



THE BEST USE OF TIMBER

**Wood for Good and Scottish Forestry
present the 2018 Awards for the
Best Use of Timber in Scotland**

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the 2018 Award for the Best Use of Timber**

Introduction

Since 2012 as part of the annual RIAS Awards scheme, Scottish Forestry and Wood for Good have combined to sponsor an award aimed at encouraging innovative and creative use of timber in new buildings in Scotland. The award also seeks to stimulate greater appreciation of home grown timber and its potential for use in construction, with added consideration given to thoughtful and appropriate use of different species. Technical competence is of course paramount and the design and detail of how the timber is used was as much a part of the assessment criteria as imagination and overall architectural excellence. There is no restriction on building type or scale of project – from small to large and from domestic to commercial, the challenge is to show how suited the use of timber is to the development of new architecture in Scotland.

The Judges

Stewart Henderson
RIAS President

Joanna van Heyningen OBE RIBA
van Heyningen and Haward Architects
(representing the Royal Institute of British Architects)

Jon Stevenson
Director of Wood for Good
(Timber Award representative)

Rachel Tennant Hon FRIAS
Landscape Institute Scotland

**Architecture &
Design Scotland**
Ailtearachd is Dealbhadh na h-Alba



Scottish
Forestry
Coilltearachd
na h-Alba



Wood for Good



Bath Street Collective

WINNER

Chapter Winner

Edinburgh Architectural Association

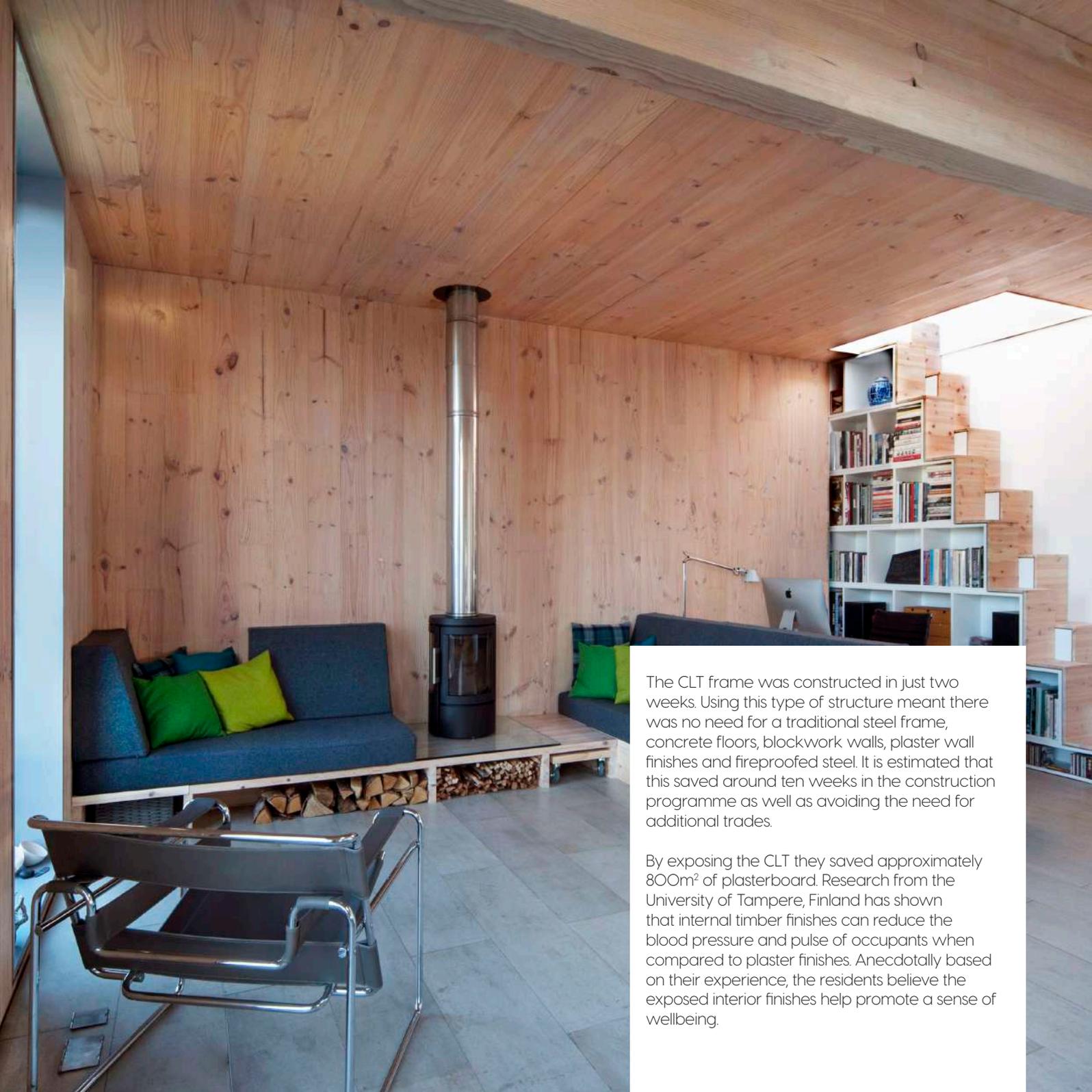
Location: Portobello, Edinburgh
Date Completed: April 2017
Building Type: Residential
Architect: John Kinsley Architects
Client: Bath Street Collective
Contract Value: £883,000
Main Contractor: HM Raitt and Sons
Timber Supplier: Egoin
Photography: John Reiach & Egoin



