

Course Contents:

Picking the right team

» Financial experts, who are they and when should I use them?
» Financial roles and responsibilities on a building project
» Raising finance
» Choosing and appointing suppliers and contractors
» Dealing with financial disputes and claims

Budgeting

» Putting together a build budget
» Site overhead costs
» Contingencies

Professional fees and what you get for your money

» Design & Professional fees
» Routes to build

Making the most of your money

» Investing money to save money – the importance of life cycle costs
» How to make sure you don't run out of money
» How to buy for less money
» Managing VAT
» Financial tools (Excel based)

Manage your budget, manage your build!

Our Guide to Managing Money course is delivered by Potton's Managing Director, Mark Stevenson.

Having worked as a builder and construction professional for almost 30 years, Mark Stevenson is Potton's Managing Director where he now helps self-builders build their own homes.

Whilst Mark describes himself as a 'professional builder' as a result of his career in house building and timber systems manufacturing, he has specialist knowledge of timber construction and extensive expertise in finding land and appraising building plots.

"That was excellent, I am so much more motivated about building now"

For further information and to book:

Call **0345 223 4455** or visit **nsbrc.co.uk**

Eco Workshops

Whether your motivation is saving the environment or saving money, our programme of Eco Workshops should have the answers you're looking for!

We've cut through the 'greenwash' to bring you a wealth of independent and informed advice and information on the latest energy-efficient technologies, products and services; sustainability; environmentally responsible building principals and retrofitting of existing properties.

Each of our Eco Workshops focus on a particular phase or aspect of energy-efficient homebuilding, so you can pick and choose which Workshops to attend that are most relevant to your particular project – or come along to all four, as you're bound to discover something new each time!

Industry experts will be on hand throughout the day to provide you with the opportunity to discuss your green ideas, designs and any plans you have for your home.

FREE ENTRY

Lifting the lid on eco issues!

2023/2024 Workshop Dates

11th November 2023	22nd June 2024
17th February 2024	10th August 2024
6th April 2024	9th November 2024

nSBRC
National Self Build & Renovation Centre

Training & Education

Workshops:

Eco Design, Planning & Sustainability

17th February 2024

Our experts will explain how your designs, lifestyle and specification choices could impact on your home's energy performance.

This focused workshop will introduce sustainable building materials and the importance of air-tightness and insulation, particularly when considering heat-pumps and ventilation. We'll explore investing in solar – with an introduction to the primary design requirements, specifications & key ancillary technologies (battery storage & electric vehicle chargers) to maximise the solar contribution for new builds.

Building Systems & Project Management

22nd June 2024

A key decision for any self builder is choosing what materials you will build your home with. When combining the desire to produce a comfortable, energy efficient home offering high performance and utilising natural materials there are many choices available. Our workshop will help you understand your options and ensure you end up with the home that delivers against your original design brief, budget and expectations.

We will also cover the role that the self builder plays in the construction process, whether it be self project managing, package managing or using sub-contractors – addressing the relative merits and drawbacks of each route.

Heat & Energy

6th April & 10th August 2024

Join us for one of our most popular events and get the answers that the salespeople might not tell you. We'll cover everything from heat pumps and solar panels to ventilation and building fabric; what's new, what works and what are the practical issues you need to consider.

This is your opportunity to get the facts straight from the experts. Hear what's happening with government incentives, and understand the green investment opportunities different technologies offer so you can balance upfront costs with the long-term savings they may provide.

Retrofit Eco Solutions

11th Nov 2023 & 9th Nov 2024

This workshop covers one of the most important eco issues today: What practical measures can be taken with existing buildings to make them more sustainable and energy efficient?

With housing contributing 22% of the UK's carbon emissions it is essential that we find ways to reduce this impact if we are to meet our future carbon targets.

Our experts will explain the options available on everything from achieving air tightness, insulation requirements and design considerations, to ventilation issues and how to choose between the array of heating technologies that are on the market.

For further information and to book:

Call **0345 223 4455** or visit **nsbrc.co.uk**

Ask An Architect

**Frustrated with the existing layout of your home?
Need an extra bedroom but can't afford to move?
Have some self-build ideas but need some advice
on putting them into practice?**

If you have any of these issues, then you will be interested in the 'Ask an Architect' event at the National Self Build and Renovation Centre.

The Royal Institute of British Architects (RIBA) is offering attendees a free, personal consultation with an architect to discuss ideas for designing and building your own home or renovating or reconfiguring your existing home, in a strictly no obligation 25 minute meeting.

Undertaking a building project, whatever the scale, can be a daunting experience. By using an architect from RIBA Chartered Practice you know you are employing someone who has undertaken seven years of training and works to the highest standards in design, health and safety and quality assurance — no other building professional is trained in design and construction to such a level of expertise.

2023/2024 Dates

28th October 2023
24th February 2024
13th April 2024

In partnership with
RIBA
Architecture.com

nSBRC
National Self Build & Renovation Centre

Training & Education

Discussion Topics:

- **Designing and building your own self build home**
- **Reconfiguring your existing home to maximise space**
- **Creating extra storage**
- **Introducing energy-saving solutions to save money**
- **Adding value to your home**

FREE ENTRY

For example, a chartered architect can add value to your project both in terms of quality of design and longer term value:

- **Help you achieve your aspirations and vision**
- **Add value to your project through good design and sound construction**
- **Bring creativity to your project whilst keeping it on track**
- **Guide you through the design and construction process**
- **Give you peace of mind**

All appointments will be held with an architect from RIBA Chartered Practice who adheres to the RIBA Professional Code of Conduct.

Sessions are by appointment only, please call 0345 223 4455 or email reception@nsbrc.co.uk to book.

Photo credit: Mark Siddall, LEAP

Passivhaus Workshops

We spend most of our time indoors, so buildings play an important part in our health and wellbeing. Join us at our **Passivhaus Workshop** as we explore how we can create homes that are designed to deliver comfort, quality and lower running costs, in any type of building.

Produced in partnership with the Passivhaus Trust, this workshop introduces the key concepts to passiv design and construction. This is a fantastic opportunity for professionals, trades and individual self builders to really understand Passivhaus.

Featuring: surgeries on design, airtightness, insulation, ventilation, windows & doors; a range of Case Studies; an interactive 'Question Time' session and much more.

2023/2024 Workshop Dates

25th November 2023
19th & 20th April 2024
23rd November 2024

FREE ENTRY

nSBRC
National Self Build & Renovation Centre

Training & Education

5 Reasons to consider building to Passivhaus standards:

- **Good for comfort -** comfortable temperatures are easily maintained whatever the weather using very little energy
- **Good for your health -** constant clean fresh air
- **Good for your pocket -** 90% reductions in energy needed for heating
- **Good for quality -** a rigorous quality control process requires craftsmanship and buildings that are built with care
- **Good for your future -** the Passivhaus seal of approval guarantees certainty of performance

The most successful and cost-effective way of achieving Passivhaus is by incorporating the standard before your designs are complete. It's also useful if the Passivhaus elements are included in your planning application.

Take advantage of free guidance and ensure you have the right team behind you by meeting Passivhaus accredited experts and suppliers at our Workshop.

Photo credit: PH15 System from Passivhaus Homes Ltd.

For further information and to book:
Call **0345 223 4455** or visit **nsbrc.co.uk**

Internal Finishes Workshop

Once the main structure is completed the last stage of the build is traditionally called the finish or second fix, you'll have a huge choice of methods to complete the look and feel of your house. The NSBRC are pleased to host this workshop for self builders and home renovators to help you make these decisions.

The internal finish will give the impression, not only of your personal taste and preferences, but also the feeling of the quality of the build. From wall finishes, architraves and mouldings, floor coverings, doors and stairs a huge amount of thought will be given to the design, materials used and layout in the early part of any design project. This workshop will introduce you to just a few of your options and give you some excellent ideas on how to choose the best solutions for your home.

During the day, you can enjoy a range of seminars delivered by our experts, panel discussions, live demonstrations and guided tours.

2023/2024 Workshop Dates

2nd September 2023
14th September 2024

FREE ENTRY

Expert Advice

Our experts will offer free advice on:

- The principles of kitchen and bathroom planning and design
- How to prepare for a site survey
- Space planning and ergonomics
- Building regulations and practical considerations
- Materials and Finishes
- Preparing a specification
- Colour and Lighting
- Styles, Trends and new technologies

For further information and to book:

Call **0345 223 4455** or visit **nsbrc.co.uk**

Building Systems Workshop

One of the most important decisions you will make during your self build journey is which building system to use. The building system is the method used to construct the superstructure of the house.

This **free workshop** is all about '**Building Systems**'. This is aimed at people at the early stages of a project, who have yet to decide what building method they are using.

FREE ENTRY

2023/2024 Workshop Dates

9th December 2023
16th March 2024
7th December 2024

National Self Build & Renovation Centre

Training & Education

We will cover key issues such as:

- The different building systems available in the UK
- Pros & cons of each option
- Performance factors - Air tightness and energy efficiency
- Cost implications
- Time on site required
- Impact on gaining finance and planning consent
- Site access implications

Using our own unique educational zones, and working with a selection of NSBRC exhibiting partners, we'll explore each of the main options, including: Timber Frame – Masonry – Insulated Concrete Formwork – Steel Frame – Passivhaus – Structural Insulated Panels – Log homes – Straw bale.

Key features of the workshop include:

- 'Battle of the building systems' Panel discussions
- Exhibitor Presentations
- Live Demonstrations
- 1:2:1 consultations
- Tours of the 'Wall Zone' in our new build educational area

For further information and to book:
Call **0345 223 4455** or visit **nsbrc.co.uk**

BUILDING BETTER NETWORKS
Est. 2007

Conference & Venue Hire

As an employee owned company our team shares a passion for delivering a brilliant experience for our conferencing guests.

We promise you will always have a dedicated contact, from your first enquiry, up until the moment your delegates leave us, ensuring that you feel the difference in the experience we offer.

We have a number of conference and meeting rooms accommodating 1 to 240 delegates in a variety of layouts. All rooms have been fitted with the latest I.T and AV equipment. We also have the added benefit of the Piazza within the Visitors Centre, an open space with two timber frame houses as backdrops, suitable for catering; break out space; networking and temporary exhibition space.

We are flexible with opening and closing times, catering requirements, refreshment areas and event set-up. We are essentially your extended team and will work with you to ensure that all of your needs are catered for.

To make an enquiry contact the conference team on **01793 847 400** or **conferencing@nsbrc.co.uk**

Building Better Networks NSBRC Conference & Meeting Space

> *"Exceptional service and professionalism throughout."*

> *"We recently hosted an event at NSBRC and couldn't be happier with the experience! The staff were incredibly supportive and professional, both leading up to the event and on the day. The venue's unique ambiance was a hit with our attendees, and its convenient location just off the motorway made it easily accessible for everyone. Highly recommend NSBRC for your next event!"* **Rachael Booth – Total Guide To**

> *"The NSBRC is our venue of choice when booking an external conference facility in Swindon. The venue is excellent and the staff go the extra mile to ensure the event runs smoothly. Thank you."*

- A unique & inspiring venue
- A dedicated & passionate team
- Flexible meeting spaces
- Available 7 days a week
- Exciting menu choices
- Free Wifi & AV Equipment
- Free parking (inc. 8 EV charging points)
- All with great pricing & no hidden fees!

Maximum room capacities for meeting rooms

	Theatre Style	U-Shape with tables	Boardroom	Cabaret (tables of 10)	Classroom (2 per table)
BuildIt Theatre	240	45	55	120	48
Sovereign Theatre	70	N/A	N/A	N/A	N/A
Custom Build Suite	60	20	25	40	16
Renovation Suite	50	22	20	32 (tables of 8)	16
Dale Boardroom	N/A	N/A	12	N/A	N/A
Self Build Suite	N/A	N/A	10	N/A	N/A
The Think Box	N/A	N/A	4 (/6)	N/A	N/A

Dave & Kellie Signorelli

Case Study

case study

Fact File

Names
Dave & Kellie Signorelli

Occupations
Sales Director / Senior Manager Insurance

Project Location
Swindon, Wiltshire

What type of project did you undertake?
Extension / Renovation

What construction method did you use?
Block & Cladding

How would you describe the style of your project?
Modern

When did you begin work?
October 2020

When did you complete the work?
August 2021

What is the floor area of your project in sq. ft or sq. m?
c.1250 sq. ft

Dave & Kellie undertook an extension / renovation project in Swindon on a house originally built in 1929; they used block & cladding to construct a modern-style family home.

Could you tell us any interesting facts or remarkable features about your project?

The house was originally built in 1929 and formed part of the estate that was coupled with Westlecot Manor opposite our house. We had some good fortune in that we were c.5 houses away from the Conservation Area therefore saved some complications. We're also in the bottom or a quarry where we had bedrock close to the surface.

Dave & Kellie's Experience at the Centre

How many times have you visited The National Self Build and Renovation Centre before?
8-10 times.

What would you say is the most helpful feature or resource at the NSBRC?
The ability to be able to see functioning mock-ups of what we wanted to achieve was absolutely priceless. We used several ideas from our visits there.

Did you use any exhibitors at the NSBRC? If so, who?
Yes, we used both Ultraline Sliding Doors and Aperio for the sound system.

What did you enjoy most about your visit to the NSBRC?
Both the NSBRC staff and the exhibitors were extremely helpful - each time we returned we were able to complete another piece to the puzzle.

Would you recommend the NSBRC to a friend, and if so, what aspects of the Centre would you recommend and why?
For us, this was our first attempt at anything like this. We had some help in that a close family friend is a property developer and actually lives at Westlecot Manor that I mention earlier, so they were able to help direct us in many respects.

Dave & Kellie's Home Improvement Experience

What first inspired you to undertake project – what did you hope to achieve?
We lived close by on Bath Rd for 20yrs and needed more space, so we looked at extending but it became clear that if we really wanted to create the space we needed, then a house move was going to be the way forward. When we eventually found our new home, we were prepared. On the day of moving we took our architect along, so whilst we were unpacking boxes, our architect was measuring up. Many people say you should live in a property for 'some time' before starting large extension projects - and we agree this is important - however, we threw caution to the wind and planned out and executed this project in the knowledge we had spoken to many friends and family in the trade to ensure we constructed an extension that was right for us.

What was the cost & size of the land?
£875k & 0.65 acre.

How did you find the land? Do you have any tips for others currently searching for a plot?
The house went up for sale with a local estate agent and we saw it advertised.

Did you have any issues getting your planning permission granted or with building control?
No, none.

Why did you choose your method of construction?
This was simple, we knew we had to make the extension different to the pebbledash of the original house, and planners seem to prefer that a distinct difference exists between what was original and the new build. So, block and eco-cladding was always the direction we were going.

Did you use a project manager, or did you choose to self project manage?
Self Project Managed.

What was your budget and were you able to stick to it?
Our budget was £300k, and we closed at £262k.

If you didn't stick to your budget, what was the main reason for the overspend?
We did have a close call when we built the new roof, it was clear that there would be a visual difference if we had part of the house with new tiles and the older part with the existing tiles. We had several inspections carried out and we could see that the existing tiles possibly had another 3-5yrs left before they began to fail, some had already failed and had been replaced. The cost of replacing the entire roof was a significant sum that we hadn't budgeted for.

Did you reclaim the VAT, and if so, how much were you able to reclaim?
No.

What aspects of the process did you find stressful – and do you have any tips on how to avoid the pitfalls you encountered?
We're pretty relaxed and just got on with it. The dust, that was annoying though! I'd say, to pull off a project similar to this you need to sit down and adjust your mindset to allow you to consider your life will be in turmoil for a short time; so consider the undertaking, accept it, and rest in the knowledge that it's not forever! In the broader scheme, 9 months is nothing, so we focused on that outcome.

What did you find most enjoyable about working on your project?
In my business life, I rarely see something complete to a physical outcome I can step back from and relish in the fact that I was involved. So watching the project unfold, develop and complete is a very satisfying outcome.

What is one of your favourite features about your project?

The space, the glass out to the garden, and the feeling of tranquillity as its so peaceful here.

How did you tailor your home to suit your lifestyle?

We enjoy entertaining, and we have a young family - so the open plan kitchen and snug areas were really important to us. All the family can be in the same space, doing different things and yet we're all still together.

Is there a possibility you would ever undertake another project in the future?

Yes, a summerhouse will be next but not on the same scale thankfully.

If so, is there anything you would do differently?

I would have thought more on the socket positions, and the quality of the insulation. Although the insulation is more than what was required, the sound proofing between upstairs and downstairs isn't great. If I were to do this again I would use block and beam, which was the original plan.

What would your top tip be for other NSBRC Visitors about to embark on their first self build or home improvement journey?

Ask lots of questions, as the people we spoke with were really helpful and explained everything we needed to know.

Essential Elements

Educational Journey - Walk through our educational zones, covering the six major stages of a building project. From footings and foundations to super-structure and services, our life-sized exhibits covering everything you need to consider when building your own house.

Professional Services Hub - The 'go to' hub for all your professional services and solutions. Including Architects, Project Managers, Surveyors, Building Control, Energy Assessors, Timber Frame Manufacturers, Design Solutions, Landscape Designers and Health & Safety.

Potton House - Artfully combining the best of tradition with modernity. The Ruskin House, from Potton's Renaissance collection, is sure to become a design classic.

Renovation House - The Renovation House is typical of a property built in the inter-war year and has clearly had very little maintenance done to it. Listen to the audio guide as you progress through the construction site.

Land Finding - PlotSearch is the UK's largest and most accurate database of genuine self build land, renovation and conversion opportunities.

Financial Planning - BuildStore Mortgage Services is the UK's leading provider of exclusive mortgages for self build, renovation and conversion projects.

Trade Village - Visit over 250 company stands showcasing their products and services to see how they can help you with your project. Simply scan the companies you want to hear from.

Help Desk - Our team of independent experts are on hand to offer free advice and support on every aspect of your project

Ordering Product Information

Once inside the Centre you have access to vast amounts of information that will be useful to your project. Rather than picking up brochures you can collect what you need electronically. On entry to the Centre you will be issued with a bar-code scanner personalised with your visit ID – similar to the ones used in supermarkets.
There are product information signs and 'Visitor Information Points' (in the Trade Village) allowing you to select specific product information, request a brochure or get the exhibitor to contact you. Within 7-10 days the information you requested will be sent.

To operate the scanner:

1) Position it approximately 15cm (6 inches) from the barcode
2) Press the button on the device
3) A red line will appear
4) Move the scanner until the red line is fully over the barcode
5) The device will bleep and a green light will flash to indicate that the barcode has been read

If you think you have scanned the same barcode more than once, don't worry, the system will only log one request.

LAND SERVICES

LOOKING FOR A BUILDING PLOT?

Key to any self build project is finding the ideal plot of land on which to construct your new home. For stress-free searching, and success, sign up to any of BuildStore's unrivalled land services, available at the Centre or online today.

PlotSearch from BuildStore is the UK's premier land and property finding resource for self-builders, renovators and small scale property developers. With thousands of opportunities to choose from it won't take you long to find your perfect plot of land or project!

THINK PLOTSEARCH
SUBSCRIBE FOR FREE TODAY

Call **0345 223 4445**
Visit **plotsearch.co.uk**

SITE INSURANCE & STRUCTURAL WARRANTY

BUILDCARE SITE INSURANCE
You need site insurance as soon as your planning has been granted and you're ready to start your project, and lenders insist you have adequate insurance before releasing funds to you.

BUILDCARE STRUCTURAL WARRANTY
Only a 10 year structural warranty will protect your project against a defect in the design, workmanship or materials on your self build or renovation project.

Get comprehensive and competitive cover for your project with BuildCare from BuildStore.

Visit **buildstore.co.uk**

MORTGAGES

After planning your budget and finding land, raising the finance is probably the most important aspect of planning a self build or renovation project.

While some people have enough cash to build their house, most people need to borrow. This could be long term in the form of a mortgage, or short term where you are looking to repay your loan when you sell your current house post build.

BuildStore has the mortgage for you whether you are building your own house, renovating or simply looking for a better rate on your existing house while you plan your project.

- Higher lending percentages - up to 95% on your land and build costs (compared with 75% with most lenders)
- Purchase land with just online planning permission
- Better cashflow through every stage of your project
- Guaranteed stage payments based on your build costs in advance, or arrears
- Expert help with costings and planning
- Stay in your current home as you build
- Choice of leading lenders, products and competitive rates

YOUR MORTGAGE OPTIONS

Did you also know that BuildStore has a whole of mortgage market team - **Your Mortgage Options**?

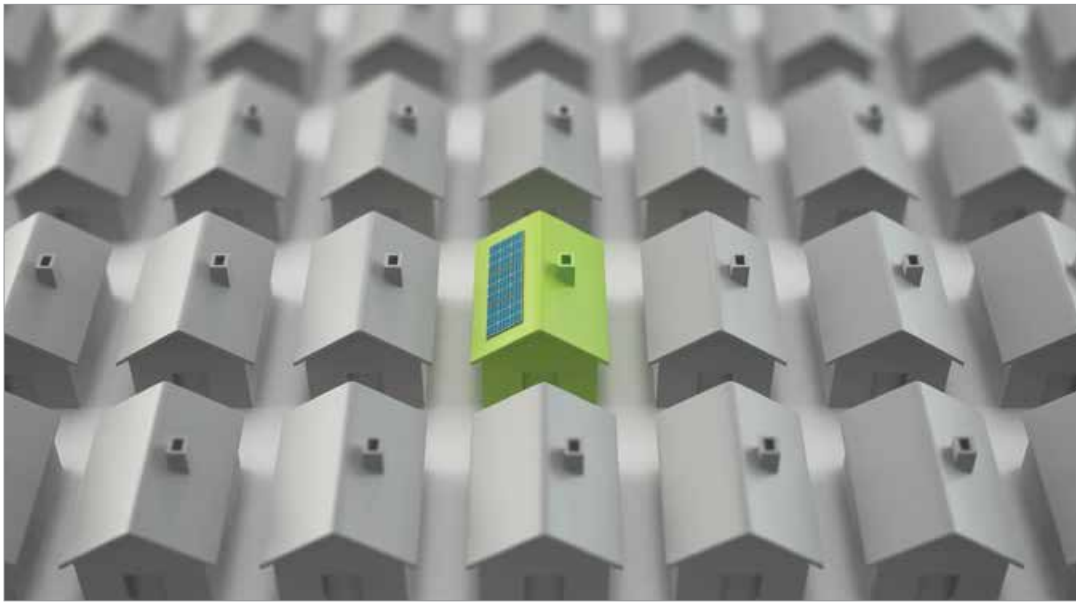
Whether you are looking to buy a home, remortgage your current home, buy or remortgage a house to let, BuildStore's expert advisers can help. With access to all of the best mortgage deals in the market, including many exclusives, we'll help you make an informed decision - saving you time and money.

Call **0345 223 4888** to speak to an adviser
Visit **buildstore.co.uk**

Your home may be repossessed if you do not keep up repayments on your mortgage.

For self and custom build mortgages, we charge a fee of £295. £95 is payable on application and a further £200 on offer. For all other mortgages a separate fee policy applies.

Thinking Sustainability
and Building Quality Homes



What is Sustainability?

The most commonly accepted definition of 'Sustainability' was made in 1987 when referring to future world development: 'Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs'. The concept of 'Sustainability' in practice is a broad church within which a number of social, economic and environmental issues are included.

The building industry is usually responsible for around 10% of the UK economy and so represents a significant impact on areas of sustainability. The industry's key zones of accountability are: Global warming gases from the energy it uses; The quantity of material resources it extracts from the earth; The environmental damage caused by material extraction, processing and construction; And the damage to health caused throughout the extraction, manufacture, use and final disposal of building materials.

How does the building industry achieve higher levels of sustainability?

The industry can be more sustainable through adopting better principles and practices in the way it designs and constructs buildings. The way we design and build using the principles of 'Green Building 'can make a significant contribution, not only to reducing our collective impact on the environment, but also to our health and wellbeing in the places we work and the homes we live in.

But....

Like many another large industry, construction is very slow to change. Economically, the industry is notoriously volatile, so it's no surprise that change is seldom welcome or implemented.
Most change is legislation-led through the Building Regulations and industry-related initiatives such as BREEAM; but some change is thanks to individuals and companies taking responsibility for reducing their own environmental impacts.

ecomerchant

www.ecomerchant.co.uk
info@ecomerchant.co.uk
01793 847 444

LOW-IMPACT, NATURAL AND ECO-FRIENDLY BUILDING MATERIALS

Airtightness membranes, tapes, boards & accessories • Natural paints, stains & treatments
Sheathing, sarking & racking boards • Natural insulation, wood fibre, wool, cellulose, hemp
Lime & clay plasters, renders, mortars, putty • Landscaping, groundworks, water & drainage
Building shell materials

...and much more

Sustainability, Quality and Self Build

The core of the construction industry is the 'volume' house-building sector. So critical is the role of the dozen or so companies that make up this group, that their economic role in the GDP (Gross Domestic Product), is regularly cited in economic reporting as the 'weather vane' of all industry. Key to their success is their efficiency of production. They buy materials and erect and sell homes on an industrial basis that maximises profits. That they manage to do this, whilst actually selling arguably poorly performing, indifferently constructed houses with abysmal space standards, is thanks to a well-oiled marketing machine that consistently succeeds at selling a premium on image, location and affordability. Notably, when the national economic output is bleak, so is that of the builders, who stop building until recovery. This chronic 'boom and bust' approach to housing is one of the reasons that the UK fails to meet the need for more homes.

In stark contrast to the anonymity and indifference of industry-produced housing, the self-build sector delivers for its members well-built, well-performing, high quality and spacious homes. Increasingly their houses are made from materials and designs that put people, their health and their future at the centre of the process.

There are between 10 - 20,000 self-builds in the UK every year. This is less than 10-15% of all the homes built annually but may constitute as much as one third of new detached homes - this compares with 60% in Germany and 80% in Austria where self-build is the norm.

Despite their number, self-builders have and continue to make significant contributions to advances in house design and technology. In particular, in recent years, they have been responsible for the dramatic uptake of 'Green' features such as renewable energy and low environmental impact building systems. Outside of the self-build market, these are features that take several years to filter through to commercial housing developments.

There is many a volume house builder who looks upon his self-build cousin with envy. Shorn of the profit motive, but instead equipped with a will to build exactly for his/her needs, the self-builder is at liberty to choose the type of construction and the materials that the building is made from. In particular, the self-builder is uniquely enabled to choose freely from the wealth of materials now appearing on the market that are not only of very high quality, but also representative of a quickly growing market in the UK for 'sustainable' and healthy 'Green' products.

'Fabric first'

As part of the UK government's first initiative in 2006 to tackle climate change, it published a voluntary code requiring new homes to add renewable energy devices to the buildings. This kicked off thousands of new businesses dealing in the installation of wind turbines, heat pumps and solar panels was probably no bad thing, but it was responsible for sending house builders off in the wrong direction.

Critics soon pointed out that the adding of energy-generating technology was usually doing not much more than covering for the poorly performing buildings they were attached to. The analogy to the policy was that of a leaking bucket of water: to keep the bucket full, it was necessary to keep pouring water into it - rather than fix the leaks themselves.

The code didn't change and was eventually eclipsed and abandoned. Instead building designers and developers worked towards design standards of their own adoption. The most well known standard, imported from Germany, is the Passivhaus standard which ensures that the way a house is built will deliver a heating requirement of no more than 15 kWh/m^2/yr. This very low figure is achieved by careful design and the building fabric alone. For many already built Passivhaus homes, their heating systems have become largely redundant.

This emerging (in the UK) methodology of designing buildings to reduce their energy usage through building technology rather than adding renewable energy systems is known as 'Fabric first'.

Characteristics of a 'Fabric first' approach is:

- High performance and high quantities of insulation.
- Maximum levels of air-tightness.
- Use of heat given off by the occupants and their cooking and electronic devices to help the heat the spaces.
- Optimisation of natural ventilation.
- Optimisation of solar gain through appropriately located windows.
- Sometimes using the thermal mass of the building to absorb excess heat.

In addition to high degrees of energy efficiency, the 'Fabric first' method provides a comfortable environment that makes few demands of the building's occupants. Where renewable technologies place the reliance on the occupier to operate the sometime complicated controls, a well-built energy efficient building has already done all the work for them.

What to look for when choosing 'Green' building materials

'Green' building materials are products that have a lesser environmental impact than other materials that might be used for the same 'job' in the building. Apart from environmental preferences, Green materials are also usually associated with high levels of performance and safe user-friendliness.

Of course, not all the building materials we employ have significant damaging effects on the environment. Those that do vary from severe to mild and to sort one from the other it's useful to consult the GreenSpec website which provides information about the environmental impacts of materials at **www.greenspec.co.uk**

There are usually plenty of alternatives, but the golden rule is to ensure that the products eventually selected can do the job demanded of them in a way equal to or better than the materials they are replacing.

It is notoriously difficult to clearly identify materials with a lesser overall environmental impact. Experts can take a lot of time in examining and assessing the potentially wide range of environmental properties contained within even a single building product.

