

The Original

Kingspan TEK®
Delivery Partner



CONNECT

- STYLISH DESIGN
- PRECISION ENGINEERING
- EXPERT INSTALLATION



SIPS @CLAYS

clays.com
01756 799498



FEATURED PROJECT

Off-Grid Life

Made Easy with SIPS

This pioneering off-grid project is a stunning example of what can be achieved when building with SIPS.

Designed and self built by Peter & Diana, 'Westfield' was created with a desire to minimise the couple's environmental impact by using renewable/recyclable materials, rely solely on wind and solar energy and achieve a nett zero carbon lifestyle. Ultimately, this aspirational couple have created an exemplar for sustainable development in rural Northumberland.

Blending beautifully into its surroundings with an uninterrupted view of Hadrian's Wall, Westfield is nestled in the wilds of Northumbria, just outside Northumberland National Park and UNESCO World Heritage site boundaries.

With an architectural background and in-depth construction knowledge, Peter

designed, project managed and did much of the construction work himself. Taking a 'fabric first' approach, he specified 142mm Kingspan TEK® SIPS for their thermal superiority, low carbon footprint and speed of build.

Inspired by the stunning surroundings, Peter designed Westfield to be a contemporary interpretation of the local vernacular, with every element of Westfield carefully and tastefully curated to achieve the client's nett zero ambition.

The 1.5 storey, four bed bungalow has 300m² of internal living floorspace plus a 50m² garage. It has a 32.5° pitch VMZINC Zinc standing seam roof and vertical Siberian Larch cladding. With double height living spaces, mezzanine levels and a room in the roof, the design flexibility of SIPS really shines through.

Complemented by triple glazing and onsite renewable energy sources including an

MVHR system, 6.4kw of solar panels, a 3kw wind turbine plus a freestanding 3kw bioethanol stove which burns sugar beet waste and only emits a small amount of CO₂/H₂O, Westfield achieved an impressive set of SAP results. In fact they were so good they had to be taken twice to validate them! With an airtightness test of 0.6m³/hour/m² at 50Pa and EPC rating A+, Westfield is a triumph of SIPS construction.

"With the help of SIPS@Clays, we have both a beautiful and practical low-energy home that will outlast us, adapting to our changing needs and continuing to provide a sustainable home for those that follow us... We wish we had done it sooner!"

TO READ THE FULL CASE STUDY SCAN ME!



IN THIS ISSUE

REASONS TO BUILD WITH SIPS

PAGE 3



SIPS CASE STUDIES

PAGES 4 & 5



MARK BRINKLEY SAYS...

PAGE 7



Welcome to the latest edition of **Connect**, our catch-all newsletter, designed to give you hints and tips on building with SIPs and also an insight into self building with **SIPS@Clays**.

Since our last issue, I'm delighted to say that we've been busier than ever and despite a backdrop of economic uncertainty for many, we have had much to celebrate.

We've worked on some fabulous SIPs self build projects, three of which have made the dizzy heights of Channel 4's Grand Designs and Building your Dream Home in the Country on Channel 5. Seeing our projects on TV is always a thrilling high point for the SIPS@Clays team and it's great to hear our clients' enthusiasm when talking about building their dream homes with SIPs. There's a selection of our recent projects on pages 4 & 5 where you can scan the QR and head to Clays.com to read the full case studies.

In a personal first, I was delighted to be invited by TV presenter and FIX Radio host, Mark Millar to talk 'all things SIPs' on his weekly radio show, Building Ideas with Mark Millar.

We chatted about the principles of building with SIPs, what SIPs are and how they are made, and we discussed the many benefits of SIPs construction.

You can listen to the episode via the News section of our website, on Spotify Podcasts or tune into FIX radio on DAB11A to listen on catch up. There's also plenty of information on building with SIPs on page 3.

And of course... SIPS@Clays has reached the incredible milestone of 20 years in business (page 6). It's an achievement that we are all incredibly proud of and one that our friend and author of the Housebuilder's Bible, Mark Brinkley reflects upon in his guest feature on page 7.

In those 20 years, we've witnessed a seismic shift amongst self builders, architects and developers towards modern methods of construction and in particular, building with SIPs. So much so, that we are now producing and installing two SIPs projects, per week with a strong pipeline for the months to come.