Bath Street Collective is a group of four families who came together to purchase the site and build a small tenement block containing a bespoke flat for each family. When the families started meeting to discuss their plans, one of the key topics of conversation was how 'green' they wanted the building to be. The collective wanted the project to be as sustainable as possible and they soon arrived at a brief that called for the building to be designed to Passivhaus equivalent standards of energy efficiency, with an all-electric strategy that would allow them to run free from fossil fuels.

As part of that discussion, it was also apparent that embodied energy and the use of healthy materials was important. The group was aware of Cross Laminated Timber (CLT) buildings in other parts of the UK and felt that their building, a four-storey tenement, lent itself to that form of construction.

They engaged with the contractor Egoin early in the design process and the local representative was extremely helpful in putting together some initial costs which demonstrated that the use of CLT was feasible and could be cost effective.



The CLT frame was constructed in just two weeks. Using this type of structure meant there was no need for a traditional steel frame, concrete floors, blockwork walls, plaster wall finishes and fireproofed steel. It is estimated that this saved around ten weeks in the construction programme as well as avoiding the need for additional trades.

By exposing the CLT they saved approximately 800m² of plasterboard. Research from the University of Tampere, Finland has shown that internal timber finishes can reduce the blood pressure and pulse of occupants when compared to plaster finishes. Anecdotally based on their experience, the residents believe the exposed interior finishes help promote a sense of wellbeing.

We spoke to the Architect: John Kinsley



How, when and why did the four families start the process?

We (JKA) put an advert on the local community website to gauge interest in the project and followed that up with a presentation in a local cafe one evening. From an initial 18-20 attendees there were eventually 4 families that committed to the project. The key motivations for the participants were twofold:- i) being able to save money compared to buying conventionally (because there is no developer involved there is no developer's profit – the flats are bought at cost price) and ii) being able to design and build a property that is completely bespoke.

Why timber?

I had followed with interest the breakthrough use of Cross-laminated Timber (CLT) in projects down south and thought the material would lend itself to a residential project of tenemental scale. As a client group, we wanted to be as sustainable as possible and we were interested in using a timber structure in lieu of a concrete and steel frame.

Although more expensive than a conventional steel frame on a straight capital cost comparison, the CLT saved around 8-10 weeks in programme. We were also able to avoid using considerable areas of plasterboard linings. Together these made CLT cost competitive.

What was your favourite part of the project process?

Seeing the CLT frame being constructed was the most exciting aspect of the project. The building went from being a slab on the ground to having a complete 4 storey CLT frame with staircase and balconies in place in just two weeks. We could get a sense of space and volume within the building and with door and window positions in place we were also able to identify views out. For the two weeks of the CLT build we had the road closed and a large crane positioned in the street. The children from the local primary school just at the back of the building would stop to watch every afternoon on their way home and our neighbours and other passers-by were intrigued to see this new type of frame be constructed so quickly.

What is your favourite aspect of the finished project?

We have had incredibly positive feedback from our neighbours and the local community. Whilst the building is uncompromisingly of its time we worked hard to ensure it sat happily in the street and I am really happy at how well it sits with its neighbours. Also, having lived in draughty old houses for years, it's a joy to be snug and warm through the winter even in t-shirts and stockinged feet.

Is there any advice you could pass onto other community groups?