However, when specifying an appropriate product or material, these are some of the key low impact and beneficial aspects to look for:

- Products that perform well and are easy to build with
- Materials made from renewable crops such as timber, wool or hemp.
- Products manufactured from abundant resources such as lime, clay or rock.
- Products that minimize the use of fossil-fuel energy in the manufacturing process (embodied carbon).
- Materials which, as a part of their function, improve a building's energy efficiency.
- Manufacturing processes that don't pollute.
- Materials that are safe to use and dispose of or recyclable.
- Products containing recycled materials.

The Healthy Home

Whether it be sleeping, eating, relaxing or working, we spend most of our day inhabiting our homes. Because of that time in a familiar space, we become adept at managing its environment. We are familiar with controlling lighting, heating and ventilation through simply throwing a switch or opening a window. Though the technologies have changed, the basic control actions are as they have been for generations.

Though the basic provision of light and warmth is unchanged, the contents of the air we breathe has altered over the last 50 years. We could now be dealing with a raft of possible toxins that if not sufficiently designed and built to avoid, could lead to serious health issues. Perhaps not surprisingly, these changes have been brought about through the way we build and the materials we use.

The principle drivers behind the need to improve the efficiency of our homes began with the oil crisis in the 1970's since when we have set out to reduce our dependence on fossil fuels. In the last decade climate change has been added to the agenda. The combination of the two has had aggrandising effect on building regulations and the techniques we use to design and build.

For our homes the two main methods of addressing energy conservation are insulation and airtightness. We are used to using insulation in our walls and roofs; but now house builders have to learn the techniques of sealing openings in the building fabric to prevent warm air leaking out.

The result of sealing buildings could be that for many of us opening a window or just relying on the leaky nature of our buildings might not be enough to deal with the smelly, oxygen-depleted or damp air caused by everyday living.

Air contamination from materials we use in our homes is relatively new and owes its occurrence to the growth of synthetic materials. Ordinary products such as paints, floor finishes, timber-laminates, furniture, synthetic textiles, plastics and foams can emit a chemical cocktail including volatile organic compounds (VOC's) like formaldehyde, xylene, isobutylaldehyde, and organochlorides, aldehydes and phenols. Emissions from materials are known as 'off-gassing' and can result in higher, more toxic concentrations without suitable ventilation.

Sadly the most familiar aspect of an unhealthy buildings, damp caused by condensation, continues to blight modern housing. Most buildings show the effects of condensation to some degree – from water

appearing on the glass of cold windows through to damaging mould found on walls and ceilings.

The asthma linked to inhabiting in these unhealthy conditions is on the increase, caused by damp and mould, house dust mites and chemicals in carpets and flooring materials.

The direct solution to damp air is adequate ventilation, but there is also a technique of building that has gained traction in recent years. The 'Breathing wall' is one that uses 'Hygroscopic' materials and membranes together to allow moisture to pass from the interior through the wall to the outside air.

Summing-up, improving indoor air quality (IAQ) is achieved by:

- Designing a ventilation strategy that can include simply opening windows through to providing mechanical ventilation. Above all, whatever strategy is chosen, it is vital that it is easy to understand and operate by the user.
- Considering the use of 'breathing walls' that help migrate internal dampness through to the outside.
- Avoiding materials that are suspected of off-gassing toxins.
- Thinking holistically about combining techniques of reducing humidity and pollution and toxins - adding up to a whole that is more effective than the sum of its parts.
- Using Green building materials from suppliers like Ecomerchant.

…and not forgetting the potential of indoor plants to absorb toxins and carbon dioxide.

Top Tips For Going Green

Whether planning to build new from scratch or refurbishing, this is the time to incorporate sustainability into your project through design and the careful choice of materials. Getting it right will insulate you against spiraling energy bills, provide a durable long lasting healthy home and leave a lighter footprint on the earth.

The building industry generally acknowledges that self-builders build better quality buildings; In building their own homes, they are often keen to explore proven and beneficial systems that would not necessarily be part of a developer or volume house builder's package.

So what are the key aspects of building to green standards?...

1. Using enough insulation - most buildings are built with too little

The more insulation you incorporate into the walls, roofs and floors of your home, the more heat it will retain. Insulation is probably the main element to get right at the start, so it's important to ensure the appropriate materials are used in the right way and in sufficient quantity.

2. Design-in airtightness and ventilation

– 'Build tight, ventilate right'

Fewer gaps in your home's structural envelope mean less heat lost. Good air tightness maximises the efficiency of insulation and reduces fuel bills. With airtightness, ventilation is essential and needs careful design. Ventilation can be passive, mechanical or both.

3. Use the buildings thermal mass to best effect

The idea of thermal-mass is difficult to understand for most of us – so it's wise to get advice before using it. Materials such as stone, brick, terracotta and concrete can provide 'thermal mass'. Used with care, it can help moderate the internal environment throughout the day by absorbing excess heat from the sun or other sources and then releasing the heat back into the interior during darkness.

4. Design for overheating.

Increasingly hot summers are a climate feature we all need to design for. Use wood fibre insulation, particularly in rooms in the roof, but also in walls to slow down heat transfer from the outside. Think about using shading for windows exposed to the sun in summer, but make sure they're not shaded in winter.

5. Make the best use of natural light

Maximising the amount of natural light in your home reduces the need for artificial lighting. Windows are an essential element of the building's performance. Modern windows can be very efficient with whole window U values as low as 0.8W/m^{2}K. 'Solar gain' can help heat the home.

6. Choose Green materials

Green materials have a range of features and benefits not usually present in synthetic materials. A majority are less polluting, safer and recyclable. Most too can significantly out-perform synthetic oil-based products in aspects that are becoming more important as the UK warms-up.

7. Structural systems - choose your system early in the design process

Most construction techniques can be adapted to meet high levels of energy efficiency, but some lend themselves more immediately to hitting the highest standards.

This is where you will come across the expression 'Fabric first 'where the building contributes significantly to overall energy efficiency.

Some of the most popular systems for self-builders are:

- Timber frame with timber, brick or render cladding
- Monolithic clay blocks and render
- Brick and block cavity walling
- Cross-laminated timber (CLT) and cladding
- ICF - insulated concrete form work

8. Deploy renewable technologies only after your shell design is complete

Self builders have led the way in terms of adopting renewable technologies to best effect, the golden rule here is design the building to do the work then match your energy needs to that level.

Thanks to our sustainability contributors Sandy Patience & Will Kirkman:

Sandy is an architect, journalist and speaker. He is the editor of **GreenSpec** at: www.greenspec.co.uk - a site dedicated to delivering information about the design and building of Green Buildings.

Will is a co owner of **Ecomerchant** (a sustainable builder's merchant), writer and speaker and has been involved in promoting green construction for over 25 years.

BUILD BETTER.
REALISE YOUR DREAM.

CLPM
CONSTRUCTION PROJECT CONSULTANCY

BECAUSE YOU ONLY BUILD ONCE

Building projects are exciting. But organising them is a complex process. It's often unfamiliar territory - with a huge number of complicated choices and technical details to navigate. Building is expensive too, and it can be hard to find expert, impartial advice to protect your financial interests. CLPM can be there to guide and support you throughout your project.

HELPING YOU TO BUILD SMARTER

CLPM are 100% independent and we can be on hand to help and advise you - so you always make the smartest, most informed decisions. Successful building projects are down to 2 things - thorough planning before going onsite and constant monitoring during the work. We can support your decision-making from the initial design stages - right up until completion and help make sure your building project is a success. With CLPM by your side you'll not only get a better result – you'll enjoy your build and save time and money too.

YOUR FLEXIBLE, AFFORDABLE PARTNER

Every project, and client is different, so we have a variety of discrete services to help you along the way. Unlike some, our fees are not a fixed % of your build cost. Instead we only charge for the time you want us to support you. We have a set fee for each individual task, or a specific fixed monthly rate - based on the level of support you require. So, you can choose exactly what you want us to do – and what you want to spend.

GET IN TOUCH

Phone 01923 896550
Email info@cl-pm.com

- **Independent Energy Efficiency and Heating Advice**
  CLPM can help future-proof your home by advising you on how best to heat your property and make it more energy efficient.

- **Estimating, Competitive Tendering, Contractor Appointment**
  Our Quantity Surveyors can produce detailed, bespoke estimates to help you budget for, finance or refine your plans. We can also help you find and appoint the best local team for your build.

- **Contract Administration, Project Management and Ad-hoc Onsite Support**
  Once onsite, we can be there to support you and your build team. Our approach is extremely flexible and can be tailored to your needs and budget.

Educational Zones

PLANT & SITE SETUP
Contains information on organising your site; providing good access; securing and storage of valuable equipment & materials.

1

GROUNDWORKS
This zone is split into three exhibit areas:

- Foundations and excavations
- Underground Services
- Basements

2

WALLS & STRUCTURES
Explore eight construction choices for the structure of your new home. Sponsored by British Gypsum.

3

ROOF ZONE
View four roof solutions and assess the range of external roof coverings on display.

- Green Oak
- Structurally Insulated Panel
- Attic Truss
- Fink Truss

4

FINISHES ZONE
View a wide range of internal finishes. Options include stair, floors, windows and doors. Sponsored by Pietra Wood & Stone.

5

1 Plant & Site Set Up Zone

Let The Building Begin!

When you have found your plot and obtained planning permission to build your dream home, the journey begins in earnest. Your plot will probably look quite daunting, either overgrown, scruffy or with an existing building that need to be replaced. You will be amazed at how quickly your site will progress, but it's important to plan ahead because things are going to get very busy very quickly.

Start as you mean to go on and ensure you run a safe and orderly site. Construction (Design & Management) (CDM) regulations covering health and safety in construction changed in 2015 to encompass domestic clients, previously exempted from the CDM regulations. If you are using and architect or designer and a main contractor, they will automatically pick up your CDM responsibilities but if you are hiring the trades and managing the project yourself, you need to read up on the regulations. Go to www.hse.gov.uk and download a free copy of The Absolutely Essential Health & Safety Toolkit (INDG 344).

Site Preparation

SERVICES - Speak to your service providers to arrange connection of water and sewerage, electricity, telephone and (if available) mains gas. A temporary supply for water and electricity will be very useful during the build and can be connected to the house as it nears completion.

ACCESS - Create a new access to the site if necessary and lay hardcore or chippings as a temporary hardstanding. Heavy vehicles will soon churn up bare earth.

DEMOLITION - If you are demolishing an existing structure, use a specialist contractor and make sure asbestos checks have been included in the contract. It's advisable to use the same contractor for demolition and groundworks.

SITE OFFICE - You will need a site office. Either hire a purpose built item or improvise by using a garden shed or an old caravan.

SECURE STORAGE - Hire a suitable container to keep valuable tools and materials safe. Keep flammables in a separate safe store.

SANITATION - A Portaloo will be required. Agree with the builder who is providing this.

TOP SOIL - Keep the topsoil in a pile out of the way when the site is levelled so you can use it again. It's expensive to replace.

FINANCES - Make sure your finances are available and that you have access to the funds.

ADVISE NEIGHBOURS - Let neighbours know you are about to start and let them have your contact details and those of your site foreman so that any problems can be resolved quickly.

If you are using a main contractor, they will probably organise all of the plant, tools and services such as scaffolding and setting out equipment, but check that this is part of the contract to avoid delays. If you are providing the plant you will probably consider hiring the expensive items such as excavators, mixers and storage cabins but when it comes to hand tools, power tools and useful equipment like wheelbarrows and ladders, you will never have a better excuse to buy good quality equipment that will last for years.

Before you start, organise the site so you know where plant, materials and site offices can go. Remember to leave an unloading area where bulky items can be offloaded and think about how vehicles will access the site safely. A few sheets of ¼" steel plate can come in handy for bridging trenches or covering exposed manholes during the build.

Some sort of fencing, such as Herras fencing shown enclosing this zone is a good idea, especially if you are building in an urban environment. It won't keep out a determined thief, but it will show where the dangerous areas are to curious observers.

Before you start, make sure you have planning permission in place and that all conditions that must be addressed before work commences have been satisfied with you local authority. You must also notify building control at least 48 hours before you plan to start work on site.

One last thing: setting out the house is critical, so make sure it is in the right place according to the planning permission. Changing things after the foundations are in is expensive and time consuming!

Site Management

WASTE - Disposing of spoil or demolition material off site is expensive. If you can use it on site for soakaways or infill, you can save considerable sums in landfill tax.

DRAWINGS - Keep a master copy of the construction drawings available in your site office and make sure old versions are kept well away.

SITE DIARY - A site diary is a useful way of noting down what's happening and when deliveries are scheduled.

PERSONAL PROTECTIVE EQUIPMENT (PPE) - Buy a few hard hats, gloves, ear defenders and goggles for use by visitors to the site. Make sure everyone on site uses them.

SUPERVISE CHILDREN - Children love building sites, but they are dangerous places. Keep them closely supervised at all times.

CLEAR UP - One of the most useful things you can do is tidy up the site each day. Rescue usable materials and place rubbish in the skips.

TRENCHES - Keep out of trenches more than waist deep unless they are properly shored.

CONCRETE - Wet concrete burns if left in contact with skin. Wash off immediately – and don't let wet concrete get in your wellies!

Insurances and Warranties

SITE INSURANCE - Check that your builder has his own employers and contractors all-risks insurance in place. You should also take out site insurance to cover loss due to theft, fire or weather, as well as public liability and employers liability to cover anyone working for you on site. Site insurance will usually cover the contents of site huts, caravans and offer legal expenses cover.

STRUCTURAL WARRANTY - Your mortgage lender will insist on you having a 10-year structural warranty in place. This is effectively an insurance policy that will cover defects arising from construction. Even if you are a cash builder and have no plans to sell, if you do find you have sell the house in the first 10 years of its life to someone who does need to borrow, a structural warranty will be required. It makes sense to get one.

ARCHITECTS' CERTIFICATES - Some lenders will accept an architects' certificate as the basis for lending, but be aware that this is not the same thing as a structural warranty. If there is a defect, you will have to sue the architect or designer for negligence against their professional indemnity insurance, which can be a costly and protracted exercise.

Marsh Industries

LEADING THE FIELD IN ECO-SENSITIVE OFF-MAINS DRAINAGE PRODUCTS

Marsh:Ensign and Marsh:UP-L
Sewage treatment plants

Marsh Aqua-Puratine
Eco-sensitive sewage treatment systems, enabling nutrient neutral development in environmentally sensitive areas

Uni:Gem★
Septic tank conversion units

Septic tanks and cesspools
For basic water and wastewater storage/disposal

Pump stations
For pumping water or domestic sewage to mains

Visit www.marshindustries.co.uk to find out more

MARSH

2 Groundworks Zone

Foundations & Floors

This zone will show you full-sized exhibits of the main foundation and flooring options available to you.

Ground works are a tricky part of your build because at the early stages, you have no idea what they are going to cost. The foundations you will require depend on a number of factors: what you are building, site conditions and what the soil conditions are like. The first step is usually to ask your local building control officer for advice as to what sort of foundations might be required in your area. They will have experience from other construction projects nearby and will usually have an idea what to expect. They may ask you to dig a 1m deep hole in the ground near to where the dwelling will be located so they can see what the actual conditions are like. Often, this is all that is needed but if there is any doubt, you may well have to engage the services of a soil investigation company to undertake a more in-depth investigation to determine what is down there.

The good news is that just about every soil condition has a foundation solution, but the solutions can vary greatly in cost depending on the stability and strength of the underlying soil or rock. In an ideal situation, the conditions are loamy soil, compacted sand or gravel which are ideal for simple trench foundations and you require no more than the approval of the building control inspector to proceed. However, on some sites the composition of soil is complicated with a variety of strata and materials that require detailed analysis and the creation of a bespoke solution by a foundation specialist.

The main things to watch out for are sloping sites, the presence of trees and what is generally referred to as 'bad ground', which might refer to shrinkable clay, made up ground like in-filled quarries or unstable ground caused by past excavation, mining activity or water levels.

Problem Sites

CONTAMINATION - Some sites such as old petrol stations and industrial areas may have contamination issues and remediation may be required. Bioremediation using bacteria can be used to clear hydrocarbon contaminants. However, chemical or heavy metal contamination may require complete strip back, disposal and replacement of the contaminated soil.

TREES - The presence of trees, particularly thirsty varieties like willow and poplar combined with clay soils needs to be considered. Cutting trees down can also have an effect because water once taken up by the trees can be absorbed by clay soils and expand. The solution usually involves deeper trenches or, if trees are close, piling to avoid damaging root systems.

CLAY - Clay expands when it is wet and shrinks when it dries. This movement can put tension on concrete foundations, which can lead to premature failure. Some sort of compressible barrier or slip membrane may be specified to line trench walls and mitigate any movement.

MADE UP GROUND - Usually refers to 'brownfield' sites containing old footings, drains and infill. Solutions can be as simple as using specially formulated concrete or as complicated as a fully piled foundation.

SLOPING SITES - Gentle slopes do not usually cause problems, but more severe slopes may require engineered solutions when building out of the slope and expensive retaining walls if cutting in.

UNSTABLE GROUND - Particularly found in areas of heavy mining activity. Usually countered by the use of raft type foundations.

HIGH WATER TABLE - A high water table means you will need pumps on standby when digging the trenches and you may need to dig deeper than usual or use a piled solution where concrete is poured as the auger is withdrawn.

In this exhibit, you can see examples of the sort of foundations you might expect to use on almost any self build project. In order of cost, these are the solutions you might consider:

Foundation Types

STRIP FOUNDATIONS - 225mm of reinforced concrete is laid at the bottom of a 1.2m deep trench. Foundation blocks are built off this strip, then the external walls to the damp proof course. The cheapest solution.

TRENCH FILL FOUNDATIONS - The same idea as strip foundations, but the entire trench is filled with concrete. More expensive because of the extra concrete required, but arguably easier to use because external walls are built up from the top of the trench, rather than below ground. Probably the most commonly specified foundation type.

DEEP TRENCH FILL - If bad ground, clay or tree roots are found, you might have to dig deeper trenches until good bearing ground is found. Concrete is expensive, so the costs can rise significantly the deeper you go. If you need to go more than 2-3m deep, other solutions might be cheaper.

RAFT FOUNDATIONS - A large continuous reinforced concrete slab that sits under the entire building. If the ground moves, the whole house moves with it avoiding point loading on the concrete. Costs more because each raft must be individually designed and lots of concrete is required.

PILE AND RING BEAM - Holes are drilled with an auger to the required depth and filled with reinforced concrete. A concrete cap is fitted onto which a steel or concrete ring beam sits. The house is built off the ring beam. Often the most expensive option requiring engineering drawings and expensive plant. May also be specified to avoid damaging tree roots.

HELICAL SCREW PILING - A more cost-effective piled option involves screwing immensely strong hollow galvanised steel screws straight into the ground. Can also be used to underpin buildings where the existing foundations have failed.

Flooring Options

On top of the foundation exhibits you will see examples of typical flooring options that will form the oversite. The oversite is the flat horizontal surface on which the final flooring materials will be laid. The most common option used to be the ground bearing slab, whereby the area within the foundation walls would be filled with compacted hardcore, covered with a protective layer of sand called 'blinding' and then topped off with a layer of insulation and a poured concrete slab. However, it is more common these days to see a suspended 'beam and block' flooring system, which is quick and easy to dry lay (i.e. without the need for mortars or adhesives) on top of the foundation walls. Some of these suspended floor options incorporate high performance foam insulation blocks instead of standard foundation blocks to form the finished surface, greatly improving the thermal performance of the house.

Services

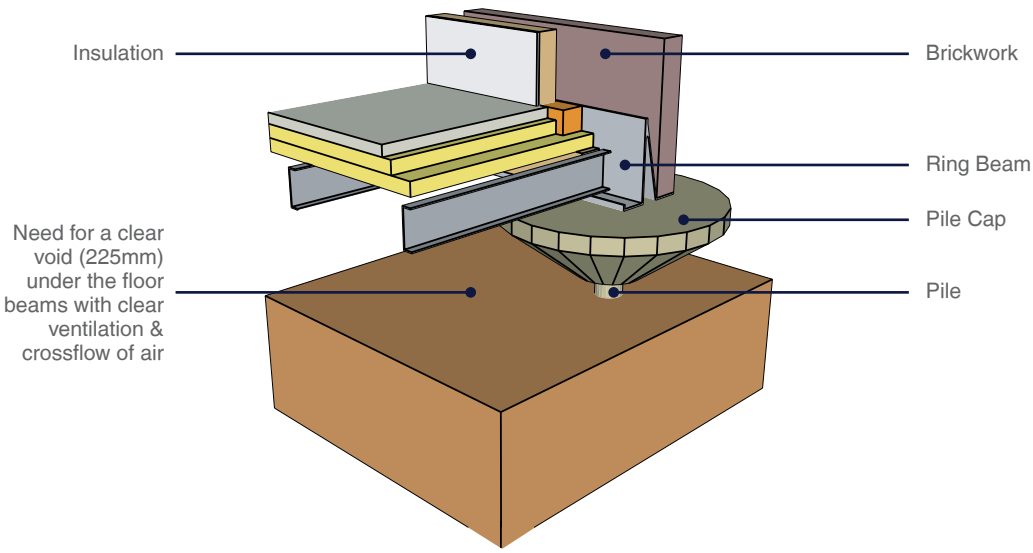
Think about where the services will enter the property and allow for suitable lintels or ducting through the foundations through which the services and drains can pass. Leave a drawstring in every conduit so cables and pipes can be pulled through when needed.

Foundations & Floors

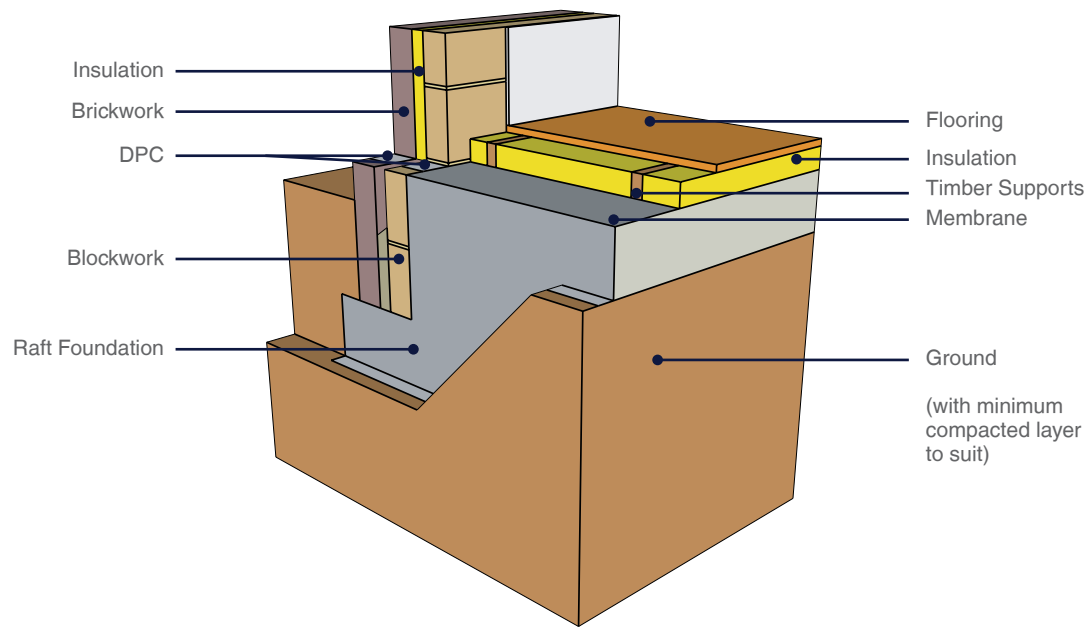
The exhibit shows four examples of foundation types. The strip, trenchfill and raft foundation exhibits each have two floor systems applied to them.

In the piled foundation exhibit there are three types of floor systems being demonstrated. The following graphics show see each of the foundation systems with one example floor type.

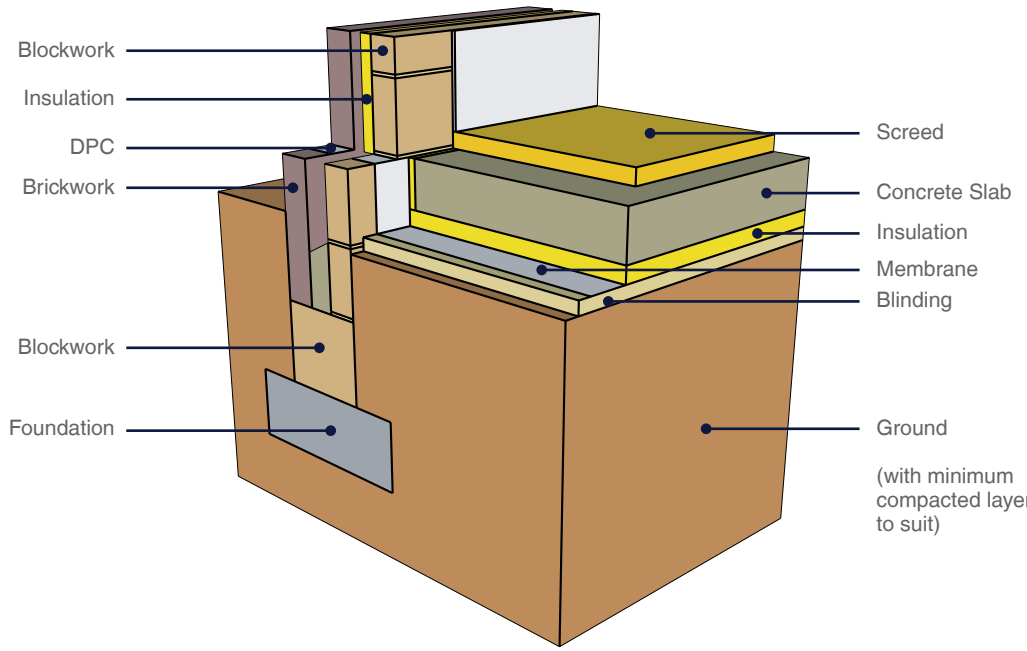
Piled foundation with an insulated steel flooring system



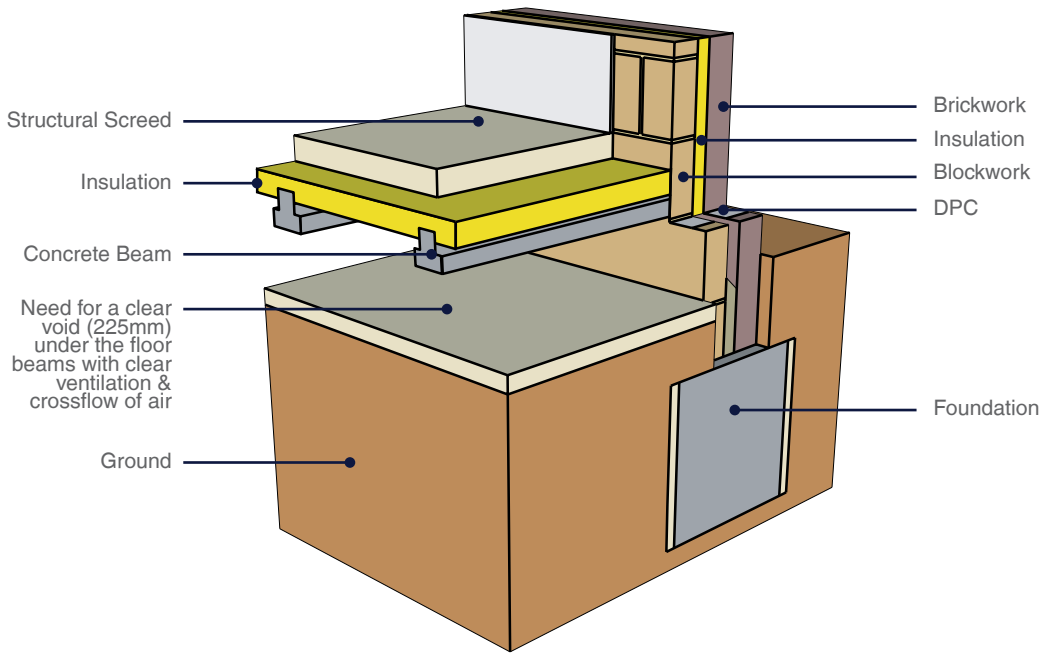
Raft foundation with a wooden floor



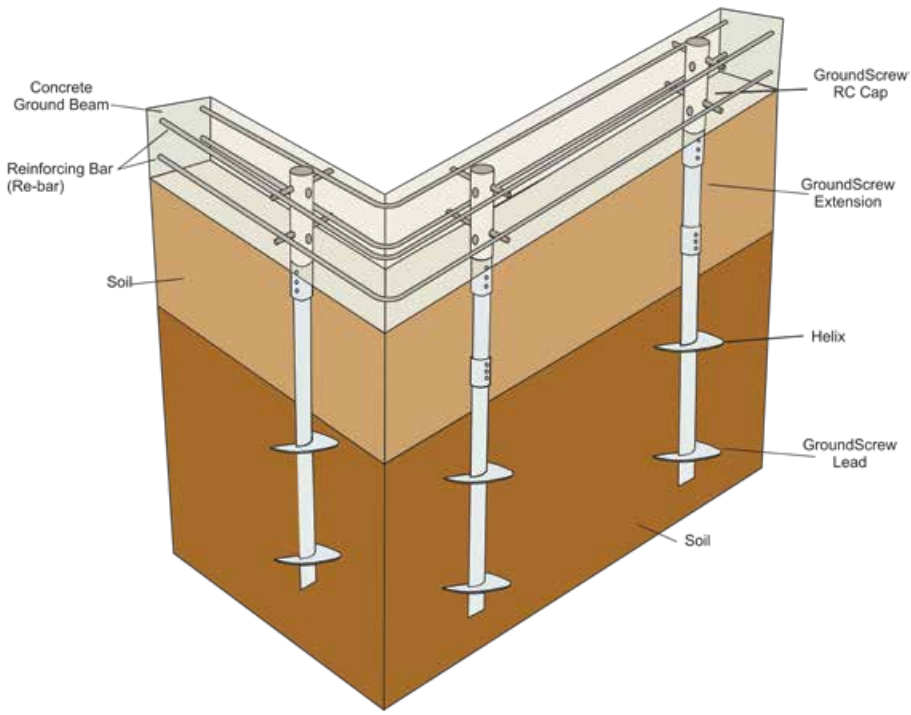
Strip foundation using a ground supported screed floor



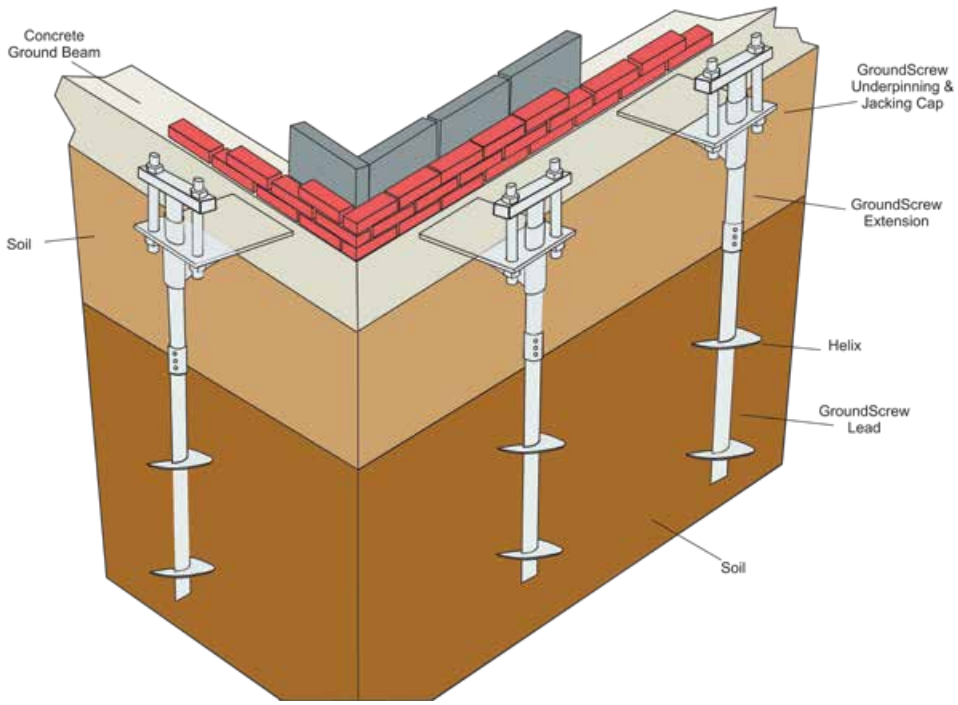
Trenchfill foundation with a 'beam floor' structural screed floor



GroundScrew Reinforced Concrete (RC) Foundations - RC Cap



GroundScrew - Remedial Underpinning - Jacking Cap



Underground Services

Underground services are an essential part of your home. A new house can't work without adequate drainage, energy and services connections, so you will need to think about where these will come from and how they will get to your property. In this zone, you can see how we have created a colour-coded 'underground map' of the services. At the far end of the exhibit, you will a large wall representing the external wall of a typical house. On one side, you can see the appliances commonly found inside your home and from here, you can follow each connection back through the wall and then underground through to where it connects with the incoming supply, tank or pipe.