We are delighted that this is the case but it's always interesting to dig deep and understand the reasons why clients are choosing to build with SIPs and find out what is driving the shift. Bearing that in mind, we asked Malcolm Birks, Head of Design at Skipton based architectural practice Rural Solutions, why he specifies SIPs and why it was the perfect solution for our recent mutual project, The Skipton Community Sports Hub. Read his response on page 7.



Ian Clay
FOUNDING PARTNER

And finally... It's not just self builders who are embracing the benefits of SIPs. We continue to work with forward thinking contractors and developers who recognise the benefits that the building system offers and are turning to SIPs as a catch all building solution. See page 8 for some of our latest developer projects and hear from Olivia Mitchell of Pretty Perfect Properties on why she chose SIPs for her latest luxury housing development.

*"We hope you enjoy this edition of Connect and remember, if you're thinking of building with SIPs... **working with us couldn't be easier!**"*

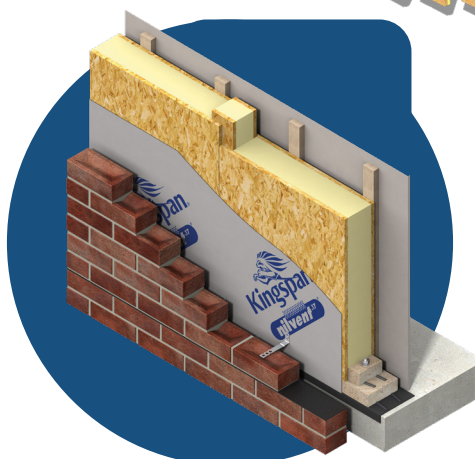
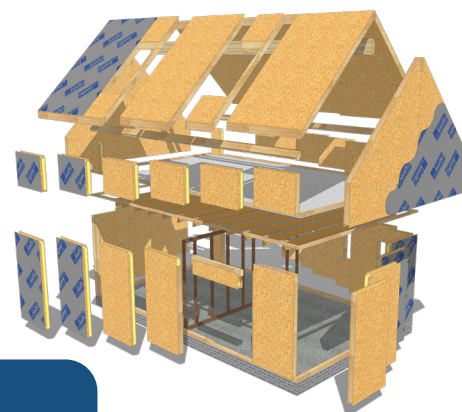
SIPs EXPLAINED

Speed, Space, Simplicity & Sustainability

Structural Insulated Panels or SIPs as they are better known, are a simple yet highly effective construction solution that offer energy efficiency, design flexibility, speedy builds and maximises liveable space.

Typically used for the structural shell of the building i.e. external walls and roofs, SIPs panels are made up of two sheets of 15mm oriented strand board (OSB) which are autohesively bonded to a rigid urethane foam insulation core to provide 'built in' insulation.

A SIPs building, and in particular the Kingspan TEK® Building System, provides an exceptionally airtight building envelope, capable of achieving approx. 1m³/hour/m² at 50Pa. With superior thermal qualities and excellent U-values, the system is ideal for building all types of sustainable homes and commercial buildings.



For more information call 01756 799498

FOR MORE TECHNICAL DATA SCAN ME!





REASONS to build with SIPs



There are so many decisions to be made when building your own home but arguably one of the most crucial is the construction method you use.

Personal considerations such as lifestyle, environmental ambitions and budget will often be the drivers, together with design requirements, availability of materials and the location and accessibility of your site.

Undeniably, there are many traditional and non-traditional construction methods available, but despite this, Structural Insulated Panel building systems (SIPs) are seeing a major surge in popularity. This is no surprise to the SIPS@Clays team, as we know that there are many incomparable benefits to building with SIPs.

However, with so many plus points to SIPs construction and varying requirements on individual wish lists, we asked our customers why they chose SIPs to build their homes.

By far, the two overriding reasons for choosing SIPs were the energy efficiency and the speed of build the system provides.

ENERGY EFFICIENCY

At a time when saving money on energy bills is still a hot topic of conversation, increasing numbers of self builders and developers are turning to SIPs as an energy efficient construction solution. They are taking a 'fabric first' approach in order to benefit from the lifelong energy efficiency a SIPs build system provides and also to meet government regulations which require all new homes to produce up to 30% less carbon dioxide (Part L Building Regulations).

The Kingspan TEK® building system supplied by SIPS@Clays, provides an energy efficient home with low U-values, reduced thermal bridging and excellent levels of airtightness. These combined, reduce the amount of energy used to heat or cool a room by up to 50% which allows for systems to be considerably downsized. A SIPs home relies on the natural efficiency of the fabric of the building but you can also add additional sources of heating if you wish.