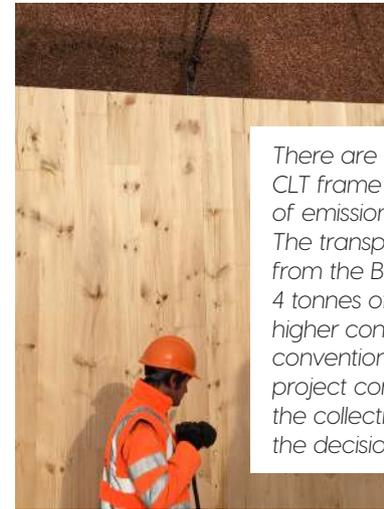
Lots! Celebrate the small victories, like getting the statutory permissions, buying the land or breaking ground. They will build up a store of positivity for when things inevitably get difficult at some point. You can't do too much communication. Get a good team of professionals around you who you can trust.

What are your plans for the future?

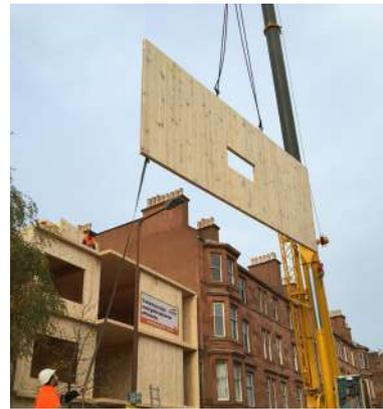
We're planning other similar projects. We are currently putting a group together for a site in Leith and are also looking at using the collective build concept as a model for retirement cohousing. Please get in touch with us if you're interested.







There are 114 tonnes of CO₂ stored within the CLT frame (approximately 12 years' worth of emissions for an average UK citizen). The transport cost of bringing the frame from the Basque region of Spain was only 4 tonnes of CO₂. Additionally, CLT achieves higher construction accuracy compared to conventional construction methods. With the project complete and occupied for a year now, the collective are all very happy that they took the decision to go with CLT.



Scan below to watch a short film of the construction process.

Film courtesy of Egoín

Timber Award judge and director of Wood for Good, Jon Stevenson, said: "We were impressed by the use of CLT, a form of timber engineering which is growing in popularity, to create a structure which has given the residents a fast, affordable build programme, flexible living space and low heating energy bills as well as a building that sits very well in its environment."



The Black Shed

SHORTLISTED

Location: Isle of Skye
Date Completed: April 2017
Building Type: Residential
Architect: Mary Arnold-Forster
Client: Helena Webster
Contract Value: £330,000
Main Contractor: Allen Cowe
Timber Supplier: Dinesen
Photography: David Barbour

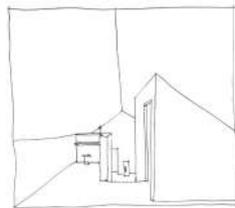


When Mary Arnold-Forster met with the clients to find out what their ideas for their new home would be they asked for an open plan house stating that they had no real desire or need for separate rooms. Adopting the ethos of the traditional Blackhouse which is local to the Highlands and Islands, the clients wanted the simplicity and warmth that a Blackhouse provided, the result was The Black Shed.

Traditionally Black houses were not built to exploit the views. People worked outside, and houses were for shelter against the wind and rain. The Black Shed is not flooded with daylight but there are a few carefully chosen

windows and the passage of the sun can be traced through the house from the morning window into the upstairs bedroom and from the long entrance corridor through to the south facing dining room doors to the fixed window pane on the west gable.

A reduced palette of materials was used - outside, black corrugated metal sheeting clads the building with a grey resin floor guiding you through the inside. The walls, ceiling, stairs, doors and kitchen are built entirely from Douglas Fir which gives the interior a real warmth and a relaxed feeling. The Douglas Fir was also used to craft shelves, cupboards, drawers, handrails and desks.





We spoke to the client: Helen Webster



Why timber?

Judith and I spent many walking holidays on Skye before deciding to relocate there. During our walks we noticed that many of the nineteenth century houses were lined internally in vertical tongue and groove boarding. There was a particularly nice example in the fisherman's house at Camasunary bay in which the panelling went from floor level to a shelf that ran around the room just below ceiling level. What we liked about this tradition was that it made the rooms feel warmer and more tactile than painted plasterboard. So, when we were talking to Mary about the internal finishes for our home we suggested lining the house in timber as a sort of homage to the Skye tradition. However, we were keen to extend the tradition rather than to slavishly replicate it. Therefore the final design employed 200mm wide Douglas Fir boards that ran horizontally, except for the doors where the boards ran vertically.

What was your favourite part of the project process?