Using a Groundworks Contractor

Think seriously about taking on a specialist groundworks contractor, and you will certainly need Building Control approval for the design and works you intend to carry out. A groundworks contractor would usually be involved in the following areas:

- ✓ Creating entry to the area
- ✓ Clearing the site
- ✓ Setting up access roadways and storage areas
- ✓ Topsoil strip away and its storage for reuse
- ✓ Levelling
- ✓ Setting out the house (in conjunction with a surveyor)
- ✓ Excavating trenches for the foundations
- ✓ Pouring concrete or installing the chosen foundation system and floor system. This may be done by specialist contractors.
- ✓ Installing damp-proof layers
- ✓ Preparing all the trenches for the services and their backfilling once installed
- ✓ Installing drainage, manholes and other underground systems
- ✓ Landscaping, driveways, pathways, patios

Drainage

If you have access to mains drainage, then you will be expected to connect to it where possible. Part H of the Building Regulations deals with drainage and details the sizes, depths and gradients (or falls) allowed, so your Building Control Officer will be able to advise what will be required.
They will want to inspect the pipes and trenches before they are backfilled and will also want to test the drainage system to make sure everything works as it should.

Sloping sites can present a problem, but most issues can be resolved by the use of specialist pumps to move waste uphill, or by creating tumble chambers or drop-downs within inspection chambers where downward slopes are the problem. However, in some cases site conditions simply won't permit connection to a main sewer or the distances involved my be so great as to make connection uneconomic. In these instances, an off-mains solution might be a better answer.

Off-mains solutions are not new, and the basic cesspool has been used for centuries. However, while still an option for some, the modern cess pool tank requires frequent emptying and is therefore costly to run. A more desirable option is to install a septic tank or, even better, a treatment plant. Treatment plants use the anaerobic bacteria found in septic tanks, but also use a powered rotating paddle to introduce oxygen into the waste so allowing aerobic bacteria to thrive as well. This combination of friendly bacteria ensures that most of the waste is consumed within the tank so further maintenance is minimal. You do need to have free-draining ground and you have to be careful about what goes into the tank so that the bacteria that do the work are unharmed, but if installed correctly, these systems are hygienic, unobtrusive and comparable to being on the mains.

Surface Water

Surface water is not permitted to drain into foul sewers. Recent regulations aimed at reducing flooding also insist on using Sustainable Urban Drainage Systems (SUDS) for driveways and hardstandings. Permeable systems prevent surface water running back into the road and overwhelming public drains.

Building Regulations PART H

H1 Foul water drainage
H2 Waste water treatment systems and cesspools
H3 Rain water drainage
H4 Building over sewers (public & private)
H5 Separate systems of drainage (foul water and surface water)
H6 Solid waste storage ("Bins" & "Recycling")

Rainwater Harvesting

It's rather odd that we spend a fortune on buying treated drinking water then use it to flush our toilets with! Rainwater is a free and plentiful resource in the UK, so another popular option for self and custom builders is to fit a rainwater harvesting system. The water is held in underground tanks and pumped into the house where it can be used to flush toilets, run washing machines, water gardens or to wash cars. Water from driveways would not be diverted into these tanks as it risks being contaminated by oils and greases. Some high-specification sustainable houses extend this principle even further by reusing 'grey water' as well. Grey water is the lightly soiled water from sinks and showers and can be made reusable by passing it through a series of filters. Again, because of the risk of contamination from oil and fats, kitchen sink water would not be used for this. It is important that the water in these systems is clearly marked so as to avoid confusion with any potable water supply.

Energy

We are slowly moving towards creating energy efficient houses that are so well insulated and airtight that the need for additional sources of heat is reduced dramatically. However, most new homes will need to have some form of central heating in the form of traditional radiators or warm-water underfloor heating, and that will require a boiler of some sort to supply the heat and domestic hot water on demand. Mains gas remains the cheapest and easiest energy source for most, but in rural areas where gas is less common, an alternative energy source may be required. Liquid Petroleum Gas (LPG) and oil are the most common alternatives but fluctuating prices and concerns over environmental impact lead many self-builders to choose a greener option. Biomass boilers, air source and ground source heat pumps offer a popular and effective alternative but must be correctly specified and installed. If you are thinking of installing a ground source heat pump, then this will need to be planned at an early stage as you will need to establish where the underground pipes or boreholes required will be situated. Although these alternative energy systems often cost more to install than standard gas or oil systems, the government's Renewable Heat Incentive scheme (RHI) has been created to help offset the additional costs involved.

Definitions

SUDS - Sustainable Urban Drainage Systems. Legislation designed to prevent flooding caused by surface water entering public drains.

FALL - The gradient of a drain to ensure free running within the pipes.

INVERT - The depth of a manhole or inspection chamber.

SOAKAWAY - An underground chamber where surface water is collected and from where it can disperse into the ground. The simplest are simply pits filled with rubble and covered over with geotextile material and topsoil.

Basement Stats

A basement can increase accommodation by an additional 50 per cent, permit a larger garden to be incorporated into your house plot and offer the builder an economic, speedy and thermally efficient solution to increasing your home's living space.

Because of the cost of land nowadays and because so many people choose to work from home, the choice of a basement to maximise the space within the footprint of your new home is becoming far more popular. Whilst this can be done retrospectively, the logistics and therefore the cost is astronomical. Even if the budget doesn't stretch to fitting out the basement with cinema, office, gym or swimming pool; it makes absolute sense to form the structure at the groundworks phase of your build.

Where ground conditions may otherwise have involved deeper foundations, a basement will capitalise on this. There are a variety of basement construction options such as masonry, poured concrete and pre-cast panel basements. There are all sorts of add-ons you can consider like light wells for natural illumination and ventilation or an external stairwell. Most are built on site but increasingly pre-fabricated options can speed up the process and provide specialist solutions.

With traditional construction methodology, a basement requires reinforced masonry or in-situ concrete walls plus internal plastering and external sealing (or tanking as it is known). Such a basement can take months to install, whereas a basement made from precast concrete panels can be installed in a few days, such as the one shown in our exhibit.

Design Considerations

- ✓ External staircase? If the basement is designated as habitable space it must have a secondary means of escape.
- ✓ Getting light into the basement? Is it fully or partially underground? Is the site flat or sloping?
- ✓ How big? It is usually more economic to include a basement under the foot-print of the whole ground floor.
- ✓ Using the basement - Cinema rooms, swimming pools, gym, home office, utility space
- ✓ Ventilating the basement. Windows, light-wells or mechanical ventilation.

Basement Construction

MASONRY - The basement walls which have to retain the surrounding soil, are built in either solid or hollow concrete blocks reinforced and with a concrete in-fill.

INSULATED CONCRETE FORM-WORK - Hollow polystyrene interlocking blocks laid to the shape and then filled with poured concrete, with reinforcement where necessary.

POURED CONCRETE - The walls can be shuttered with suitable form-work, usually plywood, before being cast in poured concrete with reinforcement rods set within it.

PRE-CAST CONCRETE PANELS - These are pre-fabricated off-site using waterproof concrete and then craned into place and sealed together to form the structure.

Information for Specialist Basement Suppliers

- ✓ Scale drawing or sketch of basement with full dimensions.
- ✓ Ground floor plan.
- ✓ Method of superstructure construction (traditional, timber frame etc).
- ✓ Site plan showing access, trees, pylons, overhead cables.
- ✓ Road access to the site for large articulated lorries.
- ✓ Soil investigation report.
- ✓ Line loads on basement walls and floors.
- ✓ Status of planning permission, the timescale of the build, party wall issues etc.

New basement design can include continuous membranes underneath your structural slab, jointed with a vertical membrane around the perimeter of the basement. Porous material around them deals with ground water, which may also involve a pump.

Some situations are so wet that water should be anticipated continually and your basement design will act like a reverse swimming pool.

All basements need to be waterproofed or tanked. Pre-cast concrete basements already have the tanking built in, but it is normal for a site application of additional tanking to be made. This can either be external or internal (occasionally both) and can be in the form of an applied liquid, proprietary tanking material or sticky sheets of bituminous material.

Alternatively, a corrugated lining to walls and floors can channel incoming moisture to a sump, from which it is then pumped to the drains. Both systems can be used in tandem.

Basement Tips

- ✓ Basements should always be designed by a specialist company or an engineer.
- ✓ There is an argument that tanking can never be totally guaranteed and that a sump and pump system either alone or in tandem is preferable.
- ✓ Soil types and, in particular, water tables can have a profound influence on cost.
- ✓ Basements do not come cheaply - they will always cost at least as much as any other part of the home.
- ✓ If the basement shows above ground level it may be possible to incorporate high level windows for light and natural ventilation.
- ✓ If the basement is completely below ground, then thought must be given to its ventilation by mechanical means.
- ✓ Basement constructions have a built-in thermal capacity, which may still need augmentation.
- ✓ If possible, consider the use of light wells to provide natural light, ventilation and means of escape.

3 Walls & Structures Zone

Building Systems

One of the main choices you will have to make is which building system to use. The building system is the method used to construct the superstructure of the house and is usually, but not always, made up of an inner and outer leaf. The inner leaf does the work, holding up the floors and the roof, while the external leaf is there to add aesthetic appearance and to keep the weather out. Some modern methods of construction use a 'monolithic' construction whereby a single waterproof wall does the job of both leaves.

In this section, you will see examples of 8 of the most popular building systems available, including some of the newest innovations.

There are no right or wrong choices, but there are systems that are more suitable for different projects and will have an effect on the planning, budget and performance of your new home. The vast majority of self builds are constructed using traditional masonry or a variety of timber framing, but as we move to requiring higher performing houses, there is more focus on the insulation and airtightness offered, leading to a rise in the use of modern methods of construction (MMC) such as Insulated Concrete Formwork (ICF) and Structural Insulated Panels (SIPS).

External Finishes

The external finish you choose will be subject to a number of factors, not least planning if you are building in a sensitive area such as a conservation area. Almost every external finish, from bricks, stone, tile, render and timber cladding can be used on any of the systems subject to obtaining planning consent. The monolithic systems often employ brick or stone 'slips' glued onto the external walls and pointed as for a standard masonry finish, making it almost impossible to tell the difference between a traditional method of construction and any of the MMCs on offer.

Off Site Fabrication

There has been a boom in self builders' options for pre fabricated buildings manufactured off site and delivered to your plot for erection in a matter of days. There is a price premium to pay for this option, but the quality, performance and speed of construction are often unbeatable. When using off-site prefabrication, you will need to do all your planning beforehand as it is difficult and often expensive to make changes once manufacturing has started.

Intermediate Floors

Any floor above ground level is called an Intermediate floor and one of the most irritating aspects of new mass-market homes is squeaking floorboards!

The good news is that we have several options to solve the problem. Squeaking floors are usually the result of shrinkage in solid timber joists as they dry out and change shape. By using engineered joists made from laminated timber and fabricated boards or open web spacers you can banish squeaks forever.

If you are using a masonry building system, you can also consider using concrete beam and block flooring which has the added benefit of increasing acoustic insulation and allows more flexibility with upper floor room layout as the whole floor becomes load bearing.

Stone wool: the natural choice for your project

When designing your home and thinking about energy efficiency, the building fabric is a great place to start, ensuring you choose the best performing materials so that less energy is needed to heat or cool your property.

Insulation is at the heart of a 'fabric first' approach – and for good reason. According to independent calculations by the Energy Savings Trust, fitting 270mm of insulation in a uninsulated loft could save up to 1310kg of CO_2 per year in a detached home.

The power of stone

Insulation can come in many forms and material types, so when choosing a product for your project, make sure you're clear on your priorities and what you want from your insulation material.

Stone wool insulation for example, is not only a great insulator but provides acoustic and fire protection too, as well as breathability. Made from volcanic rock, one of the most abundant natural materials on the planet, it can also be recycled and re-used indefinitely.

Natural fire protection

ROCKWOOL stone wool insulation, like the basalt rock it is made from, is inherently non-combustible with no chemical flame retardants. It can withstand temperatures in excess of 1000°C and if exposed to flames, will not fuel or spread a fire, nor contribute significant amounts of toxic smoke.

Sound absorbent by nature

Stone wool insulation can be used to significantly reduce the noise transmission thanks to its open porous structure that traps sound waves. Suitable for both external and internal walls, stone wool insulation can limit noise from outside, but also between spaces, which is ideal for busy homes and hybrid working.

Solid as a rock

Just like stone, these inherent natural benefits and thermal performance are long lasting and don't degrade over time. In tests on materials from real-life construction sites, stone wool has shown to retain its insulating properties for more than 65 years without a drop in performance[1]. Stone wool is also unaffected by weather, humidity and temperature changes, meaning once fitted, you can simply get on with enjoying your home.

Learn more about ROCKWOOL stone wool insulation, including our products for a range of building systems, at rockwool.com/uk/self-builders or by scanning the QR code opposite.

[1]Testing done at Danish Technical Institute (DTI) in 2023

For a warmer, safer and quieter home

ROCKWOOL stone wool insulation goes beyond thermal performance, giving you natural fire and sound protection too.

Visit our dedicated self-build portal to:

- See, hear and learn about the benefits of stone wool through immersive demonstrations
- Discover our range of insulation for every area of the home and for a range of building systems
- Access tools and resources to help design, plan and build better

Visit now:

rockwool.com/uk/self-builders

ROCKWOOL

www.rockwool.com/uk

Internal Partitions

With timber frame, the usual option for non-structural partition walls is timber studwork with a dry-lined plasterboard finish, although metal 'U' Chanel is becoming a popular and economic alternative.

In sound sensitive areas, consider allowing for additional mineral wool insulation or double skinning the plasterboard to improve performance.

If using a masonry system, like ICF or Thin Joint with beam and block intermediate floors, you can consider block partition walls upstairs for added acoustic insulation.

Other Options

We don't have the space to show every alternative building system here, but some systems are gaining in popularity and becoming more mainstream. Straw bales can be used for natural insulation and can even be used for structural walling with additional preparation.

Traditional building methods such as cob and rammed earth are returning into use as they utilise natural materials found locally and epitomise the ethos of low-carbon construction. Traditional building also means a return to traditional finishes, so to keep these buildings healthy, breathable materials such as lime plasters and lime washes are used instead of modern gypsum plasters and renders.

For more information on alternative methods of construction, look out for one of the regular ECO days held at the Centre.

Building Systems

TIMBER FRAME – Perennially popular with self builders because of the low cost, speed of construction and ECO credentials. Good for hiding service pipes and wiring out of sight.
PASSIVE HOUSE – Our exhibit shows both a masonry and timber approach to achieving Passive House levels of construction. Passive House demands high levels of insulation, almost total air tightness and a mechanical ventilation and heat recovery system to meet certification standards.
GREEN OAK FRAME - Beautiful, natural and reassuringly expensive, green oak guarantees a unique home everytime. However, it's a challenge getting this traditional method of construction through modern regulations so careful planning is required.
ICF – 'Grown up lego' is a term often used to describe ICF. A monolithic method of construction using hollow polystyrene blocks filled with poured concrete, ICF offers incredible levels of insulation and airtightness together with a rapid, low-skill build process.
DURISOL – A more environmentally conscious version of ICF that replaces the polystyrene with recycled timber but retaining most of the benefits. External finishes and internal plasterboard are easily fixed to the finished wall making for a simple construction popular with DIY builders.
STRUCTURAL STRAW PANELS - take all the advantages of straw bale building to the next level, where its modular system is easy and fast to construct - insulated, passivH certificated and healthy houses can be erected in just a few days. Exceptional thermal performance and exceptional environmental credentials.
TRADITIONAL MASONRY – We have two masonry exhibits on display, this one shows the traditional method using mortar and insulated blocks. While cheap and well known to all UK builders, it can be slow and messy and the quality of build is down to the skills of your builder. Take a look at the next exhibit to see how things have changed…..
THIN JOINT MASONRY – Look! No mortar! The thin joint system addresses the drawbacks of traditional build by using oversized insulated blocks and an adhesive rather than mortar bed. This speeds up construction times, increases the accuracy of the build but retains the solidity and thermal mass of traditional masonry.
SIPS – SIPS takes timber framing into the modern era by using cassettes of high-grade insulation sandwiched by Oriented Stranded Board (OSB) to make a strong, flexible and high-performing structure ideal for contemporary and ECO builds. SIPs roofs offer ready-made habitable living space in the loft.
CROSS LAMINATED TIMBER (CLT) – Manufactured using sustainable softwood boards glued together to form a large-format panelised system (up to 12 x 3m). Typically, a watertight shell is constructed within 2 days (200m^2 house). Think high-performance: Thermal; acoustic; environment; speed; efficiency. Passivhaus standards are readily achievable.

This is a traditional brick outer skin and lightweight aerated block inner skin wall, complete with mineral wool insulation.

SILVA TIMBER

WE DISCOVER. YOU CREATE.

Are you planning to build or renovate your dream home?

If so, you will appreciate the importance of partnering with suppliers who cannot only offer the right product but also provide advice and guidance to help ensure your project runs smoothly. That's where Silva Timber can help!

Expert Advice & Personal Service

Our team is passionate about what we do and takes great pleasure in seeing your self-build projects come to fruition. We'll work closely with you from the outset to understand your requirements before recommending the right cladding solution for your project. Whether you embark on a barn conversion or an ultra-modern new build, you can rest assured that our experts are here to help.

The Right Materials for the Job

Selecting suitable materials is key to ensuring your project has that all-important 'wow' factor, and timber cladding can deliver just that! Whether you clad the complete exterior (or interior) of your building or create a feature façade, we are sure to have the right product for the job.

Silva's cladding range features a variety of different wood species. We stock two Canadian softwoods: Western Red Cedar and Douglas Fir, and two European softwoods: Larch and ThermoWood Pine. In hardwood, we stock thermally modified Frake.

Select from a comprehensive range of profiles, from open-jointed cladding to tongue & groove style fitments, or opt to create a bespoke profile for a truly unique design.

Kerb Appeal Guaranteed

Every home needs kerb appeal, and what better way to achieve it than by adding colour with COLOURTECH™ - Silva's in-house factory coating service?

With a decade of factory coating experience behind us and partnerships with some of the world's leading wood coatings brands, we can offer the very best in factory-coated wood. Select from our core range of on-trend colours (see samples on stand 169) or choose from a more comprehensive range of over 100 standard colours. We can even create a colour to match your specific requirement, so the sky really is the limit!

Silva Select Quality

Offering the finest quality, sustainably sourced wood products is at the heart of everything we do. The Silva Select quality standard applies to all products we manufacture and ensures we maintain the highest industry standards.

Let the Projects Speak for Themselves

As one of the country's most established and trusted timber specialists, Silva Timber is proud to have been involved in some exceptional self-build projects over our 20-something-year history. Several projects have gained industry recognition and received awards for innovation, design, and sustainability.

Get in touch to see how we can help you!

w silvatimber.co.uk
t 0151 495 3111
e enquiries@silvatimber.co.uk

Halebank House, Pickerings Road, Widnes, Cheshire, WA8 8XW

Find us on stand TV169

SILVA TIMBER

WE DISCOVER. **YOU CREATE.**

High-performance wood cladding systems.
Decking, fences, screens, and other components for landscape and garden design.
Expert advice and guidance.
COLOURTECH™ - Silva's in-house factory coating service.
Fire retardant treatment.

Call our team today to discuss your project.

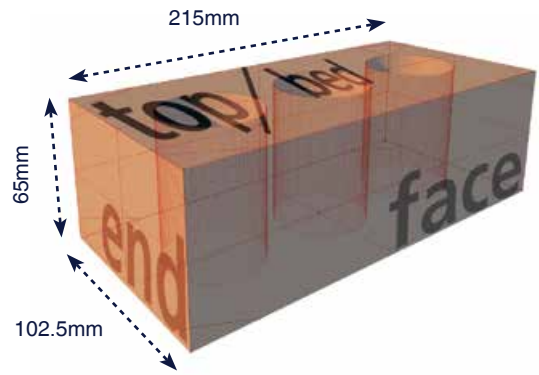
w silvatimber.co.uk
t 0151 495 3111
e enquiries@silvatimber.co.uk

Building Blocks

Bricks are the most commonly used material for external walls in the UK. The Brick Library provides a chance to look at nearly 300 types of bricks from a range of sources. There are also some tile and cladding displays.

Bricks - A Quick Guide

Modern metric bricks in the UK are sized to create a modular format. The standard brick size is 215mm x 102.5mm x 65mm (face x bed x end), which with a standard 10mm wide joint gives a working size of 225mm x 75mm. There are many types such as 'solid', 'perforated' and 'frogged'.



Bricks are categorised by use. Facing bricks present the external face to the home. Common bricks are a cheap 'fill' brick.

Engineering bricks are very resistant to the elements and are typically used below ground as well as retaining walls where strength is required. Other types include concrete or calcium silicate (used in areas where clay is scarce); reclaimed bricks (salvaged from old buildings and cleaned); and 'specials', which are basically anything that is not a standard shape. Bricks are further categorised by their durability. Their rating refers to their ability to withstand frost (F = frost rated; M = medium; O = not rated) and their soluble salt content, which affects colour over time.

Making Bricks

There are different ways of manufacturing bricks:

HANDMADE – Like stock bricks, hand-made bricks are made from a mould but as the process is not machine based, variations occur as the clay is less compacted and these bricks have distinctive creasings or 'smiles'! These types of bricks can be attractive but tend to be used on the higher end of the market due to cost.

LONDON BRICKS OR FLETTONS – Made from Lower Oxford clay found in the South East. As the clay contains coal, the firing process is shorter and the resultant facing can show different effects. The shorter firing process reduces the costs of this type of brick.

STOCK – Manufactured by moulding from wet clay, dried and fired. Although the process is automated the bricks are generally more expensive than wire cut.

WIRECUT – Made on a continuous extrusion process and then cut with wire like a cheese cutter. There is a great variety in texture and colours; usually they are the cheapest as the manufacturing process is highly automated.

4 Roof Zone

Roof and Roof Coverings

Getting the roof right is important. You won't expect to be replacing a roof or it's covering for decades, so it's worth taking the time to research the very best options for your budget. In the Roofing Zone you will see examples of the most common type of roof construction, together with various options for roof coverings, rainwater goods, chimneys and flues. Don't forget to look on both sides of each roof section!

In the first Roof Zone section, you will see a green oak roof. This will be designed and manufactured off site for erection on site with the main frame of the house. An option for traditional masonry or timber framers is a cut roof, which is made on site from sawn lumber. While cheap on materials it is labour intensive, but using this method, it is possible to construct intricate roof profiles, dormers as well as creating living space if the roof is to be occupied.

Next you will see a SIPS roof. Structural Insulated Panels, known as SIPS, comprise a sandwich of high-grade insulation bonded between structural boards. These large panels are craned up to rest on longitudinal joists called purlins, making a ready-made room in the roof. Roof lights and windows can be incorporated during manufacture. Note how the whole of the triangular roof space can be used giving a contemporary feel.

Looking further along, if you are using prefabricated trusses but are considering using the attic as habitable space, think about upgrading to attic trusses. These are much stronger than standard trusses and are designed to leave the centre space clear and to take higher floor loadings. They cost a bit more, but installing these now can save thousands of pounds compared to converting a traditional loft later on.

Finally, you will see Fink trusses, easily spotted from their distinctive 'W' supporting framework. These are the cheapest option, and as such are not designed for habitation, but they are fine for light loft storage loads.

Roof Coverings

Your planning department will usually have the final say over what roof coverings you will be allowed, but there are many options to consider. We've shown some of the more popular options here, but you can choose from the following options:

CONCRETE - Large format concrete tiles are the cheapest option because they are inexpensive to buy and easy to lay. Small concrete tiles are also cheaper than plain tiles. They are heavy, though, so be careful when replacing a lightweight slate roof with these – check that the old roof structure is strong enough.

PANTILES - Clay pantiles are another inexpensive option. Cheap to buy and quick to lay, they are more curvaceous than concrete tiles and add an elegant look to a roof.

PLAIN TILES - Smaller format tiles in clay can be machine made or, at more cost, hand made. They are slightly more expensive per m2 and cost more to lay than large format because the work is more labour intensive. However, the effect is traditional and aesthetically pleasing.

NATURAL SLATE - This traditional roofing material, made from metamorphic rock, will never go out of style. It is a natural product that has a lifespan of over 100 years. Whilst Welsh slate's reputation is well known in the UK, it is also possible to import quality natural slate at a good price from places like Spain, as they have the world's largest metamorphic reserves.

STONE SLATES - This traditional form of roofing in the Cotswolds can be very expensive because each slate has to be selected, gauged and fitted by hand. The stone slates shown here are reconstituted stone – they look fantastic but cost a fraction of the real thing.

RUBBER TILES - These ECO tiles are made from recycled car tyres and unless you touch them, you'd be hard pushed to tell them from real slate. Cost effective and ECO friendly, they will last for decades.

STEEL ROOF - Traditionally associated with industrial buildings, coated steel roofs have become very fashionable with the rise of contemporary design. Steel is the most economic material to use, but more expensive versions can use non-ferrous metals like zinc and copper.

THATCH - Still a popular vernacular material. Warm in winter, cool in summer. Thatching needs regular maintenance, particularly to ridgelines, to maintain integrity.