A Mechanical Ventilation with Heat Recovery system (MVHR) which introduces a fresh filtered air supply will be required for an airtight SIPs home and can be complemented by additional eco technologies such as solar panels, triple glazing and underfloor heating to create a low carbon footprint.

Extra insulation is added to the internal face of a SIPs structure to comply with Part L Build Regulations and improve thermal performance even further.

Our clients often achieve an A+ SAPs & EPC A rating for their new builds, so you can see why this is a major consideration when choosing to build your new home with SIPs.

SPEEDY BUILDS

Let's face it, once you've made the huge decision to self build, you just want to get the job done.

That's why, when choosing your method of construction, a quick build is high on both self builders and developers list of priorities.

Considered to be one of the quickest and most efficient building methods around, a SIPs building system is completed 40% quicker than building with traditional methods of construction - a very appealing prospect when you can't wait to move into your new home, or get your development on the market.

According to our clients, the three main reasons that make SIPs builds super speedy and gave SIPs 'the edge' when they chose their construction method are:

› Off Site Manufacturing

Without doubt, one of the main reasons for SIPs' speedy construction is the offsite manufacturing process, where each panel is individually precision cut in a quality controlled factory setting. All apertures and complex design features are pre-cut before the kit arrives on site, which saves time at installation stage, with only minor tweaking to be done, when and if required.

› Predictable Build Programme

Having a predictable building programme means that our customers feel more in control of their project and if you're not an experienced self builder, predictability can be very reassuring. The streamline process of off-site manufacturing means that an accurate build programme can be created. This allows for the building site to be fully prepared prior to delivery of the SIPs building system, materials and plant to be ordered and follow-on trades to be scheduled. The fixed programme means that clients can order their windows and doors as soon as the technical drawings are agreed, mitigating potential delays.

› No Weather Delay

One thing our self builders (or even the SIPS@Clays team) cannot control is the Great British weather, so it's good news that a SIPs building system can be

installed come rain or shine. This means there are no weather delays or resultant 'knock on' delays to follow on trades. Once SIPs installation is complete and the superstructure is weather resistant - which usually takes two to three weeks depending on size and complexity of build - follow on trades can immediately begin working, simultaneously if desired.

It typically takes around 15 weeks from preliminary drawings to the SIPs shell being completed on site. One of our clients commented, "before we knew it, we had a house".

There are numerous benefits to building with SIPs, however when you're choosing your construction method, it's important to look at your priorities. If you want low energy bills and a toasty warm home or, you want to move into your new home in double quick time, then it makes sense to build with SIPs. Just like the many customers who build with SIPS@Clays every year, you will benefit from a catch-all building solution that has become a mainstream method of construction.

BENEFITS OF SIPs

- Energy efficient pre-insulated super structure
- Thermally efficient
- Airtight construction
 - Speedy build
- Ideal for smaller or tight sites
- Off-site precision engineered system
- Cost effective
 - Reduced labour requirements
- Room in roof option
- Flexibility of design
 - Minimal waste
- Green credentials

CLAYS

SELF BUILD

We've recently worked on some aspirational SIPs project across the length and breadth of the UK...

...from remarkable self build homes and developer led projects to essential community hubs and secluded corporate retreats; the diversity of projects is an impressive testament to the popularity of SIPs.

Here's a small selection of recent projects to whet your appetite and for more inspiration and information, head over to [Clays.com](https://www.clays.com)

Why not scan the QR code to get an insight into some of our amazing SIPs projects



Project: **Self Build Replacement Home**
Clients: **David & Lisa**
Location: **Wiltshire**
Size: **220m²**
Material: **142mm Kingspan TEK**

PROJECT ID: **8521**

Project: **Self Build Home**
Client: **Chris**
Location: **Cheshire**
Size: **300m²**
Material: **142mm Kingspan TEK**

PROJECT ID: **8808**



Project: **Self Build Home**
Clients: **Phil & Emma**
Location: **Abersoch, Wales**
Size: **185m²**
Material: **142mm Kingspan TEK**

**PROJECT ID:
9719**



Project: **The Halcyon Club,
Business Retreat**
Clients: **Dominic & Kerry**
Location: **Penrith, Cumbria**
Size: **14 SIPs cabins/buildings,
various sizes**
Material: **142mm Kingspan TEK**