That's a difficult question. There were so many exciting parts of the project interspersed by lots

of challenging parts. The design phase was extremely exciting. It was fantastic to have a design dialogue with someone as creative as Mary. We had great fun talking about how we could create a house that truly reflected the way we wanted to live while at the same time extending the architectural traditions of Skye, particularly the Blackhouse typology. Naturally we also loved see house emerge on site.

What is your favourite aspect of the finished project?

We both love the Douglas Fir lining. It works fantastically on so many levels. We particularly like the experiential contrast between the hard black profiled aluminium exterior and the warm, soft, textured, and slightly automatic timber interior. The timber has a beautiful warm glow when sunlight, light from the stove or artificial light hits it. The effect of the light continuously changes the feeling of the space.

What advice would you give someone who wants to build remotely?

Building remotely proved challenging for us. We were used to the speed of transactions that occur in cities. The most important lesson we learnt was

that everything takes more time than you are promised and you need to learn to be patient. Rushing any part of the procurement process ends up being counterproductive. Maintaining good relations with the team is paramount if you want a good end product.

How does living there make you feel?

The Black Shed, which is tantamount to being one big space, facilitates the way we want to live our daily lives brilliantly. It allows us to work, play or rest together or apart. The house also deepens our connection with the incredible landscape and climate that surrounds us, producing a sort of primordial connection to place. This is at once very sublime, grounding and humbling.



Falls of Shin

SHORTLISTED

Location: Achany, Sutherland
Date Completed: May 2017
Building Type: Visitor Centre
Architect: CH Architecture Ltd
Client: Kyle of Sutherland Development Trust

Contract Value: £950,000
Main Contractor: William Gray Construction
Timber Supplier: Russwood Larch Cladding Forestry Commission Scotland - rough timber or landscaping.

Photography: Ewan Weatherspoon & C H Architecture



The building in a woodland setting and has been designed to sit comfortably in the landscape. From the outset, timber cladding was selected as the preferred external finish. Siberian Larch was specified for the board on board cladding and a silicate based timber treatment, that ages timber in a uniform manner, was added to ensure that the timber silvers evenly despite the large over sailing roof.

The structure of the building is a hybrid of timber frame, Cross Laminated Timber (CLT) and Glue Laminated Timber (Glulam). It was pre-fabricated and delivered to site to be assembled. The primary

spine wall is fabricated in CLT which is exposed in the main public space. The roof is also made from CLT, supported on Glulam beams and columns, with the finishes left exposed. Together with the polished concrete floor this provides a palette of natural materials which give the interior a robust, durable and appropriately rural feel.

Douglas Fir has been used for the external Glulam column which sits at the prow of the building supporting the oversailing roof. The Douglas Fir which was felled from a nearby forest and gifted to the project by Forestry Commission Scotland, has also been used to form the external trellised walkway.



The image shows a bright, modern dining room with a high, vaulted wooden ceiling. The ceiling is made of light-colored wood with exposed beams. Several large, circular, white pendant lights hang from the ceiling. The walls are also made of wood, and there are large windows on the left side that offer a view of a green landscape with trees and a body of water. In the foreground, there are several wooden tables and chairs. Some tables are occupied by people, while others are empty. The floor is made of polished concrete, which reflects the light from the windows and the ceiling. The overall atmosphere is warm and inviting.

This open structure is a landscape intervention which provides an approach to the building and contains the interpretation boards telling the story of the salmon and its importance to the local community, the ecosystem and the economy.

Timber that was left over from the walkway construction was salvaged and used to form two large picnic tables and benches, each accommodating over 30 people. These are used as overflow space for the cafe and have provided the ideal venue for children's parties.

We spoke to the contracts manager: Valerie Houston, Kyle of Sutherland Development Trust



Why timber?

To reach Falls of Shin you must follow a winding single track road that follows the River Shin until it reaches a clearing in the ancient woodland. The rural forest location was the inspiration and was integral to the use of timber in the design by our fantastic architect Catriona Hill from CH Architecture.

Timber was chosen to create a connection between the outdoors and indoors, but it was also chosen for its environmental sustainability because it is thermally efficient.

It was also about engaging with one of our key stakeholders – the Forestry Commission who own the land that surrounds the site and who gifted us with an in-kind donation of Douglas Fir timber for our showpiece external walkway which represents the salmon's body. The surplus wood that was left over was also used to create the massive 8-metre long (16-seater) external tables that can now host outside parties. For this we have to praise the ingenuity of the joiners who did an amazing job of building them on site.