METAL TILES - Standard tiles can only work well down to a certain pitch, usually around 22 degrees. Metal tiles are coated sheets of steel that look like clay tiles, but are nailed to the battens to prevent water ingress and lifting in high winds.

SEDUM - For a truly ECO solution, you could opt for a sedum roof. Be warned that this is not just a case of replacing tiles with plants – green roofs must be carefully designed and constructed to avoid leaks while keeping the plants alive.

Sarking felt (or sarking boards in Scotland) will be fitted between the tiles and rafters, and these days, it is usual to install a quality breathable membrane that permits natural ventilation and allows moisture to escape naturally. This reduces the likelihood of condensation issues if the attic is used as a habitable space.

THE BEAUTY OF NATURAL CEDAR

Without the maintenance!

It's only natural to want a roofing tile that looks just as good as traditional cedar shake roofing... but performs even better! That's why DaVinci Select Shake is moulded from real wood to ensure an authentic appearance. And why it's manufactured with our proprietary composite formula to create beautiful, weather-resistant tiles that provide exactly the look and color you want for years to come... without the hassle of maintaining natural wood!

DaVinci Select Shake composite cedar roofing is available exclusively at:

TAPCOROOFINGPRODUCTS.COM

01482 880478 | INFO@TAPCOSLATE.COM

Roof Terminology

APEX - the triangular section above the window in a dormer.
BARGEBOARD - Timber masking the cut bricks or cladding at the top edge of the gable, and the gable ladder. Also keeps animals out of the roof space & cavity
BINDERS - Timbers fixed laterally through the roof timbers to provide stability
BRACINGS - Timbers fixed diagonally up the slope of a roof and within the trusses prevents wind deflection
CARCASSING - The main structural elements of the roof
CEILING TIE - The member forming the base of the roof triangle
CHEEKS - The sides of a dormer
COLLAR - The tie at ceiling level between the opposing rafters
DORMER - A window projection from the roof plane
EAVES - The lower edge of the roof where it meets the walling
FASCIA - The board masking the ends of the rafter feet
GABLE - The pitched end of a roof or building
GABLE LADDER SECTION - Producing an overhang at the verge
HIP - The sloping junction between the outside angles of two roof planes
PLATE - A timber used to support other elements
PURLIN - Support running laterally beneath joists or rafters
RAFTER - The member down the rake of the roof
RIDGE - The point of the roof
SARKING - Boarding giving racking strength to rafters (Obligatory in Scotland)
SOFFIT - Area beneath the rafters at the verge
TRUSS - A sectional roof component
VALLEY - The sloping junction between the internal angles of two roof planes
VERGE - The edge of the roof at the gable
WALL-PLATE - Longitudinal member fixed at the top of the wall to receive joists, trusses or rafters.

Flat Roofs

The days of constructing a flat roof using bitumen felt, hot tar and a bag of chippings are long gone. These days, better and much longer lasting alternatives are available. Options include non-ferrous metals like lead, copper and zinc which, while attractive, can be expensive and can be attractive to thieves, especially when fitted to single storey extensions.

Fibreglass is also a good option to consider. Fibreglass makes a solid waterproof layer that will not degrade, although some consideration must be given to protecting it if it is to be walked on if part of a roof terrace. Protective 'promenade' coverings and walkways are available to ensure the covering is not damaged and stays watertight.

A modern and cost effective option is single-ply thermoplastic membrane. Highly flexible and UV stable, this material looks similar to lead when applied. Intricate contemporary curved shapes can be covered and the chemical bonding process means that joints are permanent and waterproof.

Roofs like this are always constructed as a 'warm roof' with the insulation layer uppermost, just below the membrane. Fitting by a specialist installer is always recommended as the work will comply with Building Regulations and be covered by a guarantee.

Before

After

COUNTY FLAT ROOFING

Tel: 0800 09 88 271 www.countyflatroofing.co.uk

BUILDING OR REFURBISHING A FLAT ROOF?
WE'LL DO MORE TO MAKE YOUR GRAND DESIGN AN ASSET

Kevin Hodge, Managing Director of County Flat Roofing, Crafted his first single ply flat roof back in 1986. It still looks as good today as the day it was installed.

Since he decided to specialise 35 years ago he has constructed single-ply roofs and manifested every clients vision on everything from humble abodes to stately homes, to traditional extensions and avant-garde architect designs.

A great flat roof, terrace, or roof garden is the combination of both art and science. County Flat Roofing has pushed the boundaries of discipline, to be sure of what's possible for you.

Not all single-ply membranes are equal in quality. Only a few understand the art of its installation like County Flat Roofing. We recommend you contact us early in your planning so we can advise on the subtleties of roof design that few appreciate in advance. Architects consult with us before they put pencil to paper as they are seeking certainty we can pull off their grand designs.

Choosing a company to build or refurbish a flat roof should be done with the same care you would choose your architect, building contractor, or landscape designer. Our policy is to consult with you from inception to order with no pressure. As well as from installation to after sales service with total care. **A COUNTY FLAT ROOF IS NOT JUST PRODUCT... IT IS AN EXPERIENCE!**

WHO WE ARE:

- **Members of the National Federation of roofing contractors (NFRC) Competent Roofer Programme...**
- **Key Personnel are Members of institute of Roofing (IoR)...**
- **Holders of SMAS Worksafe Certificate in relation to health & safety practices...**
- **Manufacturer approved installers of the highest quality single-ply membranes...**
- **Plus we have expert knowledge of Building Regulations and guarantee your installation will comply.**

COUNTY FLAT ROOFING

Roof Furniture

Guttering

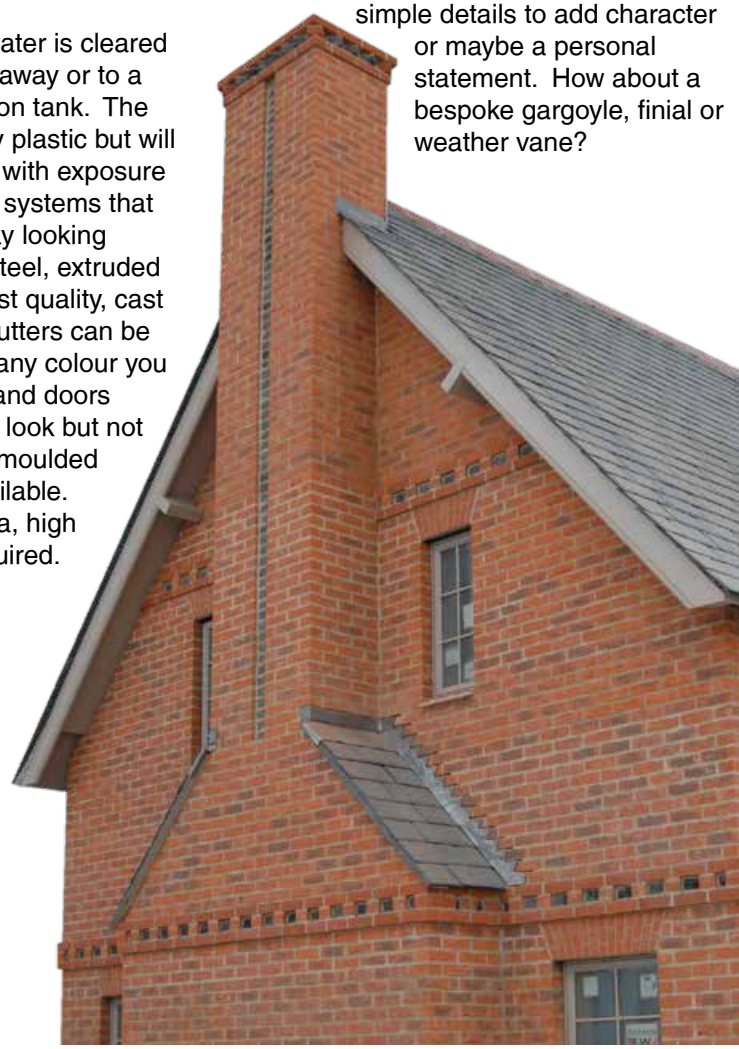
Guttering makes sure that water is cleared away safely, either to a soakaway or to a rainwater harvesting collection tank. The cheapest guttering is usually plastic but will eventually fade and weaken with exposure to sunlight. More expensive systems that will last much longer and stay looking good are made of pressed steel, extruded aluminium or for the very best quality, cast iron. Steel and aluminium gutters can be anodised or resin coated in any colour you like to match your windows and doors and if you want the cast iron look but not the cost, heavy-duty plastic moulded gutters and hoppers are available. If you are in an exposed area, high capacity gutters may be required.

Chimneys

The need for chimneys has reduced as we rely more on central heating and flueless fireplaces. However, many of us like the idea of a fireplace as a focal point and while traditional open fireplaces are in decline, wood burning stoves have never been more popular so chimneys and flues are still much in demand. The chimney is the external structure and the flue is the tubular sleeve within. When considering any chimney, flue, stove or hearth, seek the advice of a HETAS registered installer. And don't forget to cover the top of your chimney pot with a bird guard cowl. Jackdaws love building nests in chimneys!

Features

Various designs of fascias, soffits and bargeboards in MDF or low maintenance uPVC are available. If you really want the light to flood in, then you might consider a roof lantern like the one on display. You can also personalise your roof with simple details to add character or maybe a personal statement. How about a bespoke gargoyle, finial or weather vane?



Cascade

The original alternative

At a fraction of the cost of cast iron, Cascade is the original alternative to a historic rainwater system and suitable for both refurbishment and new build projects. Ask for samples today.

Flat Glass

Daylight for living

Fill your living spaces with natural daylight. Our glass rooflights are designed with energy efficiency and safety in mind and engineered to your project needs.

Brett Martin

brettmartin.com

Dormer Windows

Dormer windows add interest and character to a roof and are a great way of creating additional space following a loft conversion. On new builds, they can add considerably to the cost of a roof because most are made on site and are labour intensive. To save on costs, prefabricated dormers are available and examples can be seen on our exhibits. You can also see an extended rooflight that opens up to create its own balcony.

If you don't need a full dormer but do need additional light, roof lights are a fantastic addition. Unlike vertical wall mounted windows, roof lights let in much more light as the Sun's rays can enter from all angles, not just from above so even a small roof light can have a significant impact. They are relatively inexpensive and are very easy to install, even in an existing roof.

When adding a dormer window to an existing roof, you may be allowed to do so under permitted development rights, but these vary from council to council and there are often strict rules on what can be done without formal planning approval, so always check first.

Considering a Dormer?

PLANNING ISSUES MAY ARISE IF:

- ✓ You are in a conservation area. Most alterations in conservation areas require prior planning approval
- ✓ The proposed dormer extends above the general roof line
- ✓ The proposed dormer faces the highway. Dormers to a rear elevation are more likely to be allowed under permitted development
- ✓ The proposed increase in volume is incompatible with the existing house design.

DESIGN CONSIDERATIONS:

- ✓ Compliance with Building Regulations
- ✓ Insulation and impact on the overall performance of the house
- ✓ Waterproofing – leadwork and flashings
- ✓ Drainage – how will guttering and downpipes fit in with the existing house
- ✓ Sympathetic integration with the style of the original house, especially the existing roof.
- ✓ Ventillation. Trickle vents and eaves ventilation to avoid condensation issues.


THE RESIDENCE COLLECTION
MY WINDOWS & ME
Start your #myresidence journey today!
R9
The Original Timber Alternative
The Residence Collection can be the perfect solution for your self-build or renovation project; beautiful windows and doors that complement your home, whilst performing to the highest standards. A low maintenance alternative to timber and aluminium.
Find us on stand
206 & 207
WINDOWS & DOORS
THE WAY THEY'RE MEANT TO BE
PROUDLY MADE
IN BRITAIN
01452 345 827 | residencecollection.co.uk | journey@residencecollection.co.uk

Heating and Ventilation

The Conversion of Fuel to Heat

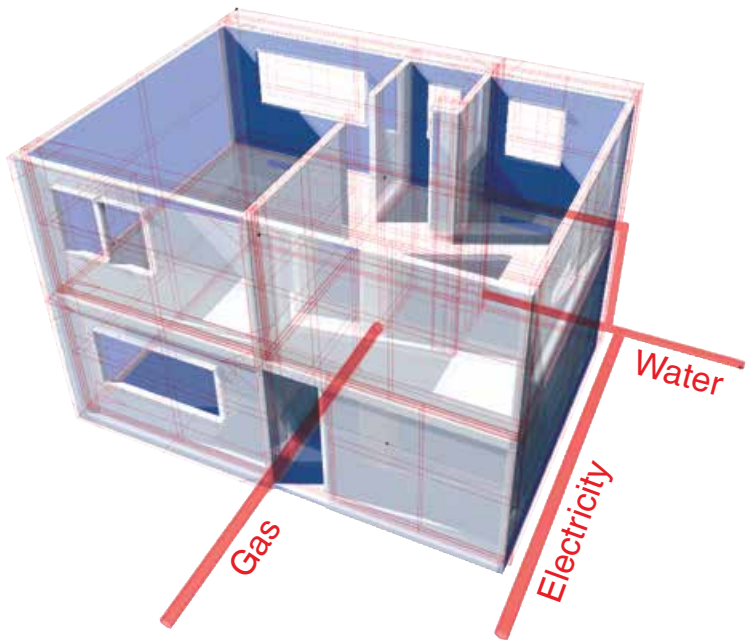
At the heart of any home is a boiler system, which may be a simple gas or oil boiler but also could be a ground source or air source heat pump or possibly even infrared electric heating. Your choice of boiler and system can have a significant impact on the efficiency rating and running costs of your new home and must ideally be designed, specified and commissioned to compliment the fabric of the building and the lifestyle of the occupants. Gas and oil boilers are given a percentage rating according to their efficiency in converting fuel to heat. The lowest ratings fall into Band D and the highest in Band A (+90%). Heat pumps have an efficiency of over 300% but they are not burning fossil fuels, they instead us electricity to drive a compressor that moves heat from the source (Air, ground or water) to a more useful place. The higher the temperature is that you are trying to create the harder the compressor must work and therefore the lower the efficiency. It is therefore prudent to design the fabric of the home to be as efficient as possible before specifying the appropriate technologies to optimise the property.

Hot Water Systems

Before deciding on the boiler and the hot water system it is useful to have assessed your hot water needs correctly — how many people are living in the house, how many bathrooms etc. For a quick calculation this can be assumed as the number of bedrooms plus one.

The typical system in the UK uses a copper or stainless steel hot water cylinder heated by coiled tubes from inside which transfer heat from the boiler to the hot water. The domestic hot water never passes through the boiler at any time — this is known as an indirect system.

The main water feed usually has a very good pressure these days so it is no longer required to have a gravity feed tank in the loft. The expansion of the water, as it heats up, is also accommodated by an expansion vessel plumbed close to the cylinder. This is known as an unvented system.



Biomass

Biomass boilers are often used for space and water heating as and alternative to oil or Lpg where high grade heat is required in larger properties or renovation projects where insulation is not feasible to install, and there is no piped gas. They use either logs, pellets or wood chips as the fuel and then store this heat in a large water tank or solid thermal mass.

Logs require a degree of manual labour to load and clean and if sized correctly you would expect to burn one batch every 3 days, depending on the heat load. Pellets and Wood chips can be automatically fed into the boiler for a steadier heat supply. First check that you have a good source of fuel before installing a biomass boiler.

Boiler Types

✓ **COMBI-BOILERS** - heat your home by hot water through radiators and heating circuits. These boilers instantaneous hot water only when water tap, shower, washing machine dishwasher is turned on, doing away with hot water storage cylinders and cold storage tanks.

✓ **CONVENTIONAL BOILERS** - provide central heating by circulating hot water radiators and under-floor heating circuits. Hot water is provided by the boiler to a hot water storage cylinder; with the appropriate programme installed, your hot water requirements can be planned to suit your life-style.

✓ **ELECTRIC BOILERS** - are quiet, easy to service and work by hot water passing electric heating elements. Some examples provide central heating and domestic hot water with the same degree of comfort and control as a gas boiler.

✓ **BACK BOILERS** - usually found on 'Aga/ Rayburn type cookers or log burners they combine a lifestyle look with a boiler, or 'wet-back' heat exchanger behind and they provide hot water and heating depending on the plumbing design. It is critical to get the design of these systems right to avoid overheating and wasted heat.

Renewable energy, solar PV and related options

Solar technology is being developed all the time and there are now more options available than there were 5 years ago. As well as roof based panels or solar tiles, you can install a static ground based array in your garden, or a higher output solar tracking system which will generate power from sunrise to sunset. You may find it helpful to ask an installer for advice, but some systems are available as self install up to the electrical wiring stage.

For optimum results / output, you will need either an unshaded south and west facing roof, or an unshaded area in your garden. (A small amount of shade can be mitigated by the use of micro inverters.) Once you have analysed your current energy usage requirements (heating, hot water, lighting, cooking, EV charging, home working and leisure technology etc.) you can start working out how many solar panels might meet your energy requirements; possibly used in conjunction with other renewable energy technology options eg a heat pump, solar immersion diverter, ceramic core radiators, thermal storage and batteries.

Photovoltaic Cells (PV)

PV panels generate electricity from light, as opposed to solar thermal panels that need heat from the sun to make hot water. PV panels have no working parts, so they are very low maintenance installations, and have an average life expectancy of around 20 years. PV is the easiest way to generate renewable electricity in the home but due to the installation cost you need to make sure that you use the electricity generated in the normal running of the home.

As the technology advances, we are seeing PV tiles and integrated PV roofs. There is also the development of PV glass, which could replace large glazed areas. This technology currently benefits from the Feed in Tariff whereby the electricity produced is sold by you to the grid. Rates are continually changing and you only get the tariff that is current on the day the system is commissioned. It is therefore important to know what the tariff will be for your project before committing.

Solar Thermal Water Heating

Often referred to as Solar Thermal, Solar water heating systems use the heat from the sun to heat your domestic hot water. There are two types of solar thermal collectors/panels: flat plate and evacuated tubes. The evacuated tubes are more efficient but they are also more expensive. The rest of the system comprises a transfer unit (a high-recovery coil), a hot water cylinder to store the hot water and a controller that manages the flow through the panel and accommodates heat expansion. In the UK we use indirect solar thermal systems to protect them against freeze damage and also to pump the water through the system. In hotter countries the pump is not required because the power of the sun circulates the water in a thermo-syphon system.

Underfloor Heating

Underfloor heating has become extremely popular with self builders but it must be understood that it is not a one size fits all solution and also needs to have some early consideration to make sure it is deigned to work properly and also will fit into the space discretely.

There are 2 types of underfloor heating: electric and water. Electric underfloor heating is effectively a lot of electric wires (or film) that are laid in the floor and through resistance they create heat. The water systems have a lot of pipes buried in the floor and the pipes then get connected in a loop to a manifold and warm water can then flow through the loop.

On the ground floor the underfloor heating pipes get buried in the screed and your floor finish goes on top. The harder the finish the better. As the pipes are in the screed you only need to be sure that the screed is thick enough (and strong enough) to cover the pipes and not crack when heated. On the upper floors the pipes can be either under the decking and between the joists or installed as an overlay system where the pipes are placed in a grooved panel that is on top of the floor deck. You then put your floorboards on top of the deck. This method will improve efficiency but will take up space and could result in an increase to the floor level of around 45mm. This must be specified early so that the door frames can be adjusted and the stairs can also be fitted correctly.

Infrared

Infrared radiant heating can be used as a target heating solution for specified areas or potentially as a whole house solution. Infrared radiant heat is an even heat that heats up objects rather than the air around objects. The radiant infrared energy passes inertly through the air and heats up people or objection contact thus creating radiant warmth (just like the sun) but at a slightly lower air temperature which is ideal for localised heating. Radiant heat reaches temperatures very quickly so warm up times are shortened thus saving energy. Radiant heaters can be used either indoors or outdoors and can be mounted on the walls (as pictures, mirrors or coloured panels) or the ceiling, such as in bathrooms.

Radiators

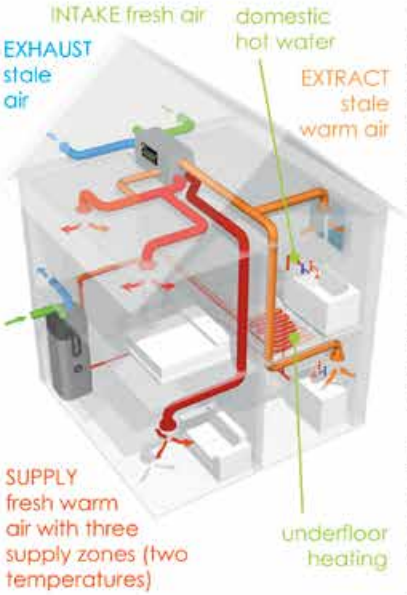
Central heating radiators are common features in our homes and it is important to make sure that they will do their job which is to heat your home. Radiators are available in many different shapes and sizes and there is a science behind specifying the right one. You may be forgiven for thinking that radiators were simply chosen according to the size of the window under which they were installed but each radiator has an output rating which is set according to specific guidelines. If you buy a 2kW radiator then that is usually specified to give 2kW of heat if the average temperature in the radiator is 50 degrees hotter than the room temperature. Therefore, if the target room temperature is 20 Celsius then the average temperature in the radiator should be 70 Celsius. If the average temperature is lower, then you won't get 2kW. As an example, if the average flow temperature was 40 Celsius (20 degree temperature difference) then you would only get 600 Watts from the 2kW radiator. The temperature difference is referred to as Delta (Δ) T on the radiators and may have a kW or Btu rating. If you are planning to run the radiators cooler to save money then you will need to oversize them. The shape, size or design of the radiator does not really matter if the kW rating is correct. On older systems it is important to make sure that the radiator circuit is regularly serviced to make sure that the right additives are in the system to stop corrosion as well as making sure that the radiators are hydraulically balanced to ensure even flow of heat to all radiators in the circuit. For more information on this, you can enrol on the NSBRC Guide to Heating your Home at the NSBRC where we explore this in more detail.

CENTRAL HEATING IS SO YESTERDAY...
THE FUTURE IS HPV TECHNOLOGY

THE HPV SERIES, SEES A HIGHLY ENERGY EFFICIENT SYSTEM REDEFINING LEVELS OF COMFORT, GIVING CONVENIENT DELIVERY OF HEATING, COOLING, HOT WATER & HEAT RECOVERY VENTILATION, WITH UNPARALLELED LEVELS OF RESPONSIVENESS.

The HPV system is a quiet heat pump located in your home, providing convenient space heating through rigid metal ducting to valve terminals in your ceiling. It requires no gas or oil, pellet storage space, ground-drilling, radiators or underfloor heating. It has two different heating zones for different floors and even has a third individually controlled supply duct if you want a bedroom at a cooler temperature, for a more pleasant night's sleep.

If more heat is required in certain rooms than others, additional heat is supplied through the filtered air in supply rooms, either via PTC terminals (heated valve elements) or radiant heating panels, so that you can have precise, responsive individual room temperature control.



In summer the system reverses, providing cooling and it reduces humidity, so that you could feel a 4-5°C temperature difference.

HPV - efficient heating, cooling & heat recovery ventilation

HPW 300 - combined heat pump with 300L domestic hot water cylinder

HPV heated ceiling elements for precise control & responsiveness

In an airtight and well insulated home, you need a healthy indoor environment to breathe. The HPV Series also ventilates your home by exchanging stale air, for fresh filtered air without traffic noise, pollutants, and pollen entering; useful if you're a light sleeper or Asthma/allergy sufferer.

During cold weather heat is recovered from stale air and transferred to the fresh air, meaning you no longer lose heat through opening a window. Room temperatures remain pleasant and you don't have to pay more than once for your heating!

The HPW 300 unit is a 300L cylinder with integrated heat pump to provide all your hot water requirements. It can heat up to 20m² of underfloor heating, or accept it from solar thermal panels.

This heating and ventilating system can be over 1,100% efficient in comparison to a gas boiler at only 90% efficiency! Isn't it time to open your mind to a different way of heating?

main benefits

- *energy efficient heating with COP of 3-11!*
- *energy efficient cooling with EER of 4.5*
- *300L domestic hot water*
- *convenient control of heat with instant effect*
- *constant fresh air filtered for pollen and allergens down to 0.01 microns*
- *heat recovery ventilation*
- *no separate heating system required*

The HPV Series and HPW 300 are suited to well insulated and airtight homes. We will complete a room-by-room heat loss appraisal to check whether the HPV Series is right for your home.

Send us floorplans, sections, elevations and the U-values for the building envelope so you too can have the future of heating... now!

total home environment

Our other products:

- heat recovery ventilation
- air-source heat pumps
- air-water heat pumps
- central vacuums

See our products on stand 58 and the attic of the Renovation House.

t: 0345 260 0123
e: info@totalhome.co.uk
w: totalhome.co.uk
twitter: @TotalHomeEnviro

AIR SOURCE HEAT PUMPS (ASHP)

With an air-source heat pump, you can reduce your heating bill by a third, slash carbon emissions and get a £5,000 grant! This is a heat source that can be 350% efficient, which doesn't need gas or oil to run and in well insulated renovations, can replace an inefficient boiler.

How does an ASHP work?

An air source heat pump sits outside and uses the heat from ambient air for heating and domestic hot water rather like a fridge, but in reverse. A pair of pipes from the ASHP serve your heating system via a buffer vessel and your hot water needs via an indirect cylinder. It is suitable for homes with a heat loss of approximately 5kW to15kW. An MCS certified specifier can advise you on the correct size ASHP as a house with a heat loss of 9kW would need a 12kW ASHP to produce enough heat at -7°C from a cold start.

What is the best heat emitter for an ASHP?

ASHP's run at a lower temperature than a boiler, so the best heat emitter to combine with an ASHP is underfloor heating (UFH) because it has a much larger surface area than radiators (see p96). However, in a renovation project where you might not be digging-up floors, or upstairs timbers might not be suitable to hold the weight of wet UFH, you can use fan-assisted radiators as heat emitters. If you already have standard radiators in your house, they could be large enough to provide sufficient heat, if not, then you may have to install radiators that have three times the heat output.

How efficient is an ASHP?

Efficiency is measured by the Seasonal Co-efficient of Performance (SCOP); how many units of electricity used, compared to the units of heat produced. With a typical boiler, the SCOP would be 0.9, whereas an ASHP typically produces SCOPs of 3 & 4!

Government Grants for ASHPs

To aid the decarbonisation of buildings, the government is encouraging self-builders and home owners (replacing existing fossil fuel systems), to install low carbon heating systems. They will provide £5,000 to overcome the upfront costs of installing an ASHP (or ground-source heat pump) under the Boiler Upgrade Scheme (BUS). Schemes entitled to support from the BUS must be in England or Wales and commissioned from 1st April 2022. To apply you will need to be the homeowner and have a valid EPC (Energy Performance Certificate) with no outstanding recommendations. The system must be correctly sized and fitted by a Microgeneration Certification Scheme (MCS) accredited installer who will also apply for the grant on your behalf.

Air to Water Heat Pumps

There are also air-to-water heat pumps which can take energy from the outside air and put heat energy straight into a water tank especially for your domestic hot water requirements. These units would normally be located in a plant or utility room, where the heat pump is integral to a tank of water. These heat pumps are so effective at the higher temperatures required for hot water, that COPs typically come out at 4.3.

VENTILATION

As you seal up and insulate your home more, so the indoor air quality in your home deteriorates. A constant cocktail of chemicals is emitted from curtains, sofas, laminates, cleaning detergents etc. Radon Gas, (the second biggest cause of lung cancer in the UK) mould, (caused by moisture from cooking and bathing) and Carbon Dioxide (from breathing) – all contribute to the air inside your home possibly having more pollutants, than the air next to a busy road.

Why Heat Recovery Ventilation?

Ventilating your home by poking holes through the skin with unfiltered trickle-vents in window frames and noisy extractor fans in kitchens and bathrooms will not be adequate if you're really sealing it up. There are various methods of ventilating your home including Passive Stack Ventilation (PSV), Positive Input Ventilation (PIV) and Mechanical Extract Ventilation (MEV), but all of these are either uncontrollable, rely on air leakage, lose you heat or won't guarantee you enough fresh air. Still, these may be your only option to get some fresh air in your home should you be completing a renovation project.

However, Heat Recovery Ventilation or Mechanical Ventilation with heat recovery (HRV/MVHR) continuously extracts stale air out of wet rooms and draws fresh filtered air from outside whilst recovering up to 95% of the heat that you would normally lose through other types of ventilation.

What to look out for in an HRV system

Good HRV systems will be Passivhaus certified, have an automatic summer bypass (no heat recovery in summer months), trap pollen and allergens and save about a third on heating bills. They should also have CO_2/humidity sensors and a controller ensuring the system is perfectly set up for your house and lifestyle with options such as a 24/7 timer, temperature monitor, boost function, data card, mobile app, cold weather reduced supply-rate function etc.

The best form of ducting is rigid-metal safe-seal, as it's naturally anti-bacterial, crush-proof, air-flows on paper happen in practice and mice can't nibble through it. Smaller bore plastic radial ducting is useful in renovations where ducting may be less easy to hide.