**PROJECT ID:
9648**



Project: **Self Build Home**
Client: **Andy**
Location: **Pwllheli**
Size: **75m²**
Material: **142mm Kingspan TEK**

**PROJECT ID:
8260**

Project: **Skipton Community Sports Hub**
Client: **Rural Solutions Ltd**
Location: **Skipton, North Yorkshire**
Size: **3,500sq ft**
Material: **142mm Kingspan TEK**

**PROJECT ID:
8983**





successful years
of supplying
SIPS



As pioneers of building with structural insulated panels (SIPs) in the UK, SIPS@Clays has an impressive history of helping self builders, contractors and developers to bring their SIPs projects to life. So, after celebrating two decades at the forefront of SIPs construction, we look back to where it all began.

Founded in 2003 by Ian & Alison Clay, SIPS@Clays has become one of the UK's leading SIPs providers and has designed, fabricated and erected in excess of 1500 self-build, commercial and renovation projects throughout the British Isles.

Ian, at the time, was running Clays Construction, a house building company set up by his father in 1973. However, back in the early 2000's, when SIPs innovation was a relatively new concept to the UK, Ian recognised the many benefits of modern methods of construction and began looking for a build system that would speed up the house building process.

After hearing of Kingspan TEK®, a revolutionary SIPs system supplied by Kingspan Insulation, Ian dipped his toe in the water by building 14 new SIPs homes in Boston Spa, West Yorkshire. The SIPs development was so successful that when he was approached by Kingspan to spearhead a national network of Kingspan TEK® Delivery Partners to deliver the building system across the UK, he didn't have to think twice.

So, with a pioneering spirit and a strong belief that SIPs construction 'was the future' SIPS@Clays was born.

In the past 20 years, SIPS@Clays has grown to become a leader in SIPs construction.

"Back in 2003 when the company was founded, building with SIPs was a new innovation and so setting up SIPS@Clays was a leap of faith."

During that time the company has flourished and is recognised for outstanding customer service, innovative design, skilful fabrication and expert installation.

Now with five partners, the company employs eight staff across its sites at Jaycee Business Park and a design studio in Skipton town centre, which was opened in 2021.

Ian Clay, Founding Partner said: "We're very excited to have celebrated our 20th year in business and even more so, to look back and reflect on how far we have come in those years.

"We believed passionately in sustainable construction and the need to create more energy efficient homes and we recognised that modern methods of construction, like SIPs, was the future.

"Now 20 years on, sustainability and zero carbon construction is at the forefront of everyone's mind. Our deeper understanding of the impact that construction has on our environment and the need for thermal efficiency is driving an eco-conscious revolution amongst self builders, developers and those connected to the construction sector. We are so proud to have been an integral part of that.

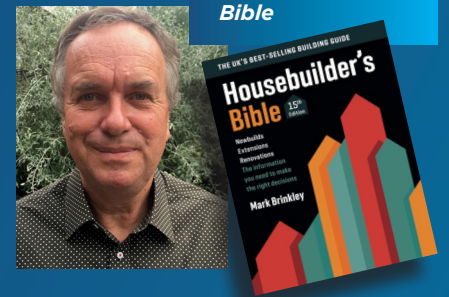
"We are delighted to have reached this significant milestone and we couldn't be more excited for the future of SIPS@Clays - so here's to the next 20 years!"

POINT OF VIEW

ARCHITECT MALCOLM BIRKS TELLS ALL

We asked Malcolm Birks, Head of Design at Rural Solutions, why SIPs are his 'go to' building solution.

Author of the Housebuilder's Bible



THE TRUE PIONEERS

of the SIPs industry
by Mark Brinkley

"I've known SIPS@Clays for most of the 20 years since the business launched in 2003 but it was only recently that I had the chance to catch up with them and discover the history of how it all began..."

“Despite years of training and experience, I find it can still be difficult and unclear when trying to decide on the best way to go about constructing a building. In recent years, the benefits of using SIPs have become more apparent to me. Although architects tend to focus on the final design outcome and appearance, the most successful projects are usually where they, and others, have really considered the construction process. Issues of cost, time and sequencing become vital on a construction site.

Using SIPs offers a number of benefits in this regard. The foremost of these is the ability to achieve an almost watertight building envelope very quickly which frees up other trades to move a project forward. This is particularly relevant if building in the autumn/winter when projects can become literally stuck in the mud. The fact that the panels are constructed offsite means that the envelope can be formed rapidly and with far fewer potential impacts from weather conditions. A vital benefit!