Heat Pump Ventilation

Even with the best HRV systems, there is still heat available to recycle. If you make your house airtight and well insulated, you may be able to take advantage of Heat Pump Ventilation (HPV) to provide a low energy heating solution as well. HPV integrates a micro heat pump within the HRV unit to harness even more energy from the outgoing air. It provides responsive individual room space heating, domestic hot water and some cooling too.

Can't Install Whole House Ducting?

If getting whole house ventilation ductwork into a renovation project is going to prove challenging, you can just extract air out of kitchens and bathrooms and connect ducting up to an air-water heat pump (on previous page). This will recover the heat and harness the energy in the air extracted to provide hot water, so there is at least no heat wasted from these rooms.

These units can also act as Mechanical Extract Ventilation (MEV) under Building Regulations Part F system 3.

How a HRV/MVHR system works

5 Finishes Zone *In partnership with* Pietra Wood And Stone

Finishes Zone

Once your main structure is completed the last stage of the build is traditionally called the finish or second fix, hence the name Finishes Zone. It is split into two main areas – the main one comprising of door, floor and wall finishes and then there is the stairs exhibit, off to one side.

The finishes to your house are very important and will give the impression not only of your chosen style but also the feeling of the quality of the build.

Windows & Doors

The choices of your doors and windows may to some extent be dictated by planning and performance considerations. However, a house that features a large amount of glass will be scrutinised to ensure that the insulation performance of the home is not compromised.

It is impossible to outline the choices here but consideration as to material, performance and desired finish is a factor – for example softwood windows are now pressure impregnated and treated to last around 30 years. Alternatively hardwood is more expensive and is often stained for effect rather than painted. When choosing metal, aluminium or steel windows, care must be taken to ensure that a thermal break is considered, to prevent what is known as cold bridging, which compromises the insulation of your house.

PVCu windows are popular as they offer a low maintenance solution, however you need to watch for discolouration and brittleness that can occur over time in cheaper varieties.

SELF BUILD ASSIST

Let's Build Your Dream Home

Designing and building your own home is one of the most rewarding experiences you can have. There is nothing quite like turning the key and stepping into your dream property, other than knowing that you were directly involved every step of the way.

Navigating the Market

As you embark on the process of selecting partners and researching the technologies you wish to integrate into your home, you will likely encounter many specialist contractors, plus as many (if not more) equipment manufacturers and their 'salespeople'. This can be quite overwhelming at times.

With this 'information noise' you might then find yourself asking, **"which of these options are best suited to us, and how will we know if we have chosen well?"** The key to answering those questions is to first understand how these individual elements all fit together, and whether they are necessary and wise investments.

Independent & Impartial

Self-Build Assist was founded on the principle that knowledge is key; "forewarned is forearmed", and with our decades of collective construction and renewables industry expertise to call upon you'll be in very safe hands indeed. We are fluent in all aspects of the building process and always provide the facts to back up our rationale, therefore allowing you to make your own informed decisions accordingly.

A Multidisciplinary Specialist

We are specialist turnkey 'low energy' and Passiv Haus building project coordinators, with a simple mission:

- To empower the client and build up their own confidence.
- To demystify the industry; by translating the 'technical jargon'.
- To offer comprehensive and holistic guidance; with all the pros, cons and caveats illuminated.
- To provide turnkey supply and fit packages, upon request.

What Our Customers Say

"Self-Build Assist provided us with a wealth of impartial information and technical support. They were very knowledgeable, open, and trustworthy. A comprehensive, no-nonsense service"
Mr & Mrs Bettridge. Low Energy ICF New Build - Hertfordshire.

Free, Introductory Offer

To discuss your build aspirations, we offer a free and impartial 30-minute phone consultation. If this is of interest to you, please call us or email us to arrange an appointment on:

0330 043 7364
info@selfbuildassist.com

The main entrance door is of key importance, and a sympathetic design to your house style is an obvious thing to get right. Issues to consider are the amount of glass, thermal sealing, acoustic insulation, security and maintenance.

On the Inside

Interior doors are split between two basic types – solid and hollow. Hollow doors are effectively sandwiches with a centre fill similar to egg boxes. The areas where the handles are fixed are solid – so hanging them the right way round is essential. Hollow doors often feature some sort of veneer. Solid timber doors fall into two further categories – stainable and paint only, which are cheaper. Hardwood and glazed doors are also available – these are at the top end of the market.

Door furniture is everything to do with doors other than the door itself. Handles are the most visual and the only piece you might touch but some things you are not going to see, such as locks, seals and security also need to be thought about and chosen according to function.

Wall Finishes, Architraves and Mouldings

This area is mostly concerned with style. Skirtings, mouldings and architraves are purely cosmetic.

Costs can vary enormously depending on the materials; MDF features heavily in these areas as it is easy to engineer, however you may choose to go for plaster mouldings, which are more expensive but should not be discounted as an option.

Internal wall finishes – a basic choice is plaster or dry lining. The finish can be a simple paint where the options are between matt or silk. Don't forget the ceilings – artex has been very popular but it will need painting as well.


Visit
Stand
204
klöeber
Bespoke Doors and Windows for Self-Builders and Renovators
We manufacture, supply and install:
Bifold doors
Sliding doors
Entrance doors
French doors
Single doors
Windows
Shaped glazed screens
Rooflights
01487 740044
info@kloeber.co.uk
www.kloeber.co.uk
Visit our showrooms in: London, Cambridgeshire, Buckinghamshire and West Sussex.

Wallpaper does not seem as fashionable as it was but it may have a place in your home depending on style – it is relatively inexpensive and if used over emulsion paint throughout the house will only add a small premium to decorating costs.

Floors

There are a vast amount of choices in floor finishes and it is a huge area. The floor finish is likely to be related to the area you are designing for. Tiles in kitchens and bathrooms are very popular as they are practical. Note that most finishings are zero rated for VAT when used for new build purposes, – that is apart from carpets and curtains which are designated as movable items. Curtain rails and blinds however are!

There is quite a range of quality and materials for carpets, but you need to also factor in underlay – which can cost more than the carpet. Carpets in bathrooms need to be treated with care – woollen carpets can go mouldy.

Tiles come in all sorts of material options – vinyl, cork, ceramic or quarry tiles. Laying costs can be relatively expensive in some cases and with stone or colder types of finishes some form of under-floor heating is useful to take the chill off the surface. Also with certain types of tiles you will need treatment after laying, in order to properly seal the material to prevent liquid spills from staining your beautiful finish.

Timber floors are currently very popular in contemporary style houses. Hardwoods although expensive are widely available. Slightly cheaper options will use a veneer which incorporate a 4-5mm layer of hardwood glued to a composite backing with the primary motive being strength and stability. Shrinkage is a factor on all wood floors and needs to be checked to avoid unsightly gaps appearing – this is less of a problem with certain types of hardwoods.

Whatever floor you choose, the substrate and preparation is important. With wood floors you don't want drafts coming through and with tiles you need to ensure they are bedded properly to prevent cracking.

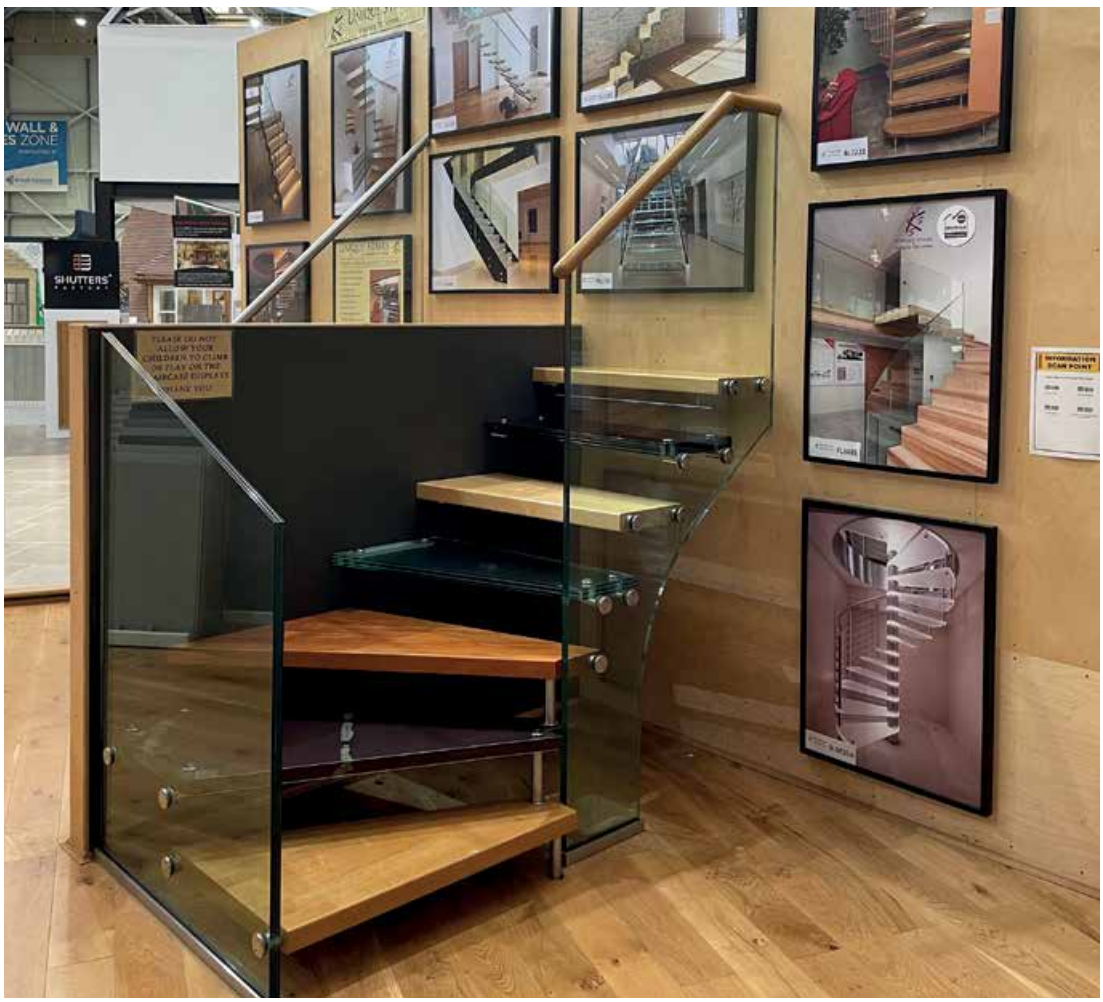
Stairs

In a modern multi-level house the staircase is an essential structural component, which should also fulfil an important aesthetic function. The most simple form of staircases are those that go straight, however often there may be space or design issues to work around and there are a variety of options available from split stairs with half landings, turning the staircase with some 'winder' treads or even a full spiral staircase.

In addition there are other considerations such as galleries, handrails and balustrades.

Thoughts on the design, materials and layout need to be included in the early part of any design project. Clearly stairs need to be able to safely transfer people between floors with the minimum of risk as well as keeping the environmental and structural integrity of the house design intact. It is necessary to adhere to the building regulations. Consider:

- The structural integrity and robustness of the construction design
- The safe access to the accommodation
- Safe means of escape
- Sufficient headroom
- Fire protection
- Tread and riser (step) conformity



Renovation House

Turning Back Time

Renovating a house can be one of the most rewarding experiences of your life and with careful planning, can also be one of your best investments. The heady days of ever-rising house prices are gone and, whilst many people still managed to make money from renovation (despite making some questionable decisions) because of the rising market, the opportunity to make a profit while restoring an older property still exists. Of course, rather than profit, your motivation may well be to turn an ancient wreck into a family home for a minimal outlay. In either case, a tour of the Renovation House is a must. Using our audio tour, you can find out exactly how to go about bringing an old property back to life whilst learning about the problems you might encounter and getting top tips on how to make your own project a success.

The Renovation House is typical of a property built in the inter-war years and has clearly had very little maintenance work or modernisation work done to it. As a result, just about everything needs work to bring it up to standard. As you move through the house, you will be guided through identifying and resolving most of the common problems encountered during a renovation project from failing brickwork, dry rot through to a leaky roof. Using the advice of specialist surveyors, builders and other tradesmen, you can see the original dilapidated house magically transform into a modern and up-to-date home with added space from basement and attic conversions.

Before buying a renovation project like this, either at auction or on the open market, a full structural survey is absolutely essential. A proper survey will help you to determine exactly what work needs to be done, and therefore whether the project is economically viable. Knowing what needs to be done will help you to set your price limit at auction, or to negotiate a fair price for the property so that you can avoid buying a 'money pit' that will cost more than its market value to restore. It will also give your builder a good idea of what work needs doing, so he will be able to give a far more accurate price for the work to be done.

Assessing the Property's Potential

Renovation is primarily concerned with making the existing dwelling into a better one. Conversion turns a property that was not previously used as a dwelling into something habitable. This may also encompass extending the living spaces and using attic or basement developments.

Much of the new build processes covered in the rest of the Centre can be applied to renovation, but a big difference is that you will need to assess the true state of the property and plan accordingly.

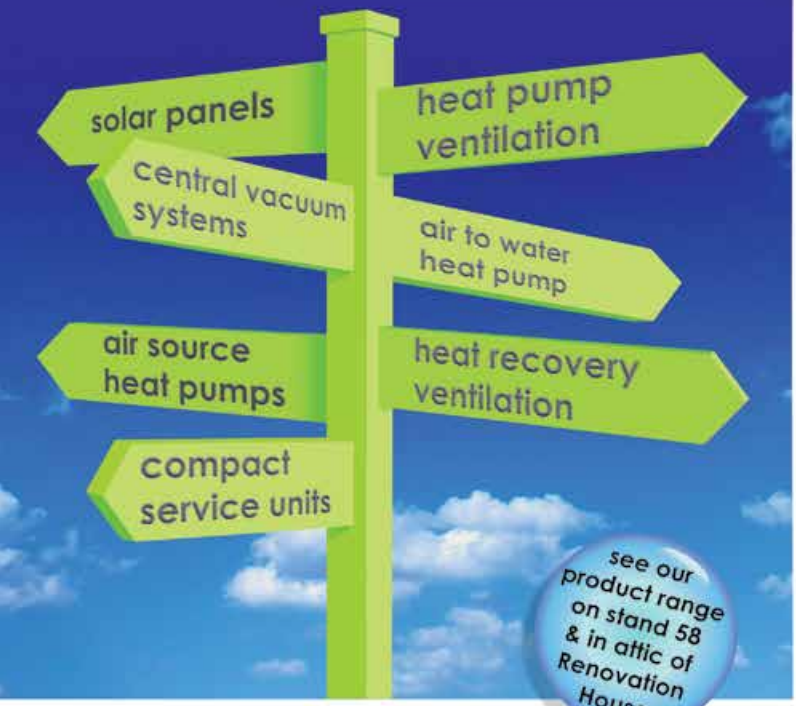
For any project you need to work out the possibilities, calculate the costs and understand the value your work can yield.

As in calculating the potential for a plot of land, you will need to get to know the local area; all the principles that apply to assessing the development value can be applied to renovation. Be wary of over-developing or specifying too high a quality home for the typical values in the neighbourhood.

The actual assessment of the property and its existing condition is likely to be a specialist task for a building surveyor and a full structural survey is always advisable. However even a surveyor may not be able to foresee all the problems once the strip-out of the property is underway. Unlike a new build, renovation costs are less precise and budgeting for potential issues is advisable from the start.

When assessing the economics it is advisable not to rely on house price inflation. Never build it into your figures other than as a possible up side. It is more often the case that this is eaten into by under-budgeting of contingencies. So in short ensure the development stacks up financially at current prices.

DECISIONS, DECISIONS...



we'll help you to take the right road from an informed choice

CELEBRATING 25 YEARS EST. 1998
OF DOING MORE WITH AIR

After having completed new builds and renovations ourselves, we know the plethora of decisions you have to make on such a project. We are happy to guide you on your sustainability journey and rest assured, we will only specify the solution that we would choose ourselves.

after all, if you do more of that, you can afford more of these!

see our products on stand 58, or for a quote send plans to info@totalhome.co.uk

send your floorplans to info@totalhome.co.uk

15 YEARS Est. 2007
Proud to exhibit at the NSBRC since 2007

RECC
energy saving trust
Passivhaus Trust
GREEN HOME AWARDS 2021 WINNER
Build It AWARDS 2018 WINNER
SELF BUILD
AS SEEN ON GRAND DESIGNS THE STREET

total home environment

0345 260 0123 www totalhome.co.uk

One last thing is to allow for VAT. Unlike new build projects where VAT can be reclaimed against materials, this is not the case for most renovations. However, a change to the VAT rules allows a reduced rate of 5% VAT on materials and labour to be charged by a VAT registered builder if the house to be renovated has been unoccupied for 2 years or more before the work commences.

Doing the Work

A large part of good renovation redevelopment is about spending wisely. It is not necessary to spend a small fortune to make an impression or create a top-quality home. However, you may decide to install the latest technology in your home such as hi-tech audio and control systems for your own enjoyment.

With a high degree of strip-out and renovation there is a great opportunity to improve the performance of the property and reduce the running costs for energy by using improved insulation, solar power and and other renewable technologies such as air source heat pumps.

Choices

While not a complete blank canvas like a new build, major renovation projects will throw up similar choices and many of the options available in a new build can be applied to a renovation project. Not only will you have to decide on finishes but you may also want to look at different options for boilers, plumbing and fixtures, underfloor heating and so on.

Stages of Renovation

The Renovation House shows the 4 main stages you will need to follow, namely:

- Assessment and design
- Strip out/build down
- Renovation first fix
- Final finishes

Once you have completed the purchase of your renovation project, typically the stages to follow are:

- Secure the property – if vacant you need to prevent vandalism

Structural Survey

A detailed or structual survey can help you uncover hidden pitfalls and give you a better idea of what the potential for your property is.

- Full survey and assessment
- Apply for planning, Building Regs and listed building consent (in some cases)
- Prevent further deterioration – especially if water ingress has been a problem making it watertight
- Secure and isolate the services for works to commence
- Strip back and salvage what you are planning to re-use
- Site organisation and set up
- Stabilise the building if any works are needed to the foundations (underpinning or underbuilding)
- Damp Proof Course (DPC)
- Sub floors – damp proof membranes may need to be installed
- Stabilising the wall structures – may involve new brick and blockwork, re pointing and installing purlins and steel RSJs where the structure is being modified
- Plumbing wiring and underfloor fix – in some instances where layouts change the drainage will need modification
- Internal floors, staircases and first fix carpentry
- Roofs – may require re-roofing, insulation, installation of solar panels and even replacing parts of the structure
- Doors windows and openings – roof lights, doors, frames, double glazing, lintels and arch replacement in some cases
- Services - new heating, boilers or heat pumps and lighting and security
- Re-plastering wall finishes and ceilings
- Floor finishes, tiling
- Fixtures and fittings, decoration.

Professional Services Hub

House Design

Professional Services Hub

An exciting aspect of any self build project is the chance to get 'hands on' and have a direct input into the building work. However, there are several areas where it is advisable to engage a professional. The hub features Architects, Project Managers, Surveyors, Building Control, Energy Assessors, Timber Frame Manufacturers, Design Solutions, Landscape Designers and much more. The Professional Services Hub is a unique resource showcasing a wide range of specialist expert service providers, all available to advise and guide you through your build project.

Kitchen Design

What goes on in your kitchen today? What would you do with the kitchen of your dreams? These are the sort of questions you have to ask yourself when it comes to deciding on the design for what will be for many people the centre-piece of their home.

Because kitchens have the potential to be incredibly practical and versatile spaces, no two households use them in the same way. To help shape your thoughts here are some questions posed by many kitchen designers:

- Do you want to use the kitchen for dining?
- Will you want to use it for homework or socialising?
- Do you need an area in which you can work in the evening, prepare food quickly and also entertain?
- Do you want to add extra facilities like laundry, storage or even a wine cooler.

Design Checklist

UNDERSTAND YOUR REQUIREMENTS:

✓ How you want to use it?
✓ Who will use it/how much of the time?
✓ What special features do you want to include?
✓ What are your must-have appliances?
✓ Consider the triangle between cooker, fridge and sink.
✓ How many power points do you need and their key locations?
✓ What sort of lighting do you want?
✓ What about audio?
✓ How much storage will you need?
✓ Consider plumbing issues.

PLANNING THE DESIGN:

✓ Consider the style options.
✓ Use free design services from suppliers to evaluate options.
✓ Review storage innovations.
✓ Be inventive about sink location - don't just stick it under the window!
✓ Be critical of dead space - check all the space has a function.
✓ If the kitchen is small then consider the need for a breakfast table/ bar.

Bathroom Design

The bathroom is usually one of the smallest spaces in your house but also needs to deliver one of the highest levels of functionality. If you are building your own house you have the luxury of planning the bathroom of your dreams. You can incorporate whatever features you desire to make your bathroom a haven of tranquillity and relaxation, a sanctuary for you to escape the outside world. You have the opportunity to include the perfect heating, lighting and storage systems from the beginning. Plumbing can be installed exactly where it needs to be and you could even incorporate entertainment such as a built-in television or music system.

What do you want?

There are actually a number of different types of bathroom – family bathroom, en-suite, shower room and cloakroom, and each will have specific functional requirements. Good planning is the key to designing your dream bathroom, then assess your needs and see what the options are. Ask yourself:

- How much space should you allocate?
- How can you maximise existing space?
- What is its primary purpose?
- What is your budget?
- What functionality is required?
- Is it relaxational or functional?
- What style suits the house?

Design Checklist

FIXTURES & FITTINGS - These will depend on how you use the bathroom, how much space you have and how you want it to look and feel.

HEATING & VENTILATION - Options for heating the bathroom would be under-floor heating, towel radiators (either as part of your central heating or electric) or radiant heating panels. Good ventilation will prevent mirrors steaming-up and condensation leading to mould growth. Basic ventilation would be extractor fans and trickle vents, but you lose a lot of heat this way and suffer the noise. Heat Recovery Ventilation is now considered the best ventilation in your home and removes all moisture from wet rooms whilst recycling the heat back into the habitable rooms of the house.

LIGHTING - An important feature to create atmosphere in your bathroom, transforming the room from bright to softly lit at the touch of a button.

STORAGE - This can be fitted or free-standing units, bespoke built-in cupboards and shelving systems. Plan in free-standing items from the beginning.

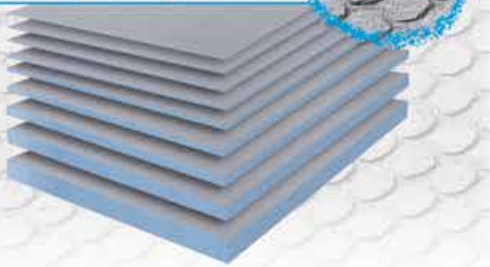
WATER SAVING - Try dual-flush WCs, delayed flush cisterns, low capacity baths, shower restrictors, ceramic disc cartridges or tap flow restrictors.

marmox

Giving wetrooms the backing they need!

- Waterproofing
- Insulating
- Walls & Floors
- Tiles or Plaster
- Shower Bases
- Pipe Boxing & Niches
- Bath Surrounds
- Vanity Units

Look out for the Honeycomb Finish!
It means... Genuine Marmox and an ultra-strong surface for adhesion!



marmox multiboard
Waterproofing • Insulating • Drylining

marmox

Thermal insulation block for the base of walls

- Low Thermal Conductivity *(0.050W/mK)*
- Guaranteed Low Ψ Values
- Ultra-High Strength *(9.0N/mm²)*
- Unaffected by Moisture

Epoxy-Concrete Columns
Supports up to 3 stories plus a roof!

marmox therm•block
Reduce heat loss at the base of walls

See our products on stand numbers: **36**, **167** and **8**

01634 835290

www.marmox.co.uk

POTTON ‘RUSKIN’ SHOW HOME

NOW WE ARRIVE AT ONE OF THE **HIGHLIGHTS OF THE CENTRE** - THE **RUSKIN SHOW HOME** FROM POTTON.

The external appearance is inspired by the Arts and Crafts movement and boasts traditional features. The 2,300 ft^2 interior gives you a real feel for a house of this size.

STEP INSIDE TO TAKE A TYPICAL **SELF-BUILD JOURNEY** WITH POTTON.

The exhibition space inside the show home will demonstrate how Potton can help you achieve your dream home, from finding land to design, planning and finishing your build. Information boards in each room will give you a real insight into working with Potton every step of the way. Head upstairs to explore Potton’s range of timber frame and SIPs build systems.

Finish your journey by browsing inspirational customer case studies, from traditional to contemporary, Potton can design a bespoke home to suit you.

THE RUSKIN WILL **INFORM** AND **INSPIRE** IN EQUAL MEASURE.

STEP INSIDE TO TAKE POTTON’S SELF-BUILD JOURNEY

Ruskin show home key facts

FLOOR AREA	**2,300 Sq ft / 214 Sq m**
RIDGE HEIGHT	**8m**

4 Bedroom family home

- Open-plan kitchen diner
- Large family lounge
- Utility, WC and study area
- 2 ensuite bathrooms
- 1 family bathroom
- Spacious hall and landing area

GUIDE BUILD COST	**£470,000 - £570,000**

DESIGN AND BUILD YOUR NEW HOME WITH POTTON

With over 50 years' experience and having designed thousands of homes, Potton is one of the UK's leading self-build companies. Potton can design your self build, gain planning permission and help build your finished home, offering you a one-stop-shop solution.

Potton's expert team of architects, designers and planning consultants are on-hand to help you realise your dream home.

If you already own or have identified a building plot then get in touch to see how Potton can help **01767 676400 sales@potton.co.uk**

VISIT POTTON'S SELF BUILD SHOW CENTRE…

Potton has five other show homes at their Self Build Show Centre in St Neots, Cambridgeshire which are fully furnished so you can experience the feel of a Potton home first-hand. Visit Potton.co.uk/inspiration/show-centre to find out more

POTTON SHOW CENTRE, ST NEOTS. OPEN MONDAY-FRIDAY 9-5; SATURDAY 10-4

Planning – A Quick Guide

Planning Section compiled in conjunction with Mark Doodes Planning

If you are intending to build a new home, or looking to add a significant extension on your existing home, then you will likely need to obtain planning permission from your local authority. You may not need to apply for permission for minor works and small extensions under what are known as "Permitted Development Rights". The Planning Portal has an excellent Interactive House Visual Guide, but there are a number of ways that these rights can be removed so it is always best to seek advice from your local authority before you start work. In nearly all cases, Building Control approval will still be required.

When considering a new build, particularly on a green field site, much has changed in the national policy arena in the last decade. Most notably, the National Planning Policy Framework (NPPF) was published in 2012, and updated in 2021, and streamlined much of the national guidance and introduced the concept of a 'presumption in favour of sustainable development'. That said, planning remains a policy led system and each local authority will have an adopted local plan that details the strategic and specific policies that all submissions will be assessed against. The local plan can be one of a number of often competing factors at play; the NPPF, case law, nearby planning appeals, supplementary planning documents, housing land supply status and written ministerial statements all form part of the decision making process. Indeed, the weight that is assigned to such policies can vary over time and this is why taking professional planning advice early on in your project is also advised as timing can be important too. Statistically around 90% of all applications are approved, but remember number can be misleading as it includes many side extensions and other minor works.

Planning is concerned with how your new house or extension will sits in its environment and the impact on neighbouring properties and the street scene, amongst many other factors such as access, flooding and ecology impact. Planning can also be a subjective process, so trying to do something out of the ordinary needs to be handled carefully and be well argued to avoid running the risk of refusal. Architects and Planning Consultants can be a real help with difficult sites and often work together to form a strategy and present the best possible case. Exercise great caution if contemplating buying land without planning permission, if you intend to build on it. The underlying agricultural value of land is around 5% of the value of a plot with permission, often less. Therefore, always offer to buy 'subject to achieving the satisfactory consents' required. Never take the word of a vested party in what the

planning merits of a site are as it is not the role of a Conveyancing Solicitor to advise on planning prospects; talk to a Chartered Town Planner. A planning (feasibility) assessment can cost between £500-£1500 depending upon the level of research required. MDP charge around £800 plus VAT in most cases. In England and Wales, full planning permission exists in two main forms and lasts for 3 years from the date of approval. Once a lawful start is made, you can take as long as you like to complete the build. There are some differences to the rules in Scotland and Northern Ireland, so check with your local authority if you are planning to build in these areas. Planning can take the following forms:

Outline Planning Permission (OPP)

OPP grants consent to develop a piece of land, here usually only the "principle of development" is addressed (often also with the means of access but other combinations of details can be provided up front also such as landscaping). The consent must indicate the use or uses proposed for the land and the amount of development and usually includes an illustrative plan showing what is proposed and where. Outline permission, on its own, doesn't mean you can start works. You need to make a separate submission to cover the matters reserved from consideration at the outset called a "Reserved Matters Submission" (see below). Most of MDPs submissions are made in Outline.

Approval of Reserved Matters

This clarifies the details omitted at the outline stage and, when combined with an outline, forms (in effect) a "full" planning permission. Once granted, and conditions have been discharged, the project can lawfully start. Once applied for, the works must start within two years of the granting of the Approval of Reserved Matters.

Full Planning Permission

Effectively, this is a combination of OPP and Reserved Matters rolled into one application. A householder application is a sub-set of Full Planning Permission as it handles the principle and the detail simultaneously. It grants permission in principle and covers all of the required details. This process is cheaper as only one fee is payable, so if you know what you want to build, this is a popular route for Self Builders. However, most Developers will use outline permission so as to avoid preparing detailed plans if there is to be a dispute about the principle of development. Full planning permission lasts for three years.

Planning Conditions

The time, cost and expertise required to prepare and see approved conditions is a matter often overlooked by applicants. For example, a condition requiring further bat surveys to be submitted to the LPA on a consent granted in October may mean months delay, since bat surveys can only be undertaken at certain times of the year, starting in May. Allow time and budget for this important work. A start to works is not (in many cases) a lawful start without the conditions being dealt with first. Take advice and build a timeline. Don't leave this until the last minute.

Pre Application Meetings

If you are looking to establish the viability of a plot of land, or you need guidance as to what sort of home you might be permitted to build in a certain area, it can be a good idea to arrange a pre-application meeting with your local authority. This will not grant permission or constitute a refusal in itself, but will give you an opportunity for you to discuss your plans and to ascertain the chances of gaining approval for what you want before paying for a planning application. Be prepared to argue your case, but also have a back-up position because some form of compromise may be required. The opinion of the local authority is important but may not take into account some of the wider, perhaps national, issues such as case law. For this reason, seeking the input of a Chartered Town Planner can give a different perspective and perhaps a stronger steer as to the probability of success.

Common Failures With Planning Applications

1. Application contrary to the adopted local planning policy.
2. Failure to include the necessary documentation, including ecology or tree surveys.
3. Failure to address problems of access, visibility splays etc.
4. Insufficient on plot parking or turning space.
5. Design/scale/choice of materials ajar with surrounding properties.
6. Poor quality plans which don't adequately show the merits of your scheme.
7. Failure to make the right consultations with neighbours, local community groups etc.
8. Adverse effect on neighbouring amenities, including open spaces, listed buildings, conservation areas etc.
9. Failure to demonstrate the above via sections, drone images, CGI or artists impressions.
10. The expiry of the original consent or not discharging conditions.

Building Regulations

While planning is all about what a house looks like, Building Regulations (often shortened to 'The Building Regs') are all about how a house is built. The Regulations ensure that new homes and extensions are safe, accessible and energy efficient. The regulations have evolved over many years and have become increasingly complex over time. The Regulations take the form of a series of 16 Approved Documents, each covering a specific area as can be seen on the panel elsewhere on this page. They are amended at regular intervals and because each is a hefty document on its own; they are best viewed online through The Planning Portal. The good news is that you, as the client, will not need to be familiar with the Regs, but your architect, designer and Builder most certainly should be. In Scotland, the Regs are known as Building Standards and will result a Building Warrant being issued on successful completion. The Standards cover similar topics but cover 8 categories from Parts 0 to 7 with 3 covering appendices.

Building Regulations

England & Wales

Approved Document A	Structure
Approved Document B	Fire Safety
Approved Document C	Site Preparation & resistance to Contamination and Moisture
Approved Document D	Toxic Substances
Approved Document E	Resistance to the Passage of Sound
Approved Document F	Ventilation
Approved Document G	Hygiene (inc Hot & Cold Water)
Approved Document H	Drainage & Waste Disposal
Approved Document J	Combustion Appliances and Fuel Storage
Approved Document K	Protection from Collision, Falling & Impact
Approved Document L	Conservation of Fuel & Power
Approved Document M	Access to and Use of Buildings
Approved Document P	Electrical Safety
Approved Document Q	Security

Note: Part N (Glazing) now subsumed into Part K

While you will have had some drawings produced to get through the planning process, these will likely be of little use to a Builder. They will need to know the details of what is involved – what materials are being used, dimensions and where everything should go. Essentially they are a set of instructions to erect the house, a good quality set of drawings can assist in comparing like-for-like quotes and ensure the onus is on the Builder to demonstrate the plans were flawed in some way to justify additional building costs.

It is important to note that some work to your home that may not need planning permission will require Building Regulations Approval and, to a less common degree, vice-versa. If in doubt, always check with your local authority as regularising mistakes can be time consuming and costly. For a new dwelling or a significant extension, your plans would be sent to Building Control for approval and once they are happy, they would agree an inspection schedule to check on the build as it progresses. A Building Control Inspector acts in your interest, no one else's. For smaller jobs, such as converting an integral garage into a home office, you may carry out the work under a Building Notice but whichever route you use, you must give 48 hours' notice of your intention to start work.

Building Regulations Approval has been deregulated, so you have a choice as to whether to use the traditional service offered by your local authority or to use the services of an Approved Inspector working for one of the private providers. Both routes have their merits: your Local Inspector will have local knowledge of ground conditions and will be able to drop into the site at short notice whereas an Approved Inspector can price the work based on risk which can be cheaper and they can also carry out structural warranty inspections so reducing the number of visits to the site. The choice is yours.

Energy Efficiency

The Approved Document that gets the most attention is Part L because it is all about insulation and energy efficiency. This Approved Document has become more stringent in recent years as the energy efficiency aspects of the Code for Sustainable Homes (CSH) have gradually been incorporated into Building Regulations to the point where CSH has been phased out. All new dwellings must now be at least 44% more energy efficient than a home built in 2006 and that has meant a radical change in the way we build and assess new homes.

As we strive to lower energy bills and reduce carbon footprint, traditional methods of building have been eclipsed by modern methods of construction (MMC) such as Structural Insulated Panels (SIPs) and Insulated Formwork systems made from polystyrene or recycled wood. While traditional methods like timber frame and brick and block remain popular, they need help to keep up with the inherent efficiencies of modern systems and may require significant extra work to meet the new standards. The modern approach to construction can be summed up by the phrase 'Fabric First'; in other words, get the insulation and airtightness right and the rest will follow.

Airtightness is a new tool in assessing energy efficiency. The idea is that heat will stay in a house unless it escapes, so by making the house more airtight by sealing joints properly and filling in the gaps around pipes doors and windows, more heat is retained and less energy is needed to replace it. This is tested at the end of the build when a big fan is placed over the front door aperture and air sucked out. The rate at which the air is replaced is measured to reveal how airtight the house is. Single houses currently have an exemption so airtightness testing is not yet mandatory, but in reality, the default settings used if you don't have one done makes complying with the regulations much more difficult so it's worth having one done anyway.

Standard Assessment Procedure

The main method for assessing energy performance of your new home under Part L of the Regs will be through a Standard Assessment Procedure (SAP). This document will be created by an approved SAP Assessor and submitted with the building regulations application at the start of your build. The SAP looks in detail at how the house is constructed, how airtight it is predicted to be, what materials have been used and what heating system or renewable energy sources have been specified. The end result is called the Dwelling Fabric Energy Efficiency (DFEE) rating and will be a number between 1 and 100, with 100 being the highest level of performance. This figure will be matched against one of a number of reference values on the Assessor's database based on a notional house of a similar size but built in a way that would pass the test. This reference value would, again, be a number between 1 and 100 and is referred to as the Target Fabric Energy Efficiency (TFEE) rating. The proposed DFEE rating you provide must be as good as or better than the TFEE number specified. If it fails, then you will need to look at improving your design (possibly by increasing the level or quality of insulation) until you meet the required standard.

Passive House

Passive House (or Passiv Haus in its native German) is a building standard developed to enshrine the principles of airtightness and insulation. Coupled with a Mechanical Ventilation and Heat Recovery system to allow fresh air to enter the house without compromising airtightness (see Ventilation on p99), a Passive House is so efficient that it requires no additional heating systems, meaning incredibly low bills. Other build systems are available such as the Canadian Super E Standard, but Passive House has become the byword for energy efficiency and ECO building. Passive houses must be carefully designed and built from the very start and can cost much more than a standard build as a result, but it can be argued that the almost non-existent running costs justifies this expense over time.

Cavity Walls

Cavity walls are associated with insulation, but their main purpose is to stop water passing through the outer walls to the inside of the house. Here are some examples of how a cavity wall might be specified:

ICF –
Some modern monolithic structures, like Insulated Concrete Formwork do not require a cavity at all because the structure is waterproof and contains its own insulation.

TIMBER FRAME –
The cavity on a timber frame structure should always remain unfilled. The frame must be kept dry, and the cavity prevents the passage of water to the timber. With timber frame, the insulation is placed within the frame itself and there is usually room for lots of it.

MASONRY –
Modern masonry construction still demands that a cavity is used. Cavities of 50mm or less would normally be left unfilled, but as the Regs become more stringent, cavities have become wider to allow greater levels of insulation to be fitted. A 150mm cavity is not uncommon. There are usually two options to consider:

FULL FILL –
With full fill, the entire cavity is filled, typically with slabs of mineral wool called batts. This is usually specified in temperate areas inland where weather is less extreme. Any moisture that permeates the external walls will quickly evaporate.

PARTIAL FILL –
Where high levels of intense weather may be experienced, such as in coastal areas, a partial fill may be specified. Here half the cavity will be filled with a high performance insulant like foil backed PIR foam while the rest of the cavity remains open. This allows any moisture that penetrates the external walls in severe weather to drain away while still achieving high thermal performance.

Handy hints to ensure that your project is a success

There are a number of ways to set a self build or large scale renovation project up, almost all of which involve you taking on a management task.

Should you choose the route of employing a builder, depending on the size and scope of the work then they would invariably manage a large part of the project. However, you will (and should) manage the accounts, administration and take an active role in the decision making process.

Alternatively you may decide that you can manage the whole project – virtually a full time job – as you will need to manage the many trades people and sub-contractors that are required throughout the process. You also need to take responsibility for the site and draw on a high degree of technical knowledge to manage the many decisions that have to be made through the project. The buck stops with you so clearly this option is one only for those with both time and expertise.

The difficult part of any house development is to get to the roofed-in and water-tight stage. As many as five separate trades and many materials have to be co-ordinated by the day and sometimes hour, you have to keep the building inspector happy too. For those of you with less time, this can make a strong argument to go down the main builder route until at least that point. Managing the remaining works is not easy, but is more realistic for the average self-builder with a bit of expertise.

Spotting a Good Builder

- ✓ Keeping sites tidy
- ✓ Able to relate to the self builder (who tends to be quite involved)
- ✓ Looks ahead and provides timely advice
- ✓ Passes on knowledge (very useful on any future builds)
- ✓ Is up to speed on regulations, innovations and modern technology
- ✓ Open and helpful - self builders have a thirst for knowledge
- ✓ Good management ability - often keeping a number of jobs and trades going at once

Choosing builders is one of the most important management decisions and before you engage them, make sure you follow up references, talk to previous clients and see their work. Always try and obtain a fixed price and avoid letting the builder pass on measured rates that he may have been given from his sub contractors – if he is any good he should be able to add up the cost of the respective jobs properly.

There are two ways to arrange a builder to build a house for you – by using an architect to establish and supervise the contract (often after a tender process managed by the architect); or to do it directly and save around 10-20 per cent.

Negotiating the contract with the builder in an amicable way can be challenging. However you can use a standard contract for the home owner/occupier from a variety of sources including the Federation of Master Builders (FMB) or the Joint Contracts Tribunal (JCT). They clearly set out the work, price, terms of payment and various conditions.
In addition it sets out how extras (extra work elements outside the initial scope) should be handled. The downside of this route can be over specifying the job and missing important things, so setting out a general set of work tasks and establishing a good working relationship is often more effective. Some self builders keep it simple with an exchange of letters, plans and drawings no more detailed than those needed for building regulation approval.

Whilst you are at the Centre, try to find the time to talk to any of the experts who are on hand; if you are yet to decide which method of construction will suit your project best then take the opportunity to listen to the advice of people who have been there and done it. Increasing the degree of off-site manufacture will often increase the speed of the build and potentially improve the quality of the finish. Time on site costs money and if you're building through the winter, weather delays are potentially very damaging to progress, if one trade falls behind it can often cause a snowball effect of delays to several other trades; there is a good argument for getting a 'weatherproof' shell up as quickly as you can, work can then continue both inside and outside at the same time without any conflict between tradesmen.

Outdoor Living Zone

Stepping outside the centre you'll find the Outdoor Living Zone; split into several sections. Here, you'll find design ideas for the hard landscaping of your project, with displays of paving, fencing and other finishing touches all in situ, helping you understand how the different elements work together.

Veranda & Garden Rooms

Transitioning from the Centre into the Outdoor Living Area, you will move through the Veranda which was installed by Ultraframe to demonstrate how they can transform light and space in the home. Supply only or fully fitted, their accredited dealers can install stunning aluminium/ timber windows as well as traditional conservatories, orangeries and glass extensions. The garden room features a working air source heat pump installed by Earth Save Products.

Hard Landscaping

With displays of artificial grass by Easigrass, paving and gravel retention by Core Gravel, the hard landscaping area in the Outdoor Living Zone will help you understand how the different elements all work together. When considering your driveway and paving options, bear in mind that legislation now requires any paving areas to be water permeable, unless the surface water is drained to ground within the curtilage of the property.

Retaining Wall Systems

The retaining wall system, is an ingenious, space saving solution for the retention of earth for a wide range of retaining, force protection, landscaping and flood protection applications, it's also partially manufactured from recycled materials.

Ablectrics

Stand 35

Tel: 01179 922977
Email: info@fraserbesantlighting.co.uk
www.electricsandlighting.co.uk

AC Architects

Allan Corfield ARCHITECTS

Allan Corfield STRUCTURES

Stand 63 & Professional Services Hub

Dunfermline and Swindon.
Tel: 01383 737101
Email: info@acarchitects.biz
www.acarchitects.biz
Email: info@acstructures.biz
www.acstructures.biz

ACA are an award winning RIBA Chartered Practice. Since 2009 we have worked on over 500 projects across the UK. We specialise in Custom & Self build projects but also work on extensions and renovations utilising timber frame, SIPS and ICF construction to create stunning energy efficient designs based on the Fabric First approach.

Allan Corfield Structures (ACS) was established in November 2020 to strengthen our parent company (ACA) and operates as a stand-alone professional Structural Engineering company. ACA and ACS work together from the very start of your project, share offices and resources, and most importantly combine our complementary professional expertise from the conception of your project.

Email, call or visit our stand to arrange your free initial consultation or site review service.

Addigrip Terraco

Stand 53 & Outdoor Living Zone

Tel: 01825 761333
Email: sales@addagrip.co.uk
www.addagrip.co.uk

ADM Systems

adm systems
Independent Heat Recovery Ventilation Specialists

Stand 62b

Suite 3, Unit A Briar Rhydding House,
Baildon, Shipley, West Yorkshire
BD17 7JW
Tel: 01756 701 051
Email: info@admsystems.co.uk

Operating nationwide, ADM Systems are one of the UK's longest established independent specialists in MVHR pioneering this technology back in the 90's. We offer a wide range of services including, 2D and 3D design, surveys, supply, installations, commissioning and servicing as well as hands-on support on site utilising our "Buddy Service".

Airflow Developments

AIRFLOW

Stand 152

Aidelle House, Lancaster Road,
Cressex Business Park,
High Wycombe, HP12 3QP
Tel: +44 (0) 1494 525252
Email: info@airflow.com
www.airflow.com

Airflow supply Mechanical Ventilation with Heat Recovery units certified by the Passive House institute. With more than 90% thermal efficiency and quiet, low energy fans they can help enhance indoor air quality and reduce energy bills. Combined with our Airflex Pro "zero leakage" semi rigid air ducting system the whole installation is installed quickly and easily, even in refurbished properties.

Air Craft

AIR CRAFT
RENEWABLE ENERGY SERVICES

Stand 73

Air Craft (Southern) Ltd.,
National Self Build
& Renovation Centre,
Lydiard Fields,
Great Western Way,
Swindon, SN5 8UB
Tel: 0800 0016 123
Email: sales@acsouthern.com
www.acsouthern.com

Specialists in new build and strip back renovation projects. We'll design, install and maintain your home's HVAC solution. Giving you optimal indoor air comfort and energy efficiency all year round.

From heat pumps to solar PV, air conditioning to comfort cooling, intelligent hot water to battery storage, ventilation systems .. and so much more. Our team has the expertise and experience to select and install the best technology for your self-build project through our partnerships with leading manufacturers.

All About Bricks

Stand 51

Tel: 0845 2300 941
Email: info.aab.build
www.aab.build

Aldas

Professional Services Hub

Tel: 01452 244160
Email: enquiries@aldas.co.uk
www.aldas.co.uk

A - Z listing

Allister Godfrey Architects Ltd

Professional Services Hub

Appledown, 31 Garston Lane
Wantage, Oxfordshire, OX12 7AR
Tel: 01235 760 693
Email: hello@allistergodfrey.com
www.allistergodfrey.com

We are award-winning architects based in Oxfordshire.

We design, refurbish, transform and extend houses.

As a RIBA Chartered Practice, we aim to alleviate the stress of planning and building your project. Working closely with you, and with sustainability in mind, we create spaces you will love to live in.

Aluminium & Glass Verandas

Unit 34A, Ganton Way
Swindon, Wilts. SN2 8ES
Tel: 0800 644 4426
Email:sales@rainclear.co.uk
www.rainclear.co.uk

Our new range of UK Manufactured Veranda and Garden Rooms are available as standard with a 110 x 110mm Aluminium frame with Integral Drainage in RAL 7016 Anthracite Grey or RAL9016 White

Laminated Glass or Poly Carbonate panels in a range of shades

Standard sizes online from 3 x 3m to 6 x 3m.

Uniquely there is no requirement for a centre post on Verandas up to 5m wide.

Delivered direct from factory to your point of installation in 2 to 3 weeks. Easy to install by competent DIY enthusiasts, saving the additional cost of installation.

Andrew Alder Associates

Professional Services Hub

Tel: 01235 763742
Email: office@andrewalderassociates.co.uk
www.andrewalderassociates.co.uk

Aperio Audio Visual Ltd

The Potton House & Professional Services Hub

Aperio Audio Visual Ltd,
Basepoint Business Centre,
Swindon, Wiltshire, SN5 7EX
Tel: 01793 220 525
Email: info@aperio-av.co.uk
Web: www.aperio-av.co.uk

SPECIALIST AUDIO-VISUAL CONSULTANTS AND INSTALLERS
// HOME CINEMA
// HOME AUTOMATION
// SMART HOME
// MOOD LIGHTING
// WIRED & WIRELESS NETWORKS
// MULTIROOM VIDEO
// MULTIROOM AUDIO
// BLINDS & SHADES
// SURVEILLANCE
// HEATING INTEGRATION
// PRE-WIRE PLANNING
// DESIGN & CONSULTANCY

Appeal Group

Stand 166

Tel: 0117 963 7734
Email: info@appealshading.com
www.appealshading.com

Archi-Scape

Stand 44 & Professional Services Hub

Tel: 01606 654983
Email: c.brearley@archi-scape.net
www.archi-scape.net

Artis Doors

Finishes Zone

Tel: 01603 980558
Email: info@artisdoors.co.uk
www.artisdoors.co.uk

Avivo Lighting

Stand 14

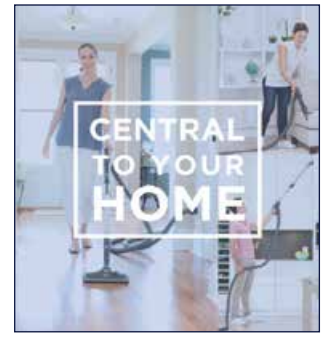
Tel: 07771 332515
Email: info@avivolighting.co.uk
www.avivolighting.co.uk

Beam Central Vacuums

Stand 58 & Renovation House

Swallow House, Cotswold Business Village, Moreton in Marsh GL56 0JQ
Tel: 0345 260 0123
Twitter: @TotalHomeEnviro
Email: info@totalhome.co.uk
www.totalhome.co.uk

Quiet, quick and easy to use with no heavy awkward kit to lug around. More suction power than a portable to remove dustmites, dirt, pollen and pet hair with no re-circulation. Uses less electricity than a portable and performs effectively for 20 years or more. Empty annually.



Bel'm Entrance Doors

Stand 129

Tel: 02 40 78 57 55
Email: contact@belmdoors.com
www.belmdoors.com

Bison Frames UK

Genesis Collection
Meticulously Crafted by BISON

Stand 137 & 165

Bison Frames (UK) Ltd
Unit H1, Bromcliffe Park,
Monk Bretton, S71 5RN
01226 715250
sales@genesiscollection.co.uk
www.genesiscollection.co.uk

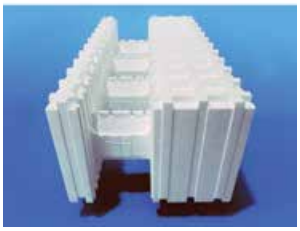
Meticulously crafted for new builds & renovations, Bison Frames' Genesis Collection is perfect for a wide variety of applications.

Energy-efficient, highly secure windows and doors suitable in modern or period homes with timber alternatives and an amazing designer aluminum range. The perfect blend of style, durability and performance.

Forever windows for your forever home.

Beco Products Ltd

BecoWallform
BUILDING FOR THE FUTURE



Professional Services Hub & Walls/Structures Zone

Albert Street, Brigg,
North Lincolnshire DN20 8HQ
Tel: 01652 653844
Email: info@becowallform.co.uk
www.becowallform.co.uk

BecoWallform is the award-winning building system for energy efficiency and a comfortable lifestyle. Developed over forty years, and made in the UK, it is a quick and practical way to build any design to the highest standards.

LOW ENERGY BUILDING

Bee Solar Technology Ltd

Bee Solar Tech
beesolartech.co.uk

Stand 179B

Tel: 0333 303 4366
Email: sales@beesolartech.co.uk
www.beesolartech.co.uk

Bee Solar Technology manufactures the innovative, multi award winning Heliomotion dual axis ground mounted solar tracking systems in the UK, and supplies them worldwide. Our systems rotate and change angle all day generating solar power from sunrise to sunset. This can be around 40% - 45% more than an equivalent static roof top system.

Bob Nicholls MCIAT Chartered Architectural Technologist

Professional Services Hub

Tel: 01793 770329
Email: bob@bobnicholls.co.uk
www.bobnicholls.co.uk

Bradfords Building Supplies

New Build Educational Zone

Tel: 01935 314460
Email: bbs.trowbridge@bradfords.co.uk
www.bradfords.co.uk

Brill Sawmills

Stand 28

Tel: 07783 535591
Email: sales@brillsawmills.co.uk
www.brillsawmills.co.uk

Build It Magazine

Piazza

Tel: 01442 820580
Email: buildit@webscribe.co.uk
www.self-build.co.uk

BuildStore

Piazza

Tel: 0345 223 4888
Email: enquiries@buildstore.co.uk
www.buildstore.co.uk

Carpenter Oak

Professional Services Hub & Walls/ Structures Zone

Tel: +44(0)1803 732900
Email: hello@carpenteroak.com
www.carpenteroak.com

A - Z listing

Cascade Cast Iron Effect Rainwater Systems

Brett Martin

Stand 88

Brett Martin Ltd
Speedway Ind. Estate, Staveley, Derbyshire, S43 3JP
Tel: 01246 280000
Email: building@brettmartin.com
www.castironstyle.co.uk

CASCADE CAST IRON EFFECT RAINWATER SYSTEMS

Brett Martin's Cascade cast iron effect rainwater is an affordable alternative to cast iron gutters and downpipes and is easy to install and maintain. Cascade comes in four gutter profiles in eight heritage colours and is suitable for both new build and refurbishment projects. Personalise your project with a date-stamped or motif hopper, or add a complementary soil system to finish the look.

CDI Innovative Construction Materials Ltd

CDI Innovative Construction Materials Ltd

Stand 171

Unit 48C, Avenue 4, Chilton Industrial Estate, Co Durham DL17 0SQ
Tel: 01388 728833
Email: info@cdi-icm.co.uk
www.cdi-icm.co.uk

As part of a joisted floor construction, LEWIS® Deck provides a first class solution for Acoustics, Fire Protection and works exceptionally well as an Underfloor Heating system.
LEWIS® Deck is used in new-builds, renovations and conversions, including brick+block, timber frame, steel frame and ICF.
All the benefits of a solid concrete floor, but up-stairs.

Chamberlain Doors Ltd

Chamberlain Doors

Stand 211

Scot Lane, Blackrod, Bolton BL6 5SG
Tel: 01942 832355
Email: info@chamberlaindoors.co.uk
www.chamberlaindoors.co.uk

Chamberlain Doors is the UK's largest independent garage door specialist distributor and installer providing complete home survey, advice and installation service for garage doors. They're the garage door professionals you can trust. Chamberlains garage doors meet exacting standards and are backed by reputable manufacturers with comprehensive warranty and support packages.

Classic Water Softeners

Stand 54

Tel: 01869 327 294
Email: enquiries@classicwatersofteners.co.uk
www.classicwatersofteners.co.uk

Catnic Urban

Stand 76 & Roof Zone

Tel: 029 2033 7900
Email: catnic.sales@tatasteeleurope.com
www.catnic.com

Chimella

Stand 21

Tel: 0208 5333 888
Email: info@chimella.com
https://www.chimella.com/

Clivet Group UK

Stand 146 & 147

Tel: 0239 9238 1235
Email: info@clivet.it
www.clivet.com

CDM for Self Build Professional Services Hub

Tel: 07717 317419
Email: katesouth@sgshealthandsafety.com
www.sgshealthandsafety.com

Chisholm Design & Consultancy

Stand 13

Tel: 01252 794 826
Email: hello@chisholmdesign.co.uk
www.chisholmdesign.co.uk

Coastal Group

Stand 210

Tel: 01726 871025
Email: sales@coastal-group.com
www.coastal-group.com

CLPM Ltd.

CLPM
CONSTRUCTION PROJECT CONSULTANCY

Professional Services Hub

Tel: 01923 896550
Email: info@cl-pm.com
www.cl-pm.com

Practical advice and support for your self-build, extension or renovation project - from initial design stage to completion. All tailored to your needs and budget.

Independent energy efficiency and heating advice. Estimating, budgeting, cost-engineering, tendering and contractor appointment. Onsite project management support.

Call today for a free, no obligation quotation.

Concrete Block Association

Professional Services Hub

Tel: 0116 2325165
Email: info@britishprecast.org
www.cba-blocks.org.uk

Connect Intelligence

Professional Services Hub

Tel: 01865 426746
designs@light-designs.co.uk
www.light-designs.co.uk

Cool Energy

Stand 127

Tel: 01472 867497
Email: sales@coolenergyshop.com
www.coolenergyshop.com

Cornerstone

Property MOT®

Stand 25 & Professional Services Hub

Hussar Court
Waterlooville PO7 7SQ
Tel: 023 9200 1374
Email:
propertymot@cornerstone-ltd.co.uk
www.propertymot.uk

The unique periodic or planned process embracing Health assessments of the exterior and interior in line with current British Standards and Building Regulations, is designed to secure a Certificate of Condition with any advisories for the Health of a structure be it under development, for sale, void, occupied or repaired. Surveys can also be undertaken by trained members of the D.A.M.P Alliance.

Cotswold Heating Solutions

Stand 162

Tel: 01453 368030
Email: info@cotswoldheatingsolutions.co.uk
www.cotswoldheatingsolutions.co.uk

Cotswold Steel

Stand 201

Tel: 01666 504889
Email: sales@cotswoldsteel.co.uk
www.cotswoldsteel.co.uk

Custom Basins

Stand 5

Tel: 07762 500932
Email: info@custombasins.co.uk
www.custombasins.co.uk0

County Flat Roofing

Stand 164

Tel: 0800 09 88 271
www.countyflatroofing.co.uk

Specialising in flat roof construction and refurbishment for over 35 years.

Cupa Pizarras

CUPA PIZARRAS
The world leader in natural slate

Stand 125, New Build Journey & Renovation House

Tel: 020 3318 4455
Email: uk@cupapizarras.com
www.cupapizarras.com/uk

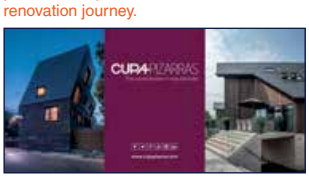
CUPA PIZARRAS is a market leader in producing high-quality natural slate for roofing and cladding. CUPA PIZARRAS supplies 1 in every 2 natural roofing slates around the globe.

Natural slate is the ultimate cladding product:

- Durable with a life span 100+ years
- Weather resistant
- Timeless aesthetic
- Naturally fire-resistant, certified A1 (EN 13501-1)
- Minimal maintenance required
- Sustainable

Adding to your project's sustainability credentials, CUPA PIZARRAS is a certified carbon neutral company, according to the PAS 2060 standard.

Our team of UK-based Technical Sales Managers and our online resources offer you all technical advice and support you need on your self-build and renovation journey.



Custom Build Homes
Piazza
Tel: 0345 223 4452
Email: enquiries@custombuildhomes.co.uk
www.custombuildhomes.co.uk

Dale Joinery

DALE JOINERY

The Dale House
First Floor 85-87 Shrivenham Hundred Business Park, Watchfield, Swindon SN6 8TY
Tel: 0800 030 2222
Email: sales@dalejoinery.co.uk
www.dalejoinery.co.uk

Combining beautiful design with high quality manufacturing technology, Dale's range of beautiful made to measure timber windows and doors set the standard.