The flexibility and precision of SIPs is also powerful, enabling the formation of complex forms with a high degree of dimensional certainty. This is very important to ensure the accurate and effective co-ordination of follow on works e.g. wall cladding and roofing. Windows and doors can also be positioned with a high degree of flexibility.

The level of embodied carbon (energy used in the materials and construction process) is also becoming a more prominent consideration. The timber components of SIPs gives them an edge

over other forms of construction, which rely heavily on steel and concrete and are both very carbon intensive in terms of their production.

The recent changes to Part L of the Building Regulations are also a key consideration with architects needing to design buildings to ever-tighter levels of thermal performance. The high-performance insulation used in SIPs is very helpful in this regard, as is the ability to achieve better levels of airtightness more easily than many other forms of construction.



SIPS@Clays are an ideal partner for this type of construction approach. Working closely with their design team on a local Community Sports Hub, we quickly worked out a way to deliver the architectural design and intentions. This included identifying areas which needed slight design adjustment to fit with the construction approach. There was close communication and co-ordination leading up to the installation of the panels on site and the clients at the Community Sports Hub were surprised and delighted by how quickly the shape and envelope of the building came to life.

“The current construction industry is characterised by a blizzard of approaches and it can be disconcerting when trying to make key choices about the delivery of your project. SIPs offer a credible and flexible option, whether it be for residential or commercial projects, and they are clearly suited to modern demands and requirements.”

MALCOLM BIRKS
MA (Cantab),
Dip Arch,
MPhil, RIB



“Dial back to November 2003 when Ian and Alison Clay, who were at the time, running Clays Construction, had 14 homes to build in a hurry. They wanted to shave 3 or 4 months off the build time and reckoned off-site construction was the answer.

“Co-incidentally, it was just at this time that SIPs were being introduced to the UK market by the Irish building conglomerate Kingspan and Ian thought they might be a good solution to their problem. The panels were slightly more expensive than conventional timber frame, the standard way of doing off-site construction, but they were faster to put together, better insulated and were simpler to finish. All in all, SIPs seemed like a compelling offer and Ian thought this new kid on the block was worth a try. So, drawing a deep breath, redrew the plans for these 14 homes and built them out using these ‘new-fangled’ SIPs panels.

“Would they work as advertised? Did it all stack up financially? Would they use them again? The answers turned out to be yes, yes and yes.

“Two years later in 2005, Andy Porter joined Ian and Alison as Partner and the success of what was an initial trial, has spawned a thriving business, with the same team still at the helm. Alongside them now, two additional partners and an enviable record of high standards, dependable delivery and satisfied clients.

“Stage Two of the SIPS@Clays story started with a decision to stop the existing development company and to switch all their

energies into this new way of building. Andy commented: “When we started out, we weren’t really sure what our limits were, but over time we have grown more and more confident and now we regularly take on complex, high-end projects. This sort of work is generally rather more exacting than straightforward developer-style houses, but our capabilities have grown exponentially over the years.”

“I first met Ian and Andy at the various self-build shows and I was immediately drawn to them by both their charm and their enthusiasm, but also by the fact that they were obviously very hands on.

“They’ve kept the business relatively simple by providing SIPs design, fabrication and installation only and they don’t get involved in turnkey projects where you take on the finishing trades as well as the structure.

“Today, their Skipton-based business produces around two new home packages every week with builds all over the UK. They employ eight people in their factory and design studio, as well as having four onsite erection crews who travel the length and breadth of the country.

“Whilst the bulk of their business is with private clients, up to a third of their workload is producing more cost-effective solutions for housing developers.

“One of the big changes we’ve seen over the years,” said Ian, “is that when we began doing the self-build shows, the people we were talking to had no idea what we were up to. We had to explain what SIPs were all about. These days, everyone we meet seems to know about SIPs and what they offer, so that we can have a much more focussed discussion from the off.” Their projects have featured on the TV self-build shows and there are many places where novices can learn the ins and outs of SIPs, not least the SIPS@Clays website which is stacked full of background information and instructive videos.

“They are true pioneers of the UK SIPs building scene and are in fact the original Kingspan TEK Delivery Partner. Their work involves a number of cutting-edge techniques, yet what strikes you most about SIPS@Clays is the timeless values embedded within the business. They are a very down to earth lot: no gimmicks, no fancy sales patter, no talking you into fancy extras, no empty promises.

“It’s no surprise they have become the No.1 SIPs provider in the country and I look forward to following their progress in the years to come.”

IN OTHER NEWS

It's great to see so many contractors and developers embracing a 'fabric first' approach and building with SIPs. We work with commercial organisations across the UK to deliver energy efficient developments, completed with predictable build programmes that are 30-40% quicker than traditional construction.



THE ROPES, OUSEBURN, NEWCASTLE

Working with Newcastle based developer Modobloc, we SIPs designed, fabricated and installed a brand new development of seven, four storey, luxury SIPs townhouses on the banks of the River Tyne in Ouseburn. Using SIPs for the first time, Modobloc were keen to embrace their energy efficiency and also take advantage of the speedy build that the system offers. The SIPs superstructure was delivered and installed in just six weeks.



KINDERZIMMER, CHELMSFORD DAY NURSERY

We worked directly with the team at Kinderzimmer to deliver a state of the art SIPs addition to one of their newest day nurseries in Chelmsford, Essex. Forming part of a major refurbishment project with architecturally designed rooms, the SIPs extension took just one week to erect and was chosen for it's speed of build and energy efficiency.



MEERSBROOK, SHEFFIELD

As a new concept in home buying and self building, we worked with developer Sustainable Shell Homes to deliver seven, three storey SIPs homes that have been built to weather tight stage only. The highly efficient shell homes achieved an outstanding airtightness test result of 1.1m³/(h.m²), making them exceptionally energy efficient. The new homes took our installation team approx. one week per house to install on site.

SIPS A DEVELOPER'S Dream

Pretty Perfect Properties founder, Olivia Mitchell explains why she's been converted to building with SIPs following the success of her flagship development at Birch Hall Close, Earby, North Yorkshire.

① WHY DID YOU CHOOSE SIPS AS YOUR CONSTRUCTION METHOD?

As a forward thinking developer with a focus on quality over quantity, it's important for me to look outside of the box and embrace more efficient and environmentally sustainable building methods. After much research and recommendation, I decided to build our latest development with SIPs because of the speed of build, the superior energy efficiency and reduced carbon footprint offered by this method of construction and specifically by the Kingspan TEK Building System, delivered by SIPS@Clays.

At Pretty Perfect Properties, we build luxury homes that are future proofed, are a cut above our competitors and noticeably different to the standard new builds offered by the big developers. With its many benefits, SIPs construction has substantially added to this dynamic blend and we take great pride in that.

"SIPS@Clays are very easy to work with and worked collaboratively with myself, our main contractor New Lodge Contractors Ltd and architect Tony Pringle of MHA Architecture Ltd to produce a development that we are extremely proud of. Birch Hall Close was a real team effort".

① COMPARED TO PREVIOUS PROJECTS, WHAT WERE THE CLEAR BENEFITS/ADVANTAGES OF BUILDING WITH SIPS AT EARBY?

The speed of build has been one of the biggest advantages. The SIPs superstructure of the properties at Earby are all circa 2000sq ft and were erected in less than 3 weeks! This allowed us to complete the new homes and have them occupied much quicker than a traditional build allows, which for any developer, is a big win.

Alongside this, is the life long energy efficiency and the airtight building envelopes of the new homes. The panels are precision engineered and jointed with insulated splines, so we had absolutely no issues with air leakage and the properties passed their airtightness tests with very high scores.

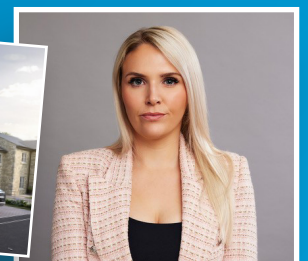


① IS THIS YOUR FIRST SIPS PROJECT?

Yes it is, but it certainly won't be my last. I have found the level of detail and precision that goes into the SIPs design and construction process fascinating. Pretty Perfect Properties will, without doubt, be building with SIPs again!

① WHY SIPS@CLAYS?

As a very proud Yorkshire girl who is passionate about delivering quality, exclusivity and luxury, I try to keep all materials and labour local to the projects we work on. e.g., the stone used at the Earby development is from Bradford and I use local building merchants wherever possible. Skipton based SIPS@Clays is just 10 minutes away from the site, so I was keen to work with them from the start due to their location, reputation and the superior SIPs product they deliver.



**PRETTY PERFECT PROPERTIES WAS
FOUNDED BY OLIVIA MITCHELL IN 2020.**

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