Whether you are replacing your existing windows and doors, are refurbishing or extending your property or are undertaking a new build, Dale Joinery is the perfect choice.

Visit the NEW Dale showroom to see our full range

Door Canopies Aluminium & Glass

Rainclear Systems

Stand 15
Unit 34A, Ganton Way, Swindon, Wilts SN2 8ES
Tel: 0800 644 44 26
Email: sales@rainclear.co.uk
www.rainclear.co.uk

Rainclear, the UK's leading online retailer and stockist of metal rainwater systems also bring you Door Canopies Next Day Aluminium, Glass, Stainless Steel & Acrylic.

Dryvit (Construction Products Group)
Piazza
Tel: 0800 014 8901
Email: sales.uk@cpg-europe.com
www.dryvit.co.uk

Dreadnought Tiles
Roof Zone & Brick Library
Tel: 01384 77405
Email: sales@dreadnought-tiles.co.uk
www.dreadnought-tiles.co.uk

Earth Save Products
Stand 42, 43 & 212
Tel: 01865 598158
Email: infoesp@esavep.com
www.earthsaveproducts.com

Discrete Heat
Stand 6
Tel: 01942 880066
Email: info@discreteheat.co.uk
www.discreteheat.com

East Brothers Timber
Stand 215
Tel: 01794 340 270
Email: mail@eastbros.co.uk
www.eastbros.co.uk

Easy Bathrooms
Stand 115
Tel: 03306601120
Email: sales@easybathrooms.com
www.easybathrooms.com

Eco Design Consultants Ltd

Celebrating 15 years
eco design consultants
Architects & Environmental Consultants

Professional Services Hub
South Pavilion, MK Art Centre
Parklands, Great Linford
Milton Keynes MK14 5DZ
01908 886854
design@edc.eco
www.ecodesignconsultants.co.uk

Architects designing beautiful, comfortable and sustainable buildings. Specialising in new build and retrofit homes to Passivhaus standards.

Call 01908 886 854 today to book your free consultation

design@edc.eco
ecodesignconsultants.co.uk

Eco Massive House (Velox)
Walls/Structures Zone
Tel: 01483 511255
Email: info@velox-systems.co.uk
www.icfsystems.co.uk

Eco Tiffin
Stand 75
Tel: 01442 819332
Email: info@velox-systems.co.uk
www.icfsystems.co.uk

Eco Energy Environment Ltd

Stand 116 & 109

Unit 20, Regents Trade Park,
Barwell Lane, Gosport, PO13 0EQ
Tel: 0800 970 34 74
Email: info@eeelimited.com
www.eeelimited.com

Solar & Battery Storage Specialists dedicated to the Self Build & Renovation sector. The consultancy for expert advice, design and installation with trained technical consultants, no Call Centre or Sales Reps!

Offices in London, Swindon & Southampton covering Southern England from Kent to Cornwall up to Yorkshire including Wales, Ireland & Scotland for specialist projects.

If Aesthetics, Quality and Attention to Detail are paramount to your project then please contact us on **0800 970 3488.**

Ecomerchant Natural Building Materials Ltd

Stand 189 & Outdoor Living Zone

Tel: 01793 847 444
Email: info@ecomerchant.co.uk
Web: www.ecomerchant.co.uk
Office Hours:
Monday to Friday 8.00am to 5.00pm

Located in the NSBRC we are the UK's Leading Sustainable Builder's Merchant.

Ethical: healthy: sustainable building materials from foundation to ridge. Your one-stop shop for all things green.

UK wide delivery direct from stock. Next day on many items.

We supply a complete range of building materials for all building applications, come and see us and talk to our expert friendly staff about your project.

The most comprehensive range of sustainable, natural and energy efficient building materials anywhere in the UK from insulation to landscaping, from airtightness to roofing we have it all in one place.

Elite Balustrade Systems

Mezzanine

Tel: 08000 385185
Email: sales@elitebalustrade.com
www.elitebalustrade.com

English Brothers

Professional Services Hub & Stand 61

Timber Frame Division,
Salts Road, Walton Highway,
Wisbech, Cambridgeshire PE14 7DU
Tel: 01945 427 985
Email: ad.enquiry@eb-bespoke.co.uk
www.eb-bespoke.co.uk

- Award-winning self-build specialists
- Insulation options from 0.10–0.18 W/m2K
- Nationwide architectural partners
- Oak framing options/oak hybrid systems
- Part or full project management optional

Email us your plans now for a free quotation and appraisal: ad.enquiry@eb-bespoke.co.uk or call 01945 427985

ecoHaus Internorm

Stand 70 & 130

Tel: 0800 612 6519
Email: enquiries@eotiffin.co.uk
www.ecotiffin.co.uk

EcoTech SIPs

Stand 151

Tel: 01635 888818
Email: hello@ecotechsips.co.uk
www.ecotechsips.co.uk

Enviro Eco Wall

Stand 97

Tel: 01304 842555
Email: sales@envirograf.com
enviroecowallpanels.com

Ecological Building Systems UK

Stand 159 & 160

Tel: 07507 187829
Email: info@ecologicalbuildingsystems.com
www.ecologicalbuildingsystems.com

Eleven Consulting Group

Stand 172 & Professional Services Hub

Tel: 01945 429689
Email: consult@elevenconsultants.co.uk
www.eleven-consulting.co.uk

EnviroVent

Stand 121

Tel: 0345 27 27 807
Email: innovation@envirovent.com
www.envirovent.com

A - Z listing

Euroclad Group (VIEO)
Stand 99
Tel: +44 (0)2922 010101
Email: enquiries@eurocladgroup.com
www.euroclad.com

Evolution Windows
Stand 149
Tel: 01767 310980
Email: enquiries@evolutionwindows.com
www.evolutionwindows.com

Fable Kitchens
Stand 199
Tel: 0333 050 2793
Email: enquiries@fablekitchens.co.uk
www.fablekitchens.co.uk

Federation of Master Builders
Professional Services Hub
Tel: 0330 333 7777
Email: membership@fmb.org.uk
www.fmb.org.uk/nsbrc-fab

FH Brundle
Stand 155 & 175
Tel: 01708 25 35 45
Email: sales@brundle.com
www.fhbrundle.co.uk

Finesse Fireplaces
Stand 179A
Tel: 01225 783558
Email: finessefireplaces@gmail.com
www.finesselimestonefireplaces.co.uk

Fireplace Saver
Stand 178
Tel: 0800 193 6161
Email: sales@fireplacesaver.co.uk
www.fireplacesaver.co.uk

Firepower
Stand 50 & Roof zone
Tel: 0844 332 0155
Email: sales@firepower.co.uk
www.firepowerheating.co.uk

Flat Glass Rooflights

Brett Martin

Stand 88
Brett Martin Ltd
Sandford Close, Aldermans Green Industrial Estate, Coventry, CV2 2QU
Tel: 024 7660 2022
Email: daylight@brettmartin.com
www.brettmartin.com

FLAT GLASS ROOFLIGHTS

Brett Martin's extensive range of glass rooflights are the ideal way to fill your living spaces with natural daylight. Suitable for both new-build and refurbishment, our glass rooflights are designed with energy efficiency and safety in mind and engineered to your project's needs.

Fleming Homes Timber Frame

FLEMINGHOMES

Stand 231 & Professional Services Hub
Head Office: Station Road, Duns, Berwickshire, TD11 3HS
Tel: 01361 883785
Swindon Office: NSBRC
Email: hello@fleminghomes.co.uk
www.fleminghomes.co.uk

Fleming Homes is an award-winning team of timber frame specialists manufacturing bespoke, one-off homes which are designed to the exact requirements of the self-builder. We also offer heaps of helpful services from design, planning and building regs, and construction design and engineering, through to erection to the wind and watertight stage. You'll find us at Stand 231, next to the exit.

From The Anvil
Stand 193
Tel: 01597 823822
Email: info@fromtheanvil.co.uk
www.fromtheanvil.co.uk

Four Walls Group

FOUR WALLS GROUP

Professional Services Hub

Tel: 07901 337573
Email: enquiries@fourwallsgroup.co.uk
www.fourwallsgroup.co.uk

Four Walls Group specialise in construction project management of residential projects offering remote or comprehensive project management services depending on our client's requirements. We work hard to save you money and time whilst delivering quality. We are here to support, guide and answer any questions or concerns you may have.

FSDC Global (The Folding Sliding Door Company)

Stand 62

Tel: 0345 64 64 646
Email: info@fsdc.global
www.fsdc.global

Gaia Energy Eco

Stand 188

Tel: 07782 192124
Email: office@gaiaenergy.uk
www.gaiaenergy.uk

Gapotape

Stand 1b

Tel: +44 28 4377 0505
Email: paul@gapogroup.com
www.gapogroup.com

Frame Technologies

FRAME TECHNOLOGIES
SELF-BUILD TIMBER FRAME

Stand 103 & Professional Services Hub

Broadaxe Lane, Presteigne,
Powys, LD8 2LA
Tel: 01544 267124
Email:
enquiries@frametechnologies.co.uk
www.frametechnologies.co.uk

TURNING YOUR VISION INTO A PREMIUM QUALITY HOME

Specialising in beautiful bespoke homes, Frame Technologies is at the forefront of innovation in timber frame construction.

Our extremely experienced team works closely with you at every stage, to turn your dream home into a reality. We offer a truly personal, end to end service, with one point of contact from initial enquiry to completion.

We follow best practice and were the first company to achieve Gold status for the STA's membership and quality standards scheme, STA Assure.

Garden on a roll

Stand 174

Tel: 01707 372296
Email: enquiries@gardenonaroll.co.uk
www.gardenonaroll.com/index.php?route=common/home

Gartec Home

Stand 135

Tel: 01296 397100
Email: sales@gartec.com
www.gartechome.com

GB Sol

Stand 200

Tel: 01443 841811
Email: info@gb-sol.co.uk
www.gb-sol.co.uk

Glass & Stainless Limited

GLASS + STAINLESS

Stand 39

3 Martins Court, West Street
Congleton, Cheshire CW12 1JR
Tel: 01260 281748
Email: sales@glassandstainless.com
www.glassandstainless.com

Glass and Stainless Limited was born from a desire to combine extensive technical knowledge, high quality service with a premium quality product.

Focused on optimised delivery and service we really do lead the market.

Due to the expertise of our team we only specify the highest quality products to the most stringent safety regulations looking at each project individually.

We listen to the demands of our clients and adapt to suit your project ensuring we advise the right products for you!

Glen Dimplex Flame

Stand 66 & 67

Tel: 0344 879 3588
Email:
gdhv.customersupport@glendimplex.com
www.dimplex.co.uk

Grants Blinds

Finishes Zone

Tel: 0800 652 2190
Email: sales@grantsblinds.com
www.grantsblinds.com

Green Building Store (MVHR)

Stand 142

Heath House Mill, Heath House Lane, Golcar, Huddersfield HD7 4JW
Tel: 01484 463334
Email: info@greenbuildingstore.co.uk
www.greenbuildingstore.co.uk
Facebook: Green Building Store

The best MVHR system….is the one you don't even know is there. Find out what makes our MVHR heat recovery ventilation systems different.

Green Building Store (windows)

Stand 134 & 141

Heath House Mill, Heath House Lane, Golcar, Huddersfield HD7 4JW
Tel: 01484 463336
Email: info@greenbuildingstore.co.uk
www.greenbuildingstore.co.uk
Facebook: Green Building Store

View our range of high quality, cost-effective triple glazed timber windows and doors for low energy and Passivhaus homes.

Green Space Architects

Professional Services Hub

Tel: 01691-623889
Email:
greenspace@greenspacearchitects.co.uk
www.greenspacearchitects.co.uk
https://www.facebook.com/greenspacearch

Green Planning Studio

Professional Services Hub

Tel: 01743 709364
Email: admin@gpsltd.co.uk
www.greenplanning.co.uk

Homes England

Professional Services Hub

Tel: 0115 852 6934
Email: helptobuildapply@homesengland.gov.uk
www.ownyourhome.gov.uk/scheme/help-to-build/

Halcyan Water Conditioners

Stand 180

E: info@halcyanwater.com
T: 0345 5040 656
W: www.halcyanwater.com

Halcyan Water Conditioner's unique alloy core powerfully prevents and removes limescale significantly saving energy, protecting equipment and fittings from damage, and creating kinder, skin-friendly water.

Halcyan units use no salts/chemicals and need no maintenance, and enjoy a 30 year warranty.

Hambleside Danelaw Ltd

Stand 106

Hambleside Danelaw, Long March, Daventry, Northamptonshire, NN11 4NR
Tel: 01327 701900
Email:
dryseal@hambleside-danelaw.co.uk
www.dryseal.org

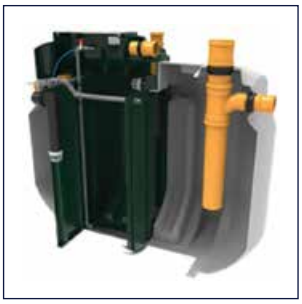
The Dryseal roof waterproofing membrane system differs from 'wet lay' GRP membranes in that it is manufactured off site, making it less susceptible to poor weather during installation. Dryseal is ideal for 'green roof' installations and all domestic applications including garages and extensions. Another unique application is on Heritage buildings, as an alternative to lead, zinc or copper.

HD Services Limited

Stand 185

Thorne Barton Farm Chesham Road, Ashley Green, Chesham, Buckinghamshire, HP5 3PQ
Tel: 01494 792000
Email: enquiries@thehdgroup.co.uk
www.hdservicesltd.co.uk

H.D. Services specialise in the construction and development of boreholes and soakaways and the installation of independent sewage treatment systems and open-loop ground source heat pumps in South East England. We offer a one stop solution for self-builders, providing waste and drainage solutions, independent water supplies and renewable heating options – all tailored to individual needs.



Helical Systems Ltd

Stand 89 & Groundworks Zone

The Old Police Station, 195 Main Road, Biggin Hill, Kent TN16 3JU
Tel: +44(0)1959 541148
Fax: +44(0)1959 540841
Email: enq@helicalsystems.co.uk
www.helicalsystems.co.uk

The GroundScrew screwpile provides cost effective engineered foundations for newbuild applications. Suitable for any type of construction, loads and soils. Used in conjunction with a Jacking Cap, GroundScrews can also be used for underpinning.
Our HeliTie range of helical stainless steel products provides solutions for new build and remedial specifications.

Home Protection Trusts

Who Will Inherit Your Home?

Professional Services Hub

Tel: 01225 230025
Mob: 07775 557933
Email: jerrywalsingham@outlook.com

What have you done to ensure your family home ends up in the right hands? And the rest of your estate too.

A Will alone is not enough. A bit like single glazing really – it's no longer fit for purpose.

You can take control today. Book a chat with me. It's free.

I can save your family £000's and thousands of tears.

You have nothing to lose. Your family however, have a great deal to gain!

Find me in the Ask the Expert arena or please scan my display in the Hub

Honka

Stand 82

Tel: 01271 325516
Email: uksales@honka.com
www.honka.com/gb/en/

Hunter Stoves

Stand 112

Tel: 01932 440019
www.hunterstoves.co.uk

HPV Series Heat Pump Ventilation

Stand 58

Swallow House, Cotswold Business Village, Moreton in Marsh GL56 0JQ
Tel: 0345 260 0123
Twitter: @TotalHomeEnviro
Email: info@totalhome.co.uk
www.totalhome.co.uk

Heat Pump Ventilation provides a highly energy efficient heating system redefining levels of comfort. It gives convenient delivery of heating, cooling, hot water and heat recovery ventilation, with unparalleled levels of responsiveness. Typical COP's of 7.5, why would you ever want to go back to traditional heating methods? Suitable for super-insulated and airtight homes.

Illbruck (Construction Products Group)

Piazza

Tel: 0800 014 8901
Email: sales.uk@cpg-europe.com
www.illbruck.com

Infraheat

Stand 55

Tel: +44(0)1942 565000
Email: info@infraheat.co.uk
www.infraheat.co.uk

Input Joinery

Stand 56

Tel: 01264 771900
Email: info@inputjoinery.co.uk
www.inputjoinery.co.uk

Integraspec

Stand 84

Tel: 02895 906508
Email: admin@integraspec.co.uk
www.integraspec.co.uk

iGarden Vision

Stand 187

Tel: 0333 577 1553
Email: hello@igardenvision.co.uk
www.igardenvision.co.uk

Juwo Evolved Smartwall

Walls / Structures Zone

Tel: 0808 2540 500
Email: mail@juwo-smartwall.co.uk
www.juwo-smartwall.co.uk

Kensa Heat Pumps

Stand 68 & Groundworks Zone

Mount Wellington, Chacewater, Truro, Cornwall TR4 8RJ
Tel: 0345 222 4328
Email: enquiries@thekensagroup.com
www.kensaheatpumps.com

The UK's leading ground source heat pump brand
Design | Supply | Support

Kensa Heat Pumps has been manufacturing award-winning ground source heat pumps since 1999.

Kensa provides reliable, renewable heating and cooling systems as alternatives to polluting fossil fuels.

Every ground source system is crafted by experts to deliver low-carbon, affordable and sustainable comfort all year round. Made in Britain, especially for UK buildings.

Ketley Brick

Roof Zone & Brick Library

Tel: 01384 78361
Email: sales@ketley-brick.co.uk
www.ketley-brick.co.uk

Kindly

Professional Services Hub

Tel: 07767 485376
Email: designers@studiobinteriordesign.co.uk
www.bykindly.co.uk

Kingspan Timber Solutions

The Potton House

Tel: 01352 716100
Email: info@kingspanpanels.com
www.kingspantimbersolutions.co.uk

Kloeber

Stand 204

Showrooms in Cambridgeshire, Buckinghamshire, West Sussex and Middlesex.
Tel: 01487 740044
Email: info@kloeber.co.uk
www.kloeber.co.uk

Award-winning Kloeber is a market-leading manufacturer and supplier of bespoke doors and windows including the FunkyFront entrance door, bifold, sliding and French doors, windows, rooflights and fixed glazing in timber, aluminium and alu-clad. From detailed site surveys to installation services, Kloeber offer the complete package to the self-builder and home improver.

Kloepping TSS
Finishes Zone
Tel: 01622 541077
Email: info@kloeppingtss.co.uk
www.kloeppingtss.co.uk

LifesTiles
Stand 181 & Roof Zone
Tel: +44 (0) 1787 237057
Email: sales@lifestiles.co.uk
www.lifestiles.co.uk

Leka Systems
Stand 79 & Outdoor Living Zone
Tel: 0800 773 4040
Email: sales@lekasystems.co.uk
www.lekasystems.co.uk

Made in Oak
Stand 74
Tel: 01666822234
Email: info@madeinoak.com
www.madeinoak.com

LG Electronics UK Limited

Stand 123 & Professional Services Hub
Velocity 2, Brooklands Drive, Weybridge, Surrey. KT13 0SL
Email: HVAC.marketing@lge.com
www.lg.com/uk/heating

LG Electronics heating range - known as Therma V is an industry leading renewable air-to-water heat pump systems, creating the ideal comfort for your home. Therma V reduces carbon emissions, consumes less energy when compared to a conventional fossil-fuel heating systems, saving you money, and comes with wi fi control (Smart ThinQ) so you can always come home to your desired temperature.

Mark Doodes Planning

Professional Services Hub
130 High Street, Marlborough, SN1LZ
Tel: 01672 539517
Email: info@markdoodesplanning.co.uk
www.markdoodesplanning.co.uk

Mark Doodes Planning (MDP) are Chartered Town Planners offering a full range of professional services to self-builders, property developers, homeowners, and small businesses. MDP advise clients on all property and land decisions from small developments to whole new housing estates including the drafting, proofing, and submission of all necessary documentation, including the preparation of drawings.

All advice is professionally insured and most work is undertaken on a fixed fee basis. MDP cover projects all over the UK and overseas and are not restricted to "local" projects and can work as part of a wider team or as managing consultants.

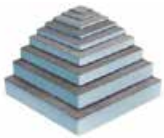
MDP has a successful track record in providing robust advice to clients resulting in around 75% of all new work being from referral. Some examples of MDP's work can be seen under the projects tab, and can be provided references (subject to client agreement) from delighted customers or have a look at MDP's 44 five-star Google Reviews.

Marmox (UK) Ltd

Stand 8, 36 & 167
101-103 Hopewell Drive, Chatham, Kent ME57NP
Tel: 01634 835290
Fax: 01634 835299
Email: sales@marmox.co.uk
www.marmox.co.uk

Marmox manufacture Multiboard, a lightweight, waterproof, insulating tile backer board which can also be used for dry-lining. Multiboard can be used in conjunction with our shower formers to create walk-in shower areas.

Marmox UK also supplies Marmox Thermoblock, the load-bearing thermal bridging block.



Marsh Industries Ltd

Stand 148
Units 2-20, Addington Park Ind Estate, Little Addington, Kettering, NN14 4AS
Tel: 01933 654582
Fax: 01933 654583
Email: sales@marshindustries.co.uk
www.marshindustries.co.uk

Marsh Industries is the market leader in domestic off-mains drainage systems. The company manufactures sewage, drainage and water recycling products, supplying builders and civil engineering merchants across the UK.

Mayfair Granite
Stand 78
Tel: 0800 432 0267
Email: info@mayfairgranite.co.uk
www.mayfairgranite.co.uk

MBC Timber Frame
Stand 93
Tel: 01452 346499
Email: info@mbctimberframe.co.uk
www.mbctimberframe.co.uk

Metal Solutions (SSAB GreenCoat Colourful Steel)
Stand 122
Tel: 01204 491800
Email: sales@metalsolutions.uk.com
www.metalsolutions.uk.com

Millworks
Stand 205
Tel: 01223 967733
Email: info@millworks.co.uk
www.millworks.co.uk

Mixergy
Stand 105
Tel: 01865 884 343
Email: enquiries@mixergy.co.uk
www.mixergy.co.uk

Modern Masonry
Professional Professional Services Hub / Walls & Structures Zone
Tel: 01162 325 170
Email: info@modernmasonry.co.uk
www.modernmasonry.co.uk/

NaCSBA
Professional Services Hub
Tel: 07387 725 106
Email: info@nacsba.org.uk
www.nacsba.org.uk

Niko Home Control

MOSSTECH
Home Control

Stand 77
Unit 8 Green Court
Village Farm Industrial Estate
Pyle, Bridgend CF33 6BN
Tel: 01656 746766 Option 2
Email: niko@mosstech.co.uk
www.homecontrol.uk.com

Changing the way you live in your home. A multi award-winning intelligent home automation system like no other. Beautifully streamlined design, easy to use and cost effective. Niko Home Control enables you to control and automate heating, lighting and music as well as shading and ventilation seamlessly through touchscreen technology and a huge range of led switches.

Nordic Garden Buildings
Stand 65 & Outdoor Living Zone
Tel: 0800 160 1710
Email: info@nordicgardenbuildings.com
www.nordicgardenbuildings.com

Norrsken
Stand 157 & 158
Tel: 01202 632777
Email: hello@norrsken.co.uk
www.norrsken.co.uk

Northcot Brick
Stand 62A, Brick Library & Wall Bay
Tel: 01386 700551
Fax: 01386 700852
Email: sales@northcotbrick.co.uk
www.northcotbrick.co.uk

Nudura (Construction Products Group)
Piazza
Tel: 0800 014 8901
Email: sales.uk@cpg-europe.com
www.nudura.co.uk

Nu-Heat Underfloor Heating & Renewables

Nu-Heat
Feel the difference

Stand 91 & Renovation House
Heathpark House, Devonshire Road,
Heathpark Industrial Estate, Honiton,
Devon, EX14 1SD
Tel: 01404 540650
Email: info@nu-heat.co.uk
Web: www.nu-heat.co.uk
Twitter: @nuheatuk
Facebook:
www.facebook.com/nuheatuk

Award-winning underfloor heating (UFH) systems and customer service, unbeatable expertise in integrating renewables, bespoke system design and the very best technical knowledge makes Nu-Heat the chosen supplier for thousands of UK homeowners. View our specialist UFH and renewable solutions on stand 91 and upstairs in the Renovation House.

Oxon Energy
Stand 219
Tel: 01491 410110
Email: info@oxonenergy.com
www.oxonenergy.com

Palmer + Partners
Stand 218
Tel: +44 (0) 1787 237057
Email: studio@palmerandpartners.co.uk
www.palmerandpartners.co.uk

PBT Installations
Stand 143
Tel: 01242 323923
Email: info@pbtinstallations.co.uk
https://pbtinstallations.co.uk/

Potton
Professional Services Hub & The Potton House
Tel: 01767 676400
www.potton.co.uk

Partel

Partel
Save energy. Build smart.

Stand 177
Tel: 02037 401918
Email: sales@partel.co.uk
www.partel.co.uk

Partel produce and supply high-performance Airtight and Windtight systems for the low-energy building sector. With a presence in 4 regions (UK, IRL, North America, mainland Europe) and dedicated expertise in Engineering, Architecture, and Building physics, Partel provide an ted approach focused on building fabric and tailored solutions for new-build and retrofit projects.

VARA, IZOPERM, EXOPERM, ALMA VERT, CONIZO & CONEXO are some of the most known brands used extensively in the construction sector, including monolithic breathable membranes, airtight acrylic adhesive tapes, and thermal bridging solutions that improve the energy efficiency of all building types.

Partel is also the exclusive supplier of LUNOS in the UK and IRL – the worldwide market leader in providing decentralized ventilation systems for residential and commercial buildings.

Pietra Wood & Stone
Finishes Zone
Tel: 01225 783527
Email: info@pwasltd.com
www.pietrawoodandstone.com

Premier Loft Ladders
Roof Zone
Tel: 0345 9000 195
Email: sales@premierlanternroofs.co.uk
www.premierloftladders.com

PKOM 4 Compact Service Unit

PICHLER
PKOM⁴

Stand 58
Swallow House, Cotswold Business Village, Moreton in Marsh GL56 0JQ
Tel: 0345 260 0123
Twitter: @TotalHomeEnviro
Email: info@totalhome.co.uk
www.totalhome.co.uk

The PKOM 4 is a compact service unit providing heat recovery ventilation, energy efficient space heating, space cooling and 212 litres of domestic hot water. It has two heat pumps so that it can simultaneously heat or cool the air, whilst heating water. Suitable for airtight, well insulated flats and small townhouses.

Quantiv

Quantiv

Professional Services Hub
Tel: 07811 475193
Email: tim@quantiv.uk
www.quantiv.uk

Whether you're self-building or renovating, it's critical to get accurate cost advice from a ***Quantity Surveyor*** as early as possible. Want to reduce financial stress and gain peace of mind that your budget will be enough to achieve your plans, then please contact Quantiv for a **FREE 30 MINUTE CONSULTATION** on **07811 475193** or **tim@quantiv.uk**

Passivhaus Homes
Stand 110 & 111
Tel: 0345 257 1500
Email: jae@phhomes.co.uk
www.phhomes.co.uk

Plumis
Stand 22 & Renovation House
Tel: 020 7871 3899
Email: info@plumis.com
www.plumis.co.uk

Pura® NFC

PURA® NFC BY TRESPA

performance panels UK Premium Partner

Stand 96

Tel: +44 (0) 300 303 5874
Email: support@pura-uk.com
Web: www.pura-uk.com
Facebook: @puranfcuk
Instagram: pura_nfc_uk

Pura® NFC, the complete cladding solution, provides a sustainable façade that will remain stunning for decades, as well as being durable, low maintenance and easy to install. From small projects to those on a larger scale, there are plenty of ways to transform your home's exterior to suit your budget with Pura® NFC. Order your FREE samples today.

Rainclear Systems Ltd

Rainclear Systems

The Dale House Gable End

Unit 34A, Ganton Way,
Swindon, Wilts SN2 8ES
Tel: 0800 644 44 26
Email: sales@rainclear.co.uk
www.rainclear.co.uk

The UK's leading online retailer and stockist of metal rainwater systems – effective and long-lasting guttering and downpipes to protect and enhance your property. We've a friendly and knowledgeable team available from 8am - 5pm on a Freephone number offering quotes, advice and take-off from architect drawings; Next day delivery on a huge range of stocked products; Free delivery on orders over £600 net and secure online payment by credit card or PayPal.

RK Steel

Stand 46

Tel: 01872 261260
Email: info@rkdoorsystems.co.uk
www.rksteel.co.uk

ROCKWOOL

ROCKWOOL®

Stand 176

Tel: 01656 868 400
rockwool.link/nsbrc

ROCKWOOL is a leading manufacturer of stone wool insulation offering a full range of products widely used by self-builders to make homes quieter, safer and warmer.

Made from volcanic rock – one of the most abundant natural materials on the planet – stone wool provides thermal, acoustic and fire protection, plus it can be recycled and re-used indefinitely.

Radix Base Systems

Stand 217

Tel: 01382 819 458
Email: sales@radixgroup.co.uk
www.radixgroup.co.uk

Rainbow International

Stand 186

Tel: 01623 422488
Email: enquiries@rainbow-int.co.uk
www.rainbow-int.co.uk

Rainwater Harvesting

Stand 144

Tel: 01733 405 111
Email: info@rainwaterharvesting.co.uk
www.rainwaterharvesting.co.uk

Rationel

Stand 101

Tel: 01536 315023
www.rationel.co.uk

Rawington

Stand 86

Tel: 01452 764875
Email: info@rawington.com
www.rawington.com

RGB Communications

Stand 104

Tel: 01488 73366
Email: info@rgbcomms.co.uk
www.rgbcomms.co.uk

RK Door Systems

Stand 49

Tel: 01872 222300
Email: info@rkdoorsystems.co.uk
www.rkdoorsystems.co.uk

Roseview Windows

Stand 133

Tel: 01234 712 657
Email: info@roseview.co.uk
www.roseview.co.uk

Royal Institute of British Architects (RIBA)

Professional Services Hub

Finding an architect: 020 7307 3700
All other enquiries: 020 7580 5533
www.architecture.com/UseAnArchitect

Rumbold Ayers

Professional Services Hub

Tel: 01722 714443
Fax: 7801 340253
Email: svend@rumbold-ayers.co.uk
www.rumbold-ayers.co.uk

SA Energy
Stand 57
Tel: 01329 595283
Email: hello@sa-energy.co.uk
www.sa-energy.co.uk

Safeguard Europe
Stand 24
Tel: 01403 210204
Email: info@safeguardeurope.com
www.safeguardeurope.com

Sage Cottage Studio
Professional Services Hub
Tel: 07595391938
Email: info@scstudio.co.uk
www.scstudio.co.uk

Scandia-Hus

scandiahus
SWEDISH ENERGY SAVING HOMES

Stand 52
Scandia-Hus Business Park,
Felcourt Road, Felcourt,
East Grinstead, RH19 2LP
Tel: 01342 838060
Email: sales@scandia-hus.co.uk
www.scandia-hus.co.uk

Scandia-Hus have been designing and supplying energy-efficient, bespoke timber frame homes in the UK for over 45 years. We have a wealth of experience at our disposal and a reputation for combining the benefits of advanced Swedish technology with the best of traditional British architectural style and building craftsmanship.

Scandinavian Homes
Professional Services Hub
Tel: 0845 299 6337 / 01274 866831 (9am-5pm)
Email: info@scandinavianhomes.com
www.scandinavianhomes.com

Scandinavian Trading
Stand 197, Finishes Zone & Renovation House
Tel: 01932 645050
Email: sales@scandinaviantrading.co.uk
www.scandinaviantrading.co.uk

Scotframe
Piazza
Tel: 01467 624440
Email: swindon@scotframe.co.uk
www.scotframe.co.uk

Seconds & Co

SECONDS & CO Insulation
GENUINE KINGSPAN SECONDS | WWW.SECONDSANDCO.CO.UK

Stand 60
Presteigne Industrial Estate
Presteigne, Powys LD8 2UF
Tel: 01544 260201
Email: sales@secondsandco.co.uk
www.secondsandco.co.uk

The ONLY approved seller of Kingspan & Kooltherm Insulation Board, SECONDS. Delivery normally within 10-15 working days from your nearest branch to Mainland England, Wales and most of Mainland Scotland. We have supplied the trade and end users for over 20 years with our Insulation Boards.

Self Build Assist

SELF BUILD ASSIST

Stand 4 & Piazza
Tel: 0330 043 7364
Email: info@selfbuildassist.com

Let's Build Your Dream Home

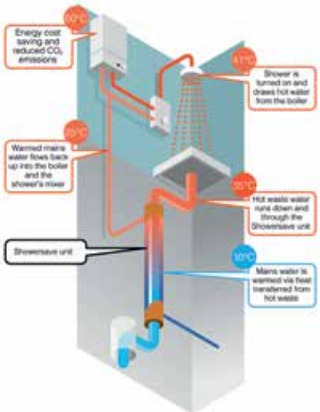
Designing and building your own home is one of the most rewarding experiences you can have. There is nothing quite like turning the key and stepping into your dream property, other than knowing that you were directly involved every step of the way.

Showersave

Showersave

Stand 85
Tel: 028 9334 4488
Email: sales@showersave.com
www.showersave.com

Wonderfully simple,
cost effective energy saving.
Why wouldn't you?
- ✓ Save £s as you shower
- ✓ Easy to install
- ✓ No maintenance
- ✓ 100,000+ installations
- ✓ Compliments heat pumps
- ✓ Embodied carbon recovery <4 years
- ✓ Reduces home energy costs
- ✓ 30+ year product life
- ✓ 5 year warranty



CERTIFIED COMPONENT

WRAS APPROVED PRODUCT

Shutters Factory Finishes Zone

Tel: 0148 392 3825
Email: silviu@shuttersfactory.co.uk
www.shuttersfactory.co.uk

Silva Timber Ltd

SILVA TIMBER
WE DISCOVER. YOU CREATE

Stand 169

Halebank House, Pickerings Road, Widnes, Cheshire, WA8 8XW

Unit 7, Skyport Trade Park, Skyport Drive, Harmondsworth, UB7 0LB

As one of the most established and trusted timber specialists in the country, Silva Timber has a long history of collaborating with self-builders to help create their dream homes. We combine the finest quality timber products with expert advice and guidance to ensure your project runs smoothly.

SkyGarden

Stand 179

Tel: 01242 620905
Email: enquiries@sky-garden.co.uk
www.sky-garden.co.uk

Squaredeal UPVC

Stand 163

Tel: 0800 731 2092
Email: info@squaredealupvc.co.uk
www.squaredealupvc.co.uk

Skyline Coping & Harmer Drainage

SKYLINE FASCIA SOFFIT COPINGS
HARMER DRAINAGE SYSTEMS

Stand 18

Unit 34A, Ganton Way, Swindon, Wilts SN2 8ES
Tel: 0800 644 44 26
Email: sales@rainclear.co.uk
www.rainclear.co.uk

Rainclear, the UK's leading online retailer and stockist of metal rainwater systems also bring you Skyline Aluminium Coping and Harmer Aluminium Roof Outlets

Solar-Shield

SOLAR-SHIELD
exterior shading solutions

Stand 69

The Byre,
Sutton Farm,
Claverley, WV5 7DD
Tel: 03302 020 701
Email: info@solar-shield.co.uk
www.solar-shield.co.uk

Solar-Shield offers complete exterior shading solutions for home owners and self builders. Our external shading products are compliant with the Part O regulation requirement and can generate long term energy savings by providing total control over heat and solar glare. From stunning external louvres, vertical screens, venetian blinds and patio awnings, we have a solution to suit every exterior shading requirement.

SPC Heat Cloud

heat cloud
Radiant Conditioning

Renovation House & Stand 72

SPC House, Evington Valley Road, Leicester, LE5 5LU
Tel: 0116 249 0044
Email: heatcloud@spc-hvac.co.uk
Web: www.heat-cloud.co.uk

Heat Cloud – Invisible Radiant Heating & Cooling

The must have alternative to Underfloor Heating!

SPC Heat Cloud is a high tech radiant panel offering efficient heating performance from low water temperature systems (e.g. heat pumps) along with low inertia and fast response times. Available in bespoke sizes and a range of pipe configurations, Heat Cloud fits within the building's ceilings, walls or a combination of both.

When using Heat Cloud, space air temperatures can be kept around 3°C below the traditional temperatures used for convective systems with no reduction in perceived comfort. The result of this and the system's rapid response times combine to reduce energy bills.

Come and see us at stand 72 and on the ground floor of the renovation house.

Sto Ltd

Stand 126 & Renovation House

Tel: 0330 024 2666
Email: werkstatt@sto.com
www.sto.co.uk

Structural Timber Association

Professional Services Hub

Tel: 01259 272140
Fax: 01259 272141
Email: office@structuraltimber.co.uk
www.structuraltimber.co.uk

Tapco Roofing Products

Roof Zone

Unit 32 Tokenspire Business Park
Hull Road, Woodmansey, Beverley,
East Yorkshire HU17 0TB
Tel: 01482 880478
Email: info@tapcoslate.com
www.tapcoroofingproducts.com

Tapco Roofing Products provides roofing solutions using natural slate and cedar textures. Advanced materials and engineering provide sustainability such as a long lifecycle, extreme durability and end-of-life recyclability. Tapco Roofing Products are premium products with premium performance, offering beauty that is built to last, high industry performance ratings, and a 40-year Warranty.

TapcoSlate Classic, our flagship composite slate product, is BBA, ETA & UKTA certified, has CE & UKCA conformity marking, and can be used on pitched roofs from 12 to 70 degrees. It's highly impact resistant, can be easily cut into shape, has very little wastage, and really easy to install, which makes it the ideal roofing material for self-build homes.

Techno Metal Posts

Stand 113

Tel: 07795 198 105
Email: guillaume.danis@technometalpost.com
www.technometalpost.com

TeleBeam

Stand 170

Unit 6, Devizes Trade Centre,
Hopton Park, Devizes,
Wiltshire, SN10 2EH
Tel: 01380 739000
Email: info@telebeam.co.uk
www.telebeam.co.uk

Don't be put off by modern trusses any more – TeleBeam is the answer for your loft conversion

Forget heavy steel beams and cranes. TeleBeam is a multi-award winning product offering loft converters, builders and home owners the first totally bespoke pre-fabricated loft conversion system which deals with a wide range of roof spans and pitches.

Terzetto Stone

Stand 230

Head Office: Unit 24 Centre Park,
Marston Moor Business Park,
Near Wetherby, YO26 7QF
Tel: 01423 358855
Email: sales@terzettostone.co.uk
Website: www.terzettostone.co.uk

Terzetto Stone specialises in beautiful natural stone and porcelain floor and wall tiles, creating a stunning finish for your home.

We have a wide range of products for every room, including many tiles with an inside out option.

Delivering UK wide with showrooms in Yorkshire, Cheshire, Warwickshire, Hertfordshire and Oxfordshire.

The Bamboo Flooring Co

Stand 80 & Renovation House

Unit 5 Euston Street, Freemens
Common, Leicester, LE2 7ST
Tel: 0116 2741050
Email:
mail@bambooflooringcompany.com

The Bamboo Flooring Company was established in 2004 and is a distributor and retailer of high quality bamboo flooring and matching flooring accessories, including bamboo flooring that is compatible with underfloor heating. Bamboo flooring is extremely durable, eco-friendly and sustainable and very cost effective compared to hardwood. We offer next day delivery across the UK.

The Bat Conservation Trust

Stand 190

Tel: 0345 1300 228
Email: enquiries@bats.org.uk
www.bats.org.uk

The Concrete Centre

Professional Services Hub

Gillingham House, 38-44 Gillingham St,
London, SW1v 1HU
Email: nsbrc@concretecentre.com
www.concretecentre.com

The Hemp Block Company

Walls & Structures Zone

Tel: 01923 263944
Email: info@hempblock.co.uk
www.hempblock.co.uk

A - Z listing

The Residence Collection

Stand 206 & 207

Unit C, Quedgeley West Business Park, Gloucester, GL2 4PA
Tel: 01452 345827
Email: journey@residencecollection.co.uk
www.residencecollection.co.uk

The Residence Collection is a suite of window and door systems, all designed and made in Britain. They fuse aesthetics and performance to create the ultimate alternative to standard upvc, timber and aluminium. All systems have a stylish flush exterior and each system has a different interior look, available in over 40 colour options. They can achieve a u-value of 0.74 with triple glazing. All our windows and doors are virtually maintenance free, no painting or sanding required and are fully recyclable. The perfect choice for both renovations and self-build. Search #residencecollection on Instagram to see live examples!

ThermoSphere

Stand 3 &114

Tel: 0800 019 5899
Email: hello@thermosphere.com
www.thermosphere.com

The Insulation Assurance Authority Professional Services Hub

Tel: 0333 3239 045
Email: enquiries@theiaa.co.uk
www.theiaa.co.uk

The National Federation of Roofing Contractors Professional Services Hub

Tel: 020 7638 7663
Email: helpdesk@nfrc.co.uk
www.nfrc.co.uk

The Rooflight Association (formally NARM) Professional Services Hub

Tel: 0161 224 7477
Email: info@rooflightassociation.org
www.rooflightassociation.org

The Rooflight Co.

THE ROOFLIGHT CO. COTSWOLDS

Stand 131 & Renovation House

Unit T1, Bourton Industrial Park, Bourton-on-the-Water, Cheltenham, Gloucestershire. GL54 2HQ
Visit www.therooflightco.com, call 01993 833155 or email hello@therooflightco.com

As the inventors of the Conservation Rooflight and still the leading brand in rooflights for heritage and historical buildings and properties in Areas of Outstanding Natural Beauty, we have been innovating that design for thirty years to incorporate a range of modern and conservation rooflights for both pitched and flat roofs, that remain sympathetic to a building's heritage and location, whilst incorporating modern performance.

Total Home Environment Ltd

Stand 58 & Renovation House

Swallow House, Cotswold Business Village, Moreton in Marsh GL56 0JQ
Tel: 0345 260 0123
Twitter: @TotalHomeEnviro
Email: info@totalhome.co.uk
www.totalhome.co.uk

Helping you create and enjoy an energy efficient, healthy home. Heat pump ventilation, heat recovery ventilation, air source heat pumps, compact service units and central vacuum systems. With 25 years' experience in 3D system design, room-by-room heat loss calculations, installation, commissioning and servicing, we exceed expectations. Passivhaus Trust and NaCSBa members.

UK Glass Centre

Stand 194

Tel: 0333 200 4922
Email: info@ukglasscentre.co.uk
www.ukglasscentre.co.uk

Ultraline

Finishes Zone

Tel: 0121 550 3066
Email: info@ultraline.co.uk
www.ultraline.co.uk

Unilin

Stand 162

Tel: 0371 222 1033
Email: info.ui@unilin.com
www.unilininsulation.co.uk

Unico Inc.

The Unico System.

Stand 136

Tel: 01384 422094
Email: unico@bellplumbing.co.uk
www.unicosystem.co.uk

The energy efficient Unico System is a simple solution offering heating, cooling and ventilation within your home. The central air distribution system can greatly enhance your indoor air quality by integrating fresh air filters and UV technology.

VAT Reclaims by Andrew Jones
Oak Wall Bay
Tel: 01269 825248
Email: andrew@vat431.co.uk
www.vat431.co.uk

Velfac
Stand 203
Tel: 01536 313 552
Fax: 01223 897101
Email: directestimating@VELFAC.co.uk
www.VELFAC.co.uk

Ventmann UK
Stand 209 & Renovation House
Tel: 01283 240025
Email: sales@ventmann.co.uk
www.ventmann.co.uk

Veritas
Stand 100
Tel: 01225 941043
Email: enquiries@veritas-gs.com
www.veritas-gs.com

Warmcel (PYC Construction)
Stand 87
Tel: 01938 500797
Email: info@pycgroup.co.uk
www.warmcel.co.uk

Warmcel (PYC Insulation)
Stand 1
Tel: 01938 500797
Email: info@pycgroup.co.uk
www.warmcel.co.uk

Watermark
Stand 47 & Renovation House
Tel: (0)1844 338137
Email: sales@watermarkgb.co.uk
www.watermarkgb.co.uk

WERU UK
Stand 108, 120 & Finishes Zone
Tel: 03332 070776
Email: info@weru.co.uk
www.weru.co.uk

Westminster Stone Company
Outdoor Living Zone & Veranda Wall Display
Tel: 01978 710 000
Email: ask@westminsterstone.com
www.westminsterstone.com

Whistler Grills Ltd
Stand 124
Tel: 07780 670859 (Chris Holland)
Email: chris@whistlergrills.com
www.whistlergrills.com

Wildlife World
Stand 191
Tel: 01666 505333
Email: hello@wildlifeworld.co.uk
www.wildlifeworld.co.uk

Woodside Joinery (Staircases)
Stand 132
Tel: +44 1633 875232
Email: sales@woodsidejoinery.com
www.woodsidejoinery.com

Worcester Renewables
Professional Services Hub
Tel: 01386 871490
Email: info@worcesterrenewables.com
www.worcesterrenewables.com

York Handmade Brick
81 & Wall Bay
Tel: 01347 838881
Email: sales@yorkhandmade.co.uk
www.yorkhandmade.co.uk

Zaptec
Stand 168 & Renovation House
Email: sales@zaptec.com
www.zaptec.com/en-uk/

Air Conditioning, Heating & Cooling

Air Craft 73
LG Electronics UK 123 & Professional Services Hub
Total Home Environment (HPV Series) 58
Total Home Environment (PKOM 4) 58
The Unico System 136

Air Purification

Air Craft 73
The Unico System 136

Air Source Heat Pumps

Air Craft 73
Cool Energy 127
Earth Save Products 42, 43 & 212
Firepower 50
LG Electronics UK 123 & Professional Services Hub
Nu-Heat 91 & Renovation House
Radiana 4
SPC - Heat Cloud 72 & Renovation House
The Unico System 136
Total Home Environment (Samsung) 58 & Renovation House
Worcester Renewables Professional Services Hub

Air Tightness

Ecological Building Systems UK 159 & 160
Illbruck (Construction Products Group) Piazza
Partel 177

Air Tightness Consultancy

Aldas Professional Services Hub

Architectural Design

AC Architects 62, 63 & Professional Services Hub
Allister Godfrey Architects Professional Services Hub
Archi-Scape 44 & Professional Services Hub
Bob Nicholls MCIAT Chartered Architectural Technologist Professional Services Hub
Eco Design Consultants Professional Services Hub
Eleven Consulting Group 172
Green Planning Studio Professional Services Hub
Green Space Architects Professional Services Hub
Mark Doodes Planning Professional Services Hub
Palmer & Partners 218
Potton Professional Services Hub & The Potton House
Richard Dudzicki Associates Professional Services Hub
Sage Cottage Studio Professional services hub
Scotframe Timber Engineering Piazza
YAM Studios Professional Services Hub

Associations

Concrete Block Association Professional Services Hub
Federation of Master Builders Professional Services Hub
GSHPA Professional Services Hub
Modern Masonry Professional Services Hub
NaCSBA Professional Services Hub
National Association of Rooflight Manufacturers (NARM) Professional Services Hub
Royal Institute of British Architects Professional Services Hub
Structural Timber Association Professional Services Hub
The Concrete Centre Professional Services Hub
The National Federation of Roofing Contractors Professional Services Hub

Balustrades

FH Brundle 155
Glass & Stainless 39

Basements

Safeguard Europe 24

Bathrooms

Custom Basins 5
Easy Bathrooms 115
Gainsborough Healthcare Group Main Piazza
Halcyan Water Conditioners 180
Showersave 85
Terzetto 230
UK Glass Centre 194
Watermark 47 & Renovation House

Bedrooms

UK Glass Centre 194
Watermark 47 & Renovation House

Boilers

Firepower 50
Halcyan Water Conditioners 180
ThermoSphere 2 & 163

Biodiversity

Gaia Energy Eco 188
The Bat Conservation Trust 190
Wildlife World 191

Biomass Boilers

Firepower 50

Blinds & Window Furnishings

Appeal Group 166
Grants Blinds Finishes Zone
Shutters Factory Ltd Finishes Zone
Solar-Shield 202

Bricks & Stone

All About Bricks 51
Concrete Block Association Professional Services Hub
Ketley Brick Roof Zone & Brick Library
Modern Masonry Professional Services Hub
Northcot Brick Brick Library & 62a
Westmister Stone Outdoor Living Zone
York Handmade Brick 81 & Wall Bay
Juwo Smartwall Walls / Structure Zone

Builders Merchant

Bradfords Building Supplies New Build Educational Zone
Cotswold Steel 201
Eco Merchant Outdoor Living Zone

Building Plastics

Tapco Roofing Products Roof Zone

Building Surveyor

Cornerstone (Property MOT) 25

Central Vacuum Systems

Beam Central Vacuums 58 & Renovation House

Cladding

Catnic Urban Roof Zone & 77
Cupa Pizarras 125 & Renovation House
East Brothers Timber 215
Euroclad 99
Ketley Brick Roof Zone & Brick Library
Metal Solutions 122
Millworks 205
Pura NFC 96 & Dale House
Pietra Wood & Stone Finishes Zone
Silva Timber Products 169
Squaredeal Building Supplies / James Hardie 163

Cladding (Internal Decorative)

Millworks 66

A - Z product index

A - Z product index

Loft Ladders
Premier Loft Ladders — Roof Zone

Log Homes
Honka — 82
Scandinavian Homes — Professional Services Hub

Natural Materials
The Hemp Block Company — Educational Wall Zone

Oak Frame
Carpenter Oak — Professional Services Hub & Walls/Structures Zone
English Brothers — Professional Services Hub & 61
Made In Oak — 74

Outdoor Kitchens
Whistler Grills Ltd — 124

Passivhaus Design
AC Architects — 62, 63 & Professional Services Hub
Allister Godfrey Architects — Professional Services Hub
Archi-Scape — 44 & Professional Services Hub
Bel'm Entrance Doors — 129
Eco Design Consultants — Professional Services Hub
Kensa Heat Pumps — 68 & Groundworks Zone
MBC Timber Frame — 93
Passivhaus Homes — 110 & 111
RDA — Professional Services Hub
Scotframe Timber Engineering — Piazza

Paving
Ketley Brick — Roof Zone & Brick Library
Westminster Stone Company — Outdoor Living Zone
York Handmade Brick — 81 & Wall Bay

Planning
AC Architects — 55 & Professional Services Hub
Archi-Scape — TV44 & Professional Services Hub
Eleven Consulting Group — 172
Green Planning Studio — Professional Services Hub
Mark Doodes Planning — Professional Services Hub

Plot Finding
Buildstore — Piazza

Plumbing
Classic Water Softeners — 54
Halcyan Water Conditioners — 180
Showersave — 85

Project Management
Archi-Scape — TV44 & Professional Services Hub
CLPM — Professional Services Hub
Four Walls Group — PS15 Professional Services Wallboard
Self Build Assist — 4 & Piazza

Property Protection Trusts
Honey Legal — Professional Services Hub

Publication
Build It — Piazza

Quantity Surveying
CLPM — Professional Services Hub
Quantiv — Professional Services Hub

Radiators
Cotswold Heating Solutions — 162
Discrete Heat — 6
Jigsaw Infrared — 48

Rainwater Goods
Brett Martin — 88
Rainclear Systems — 15, 18 & The Dale House Gable End

Rainwater Harvesting
Marsh Industries — 148
Rainwater harvesting — 144

Rendering
Dryvit (Construction Products Group) — Piazza
Sto Ltd — 126 & Renovation House

Renewable Integration
Kensa Heat Pumps — 68 & Groundworks Zone

Roof Coverings
Catnic Urban — Roof Zone & 76
Cupa Pizarras — 125 & Renovation House
Dreadnought — Roof Zone & Brick Library
Euroclad Group (VIEO) — 99
GB-Sol — 200
Hambleside Danelaw — 106
LifesTiles — 181 & Roof Zone
Metal Solutions — 122
SkyGarden — 179
Tapco Europe — Roof Zone

Roofing & Roofing Structures
Catnic Urban — Roof Zone & 76
County Flat Roofing — 164
Cupa Pizarras — 125 & Renovation House
Dreadnought — Roof Zone & Brick Library
Euroclad — 99
Hambleside Danelaw — 106
Metal Solutions — 122
Tapco Roofing Products — Roof Zone
Telebeam — 170
The National Federation of Roofing Contractors — Professional Services Hub
The Rooflight Company — 131 & Renovation House

Rooflights
Brett Martin — 88
Kloeber — 204 & Finishes Zone
National Association of Rooflight Manufacturers (NARM) — Professional Services Hub
The Rooflight Company — 131 & Renovation House

SAP Assessor
Total Home Environment — Professional Services Hub

Self-contained Sinks
Custom Basins — 5

Skirting Board Heating
Discrete Heat — 6

Smart Door Locks
Bel'm Entrance Doors — 129
Ultraline — Finishes Zone

Solar PV
Bee Solar Technology — 179B
Earth Save Products — 42, 43 & 212
Eco Energy Environment — 116 & 109
GB-Sol — 200
SA Energy — 57
Worcester Renewables — Professional Services Hub

Solar PV Battery Storage
Eco Energy Environment — 116 & 109
GB-Sol — 200
SA Energy — 57

Solar Thermal
Eco Energy Environment — 116 & 109
Nu-Heat — 91 & Renovation House

Solar Tracking
Bee Solar Technology — 179B

Sound Proofing

CDI – Innovative Construction Materials 171
Rockwool 176

Stairs

Brill Sawmills 28
Glass & Stainless 39
Input Joinery 56
Kloepping TSS Finishes Zone
Woodside Joinery (Staircases) 132

Steel Frame

Cotswold Steel 201

Structural and Civil Engineering

Eleven Consulting Group 172

Structural Insulated Panel System (SIPs)

EcoTech SIPs 151
Envirograf 97
Kingspan Timber Solutions The Potton House
Potton Professional Services Hub & The Potton House
Scotframe Timber Engineering Piazza

Tiling

Easy Bathrooms 115
Pietra Wood & Stone Finishes Zone
Terzetto 230

Timber Frame

Carpenter Oak Professional Services Hub & Walls/Structures Zone
East Brothers Timber 215
English Brothers Professional Services Hub & 61
Fleming Homes 231 & Professional Services Hub
Frame Technologies 103 & Professional Services Hub
Kingspan Timber Solutions The Potton House
MBC Timber Frame 93
Passivhaus Homes 110 & 111
Potton Professional Services Hub & The Potton House
Scandia Hus 52
Scotframe Timber Engineering Piazza

Underfloor Heating

CDI – Innovative Construction Materials 171
Discrete Heat 6
Infraheat 55
Nu-Heat 91 & Renovation House
ThermoSphere 3 & 114

VAT Reclaims

VAT Reclaims by Andrew Jones Oak Wall Bay

Water Conditioners & Softners

Classic Water Softeners 54
Halcyan Water Conditioners 180

Water Treatment & Sewage

Classic Water Softeners 54
Halcyan Water Conditioners 180
HD Services 185
Marsh Industries 148

Wetrooms

CDI – Innovative Construction Materials 171
Gainsborough Healthcare Group Main Piazza
Marmox (UK) 8, 36 & 167

Windows

Bison Frames UK 137 & 165
Coastal Group 210
Dale Joinery The Dale House
ecoHaus Internorm 70 & 130
Evolution Windows 149
FSDC Global (The Folding Sliding Door Company) 62
Green Building Store 134, 141 & 142
Input Joinery 56
Kloeber 204 & Finishes Zone
Norrsken 157 & 158
Rationel 101
Rawington 86
Residence Collection 206 & 207
Roseview Windows 133
The Rooflight Company 131 & Renovation House
Ultraline Finishes Zone
Velfac 203
Veritas 100
Weru UK 108, 120 & Finishes Zone

Worktops & Splashbacks

Chisholm Design & Consultancy 2
Mayfair Worktops 78

notes

12 issues for £12*

Exclusive Offer

Open to all visitors of the National Self Build & Renovation Centre

Save over £50 off the cover price

Fantastic inspiration & expert advice for each stage of your project

Each issue delivered to your door

Includes 2 free tickets to all Build It Live shows worth £72!

Subscribe today at **www.self-build.co.uk/nsbrc**

*UK Direct Debit new subscriber offer only.
Direct Debit automatically renews at £39.84 every 12 months unless you cancel. You can cancel at any time.

Build It Live

SELF-BUILDING / RENOVATING / EXTENDING

JUNE 2023 BICESTER HERITAGE, OXFORDSHIRE

SEPT. 2023 WESTPOINT, EXETER

FEB. 2024 KENT EVENT CENTRE





MAKE YOUR DREAM HOME HAPPEN

Planning a self-build? Renovating a property? Or looking to add more space to your current home?

Make sure you spend a day at Build It Live - Build It magazine's dedicated exhibition for self builders and home renovators.

- FIND PRACTICAL SOLUTIONS TO YOUR PROJECT
- MEET BUILD IT'S TEAM OF EXPERTS FOR FREE ONE TO ONE ADVICE
- ATTEND OUR INSPIRING FREE SEMINARS & WORKSHOPS
- TEST OUT 1000s OF INNOVATIVE & TRADITIONAL PRODUCTS

FREE TICKETS FOR ALL READERS

ENTER PROMO CODE **NSBRC** WHEN BOOKING

COME & JOIN US

THE ESSENTIAL EVENT FOR CREATING AN INDIVIDUAL HOME

FOR MORE INFO & TO REGISTER FOR FREE TICKETS WORTH £24 VISIT:

www.builditlive.co.uk

ENGLISH BROTHERS:
BUILDING TRULY BESPOKE TIMBER FRAMED HOMES SINCE 1929

LOOKING FOR AN ARCHITECT?
Visit our website dedicated to providing architectural services for the self build market **eb-architecture.co.uk**

eb-bespoke.co.uk

FAST CONSTRUCTION | £ LOWER ENERGY BILLS | FRIENDLY SERVICE | EXPERT ADVICE

- Award-winning self-build specialists
- Insulation options from 0.10–0.18 W/m2K
- Nationwide architectural partners
- Oak framing options/oak hybrid systems
- Part or full project management optional

Email us your plans now for a free quotation and appraisal:
ad.enquiry@eb-bespoke.co.uk or call 01945 427985

English Brothers
BESPOKE TIMBER FRAMES

www.eb-bespoke.co.uk