Timber was also used for practical reasons – because it is the most common method of construction in this part of the world – it's a method that local contractors are comfortable with, so you tend to get best value for money.

What was your favourite part of the project process?

There were several fantastic moments in the project process – for example, when we took the 1:200 model out to the community consultations. It was great to see how people could really engage with the 3D model and visualise what the finished building would look like. Also, the first day of construction was pretty momentous – because so many members of the community came along for that. Obviously, the day that the keys were handed over by the contractors was an amazing moment, and of course the day that we officially opened to the public with a day of celebrations after all those years of closure was very special.

What is your favourite aspect of the finished project?

I just love the atmosphere of the interior – it feels cosy and comfortable – especially in winter when the wood burning stove is glowing.

Since reopening the attraction in May 2017, local people and tourists from across the globe have told us that they love the striking new building. People love the fact that the building is inspired by the salmon that leap up the falls, and I think they understand the connection that the building has with the natural environment that surrounds it.

Is there any advice you could pass onto other community groups?

If you are doing a building project, make sure that you start your consultation process with all the stakeholders and with the local community as early as possible. Engage with the community from the start so that they buy in to the project and get excited about it. It is essential to get the design team on board early on. Our brief was that we wanted to create a sustainable community facility and Catriona Hill of CH Architecture completely understood what we wanted – we could not have asked for a better architect – so make sure that you and your architect have the same vision.

It is also essential to think about the end user from the outset – what will the visitor journey be, will the finished building be user friendly and easy for a community group to run and maintain? How sustainable and flexible will the building be?

Can you say something about the commissioning/procurement process?

The commissioning/procurement process went out to tender through Public Contract Scotland on a design and build contract. The valuation was done on a 70/30 split – 70% on pricing and 30% on quality and the tenders were scored on this. We ended up with the most amazing, creative team with CH Architecture, WSD Inverness and WGC Scotland Ltd who bought into the idea that this was about creating a sustainable building for the community to use for years to come – that would bring in visitors and create employment opportunities to the rural local area.



The Hawkhead Centre

SHORTLISTED

Location: Paisley, Renfrewshire
Date Completed: September 2017
Building Type: Support Centre for the War Blinded
Architect: Page\Park
Client: Scottish War Blinded
Main Contractor: CCG Scotland
Timber Supplier: Buildbase Glasgow
Photographer: Keith Hunter



Timber is the predominant cladding, and most prominent internal material used in the Hawkhead Centre. The exterior of the building and its outbuildings (a potting shed and garage) are clad in white-stained Scottish Larch. The stain contains an admixture to avoid the spread of fire on the façade, rather than the conventional two-stage application of fire-retardant coating followed by decorative stain.

The most prominent feature of the building interior is the double curving Birch plywood ceiling. This canopy extends outside to form a sheltered entrance over the veranda, where a curved Larch lining is used. This is stained to match the colour of the Birch plywood, giving the impression

of a ceiling which runs continuously from outside in. This ceiling has an aesthetic role, visually connecting each room inside and continuing to the outside. It also has a technical role in housing all of the services, light fittings and acoustic absorption material for the spaces below. The ceiling uses a framing system that was curved to shape on-site, which the manufacturer advises is the first outdoor implementation of the product.

Timber was also used internally as a key part of the visual contrast strategy: with Dark Walnut used for handrails; door frames and furniture; lighter timbers such as maple veneers are used for doors. Coloured wood fibre panels were used as a cladding material for the feature internal 'pod' housing the dining area servery, the 'heart' of the centre.





We spoke to a building user: William Alexander Montgomerie, member of Scottish War Blinded



How often and why do you use the building?

My first contact with Scottish War Blinded was through John Kerr of the outreach service. It was John who recognised the loneliness that I experience and told me about the Hawkhead Centre. I needed something to put the spark back in my life. The loneliness is still there but I have something to look forward to. The Centre makes me feel that I'm coming home once a week and gives me a new lease of life.

On first sight, the building looks like a spaceship that has landed amongst the trees, that first glimpse you catch as you come along the main road. On closer inspection you see that the building is made for the surroundings, reflecting the use of timber. The old Gatehouse at the exit also adds to the interest, the old, the new and the trees all intertwined and connected with the use of natural materials. This is the future.

What is your favourite part of the building and why?

I love all the building. It feels welcoming from the minute you come to reception all the way down to the main area, the Hub.

The most important part of the building is the Hub. It's like a roundabout! All the members and staff come together there and then disappear in separate directions to their activities. When you sit in the Hub your eyes are drawn to the outside. The outside comes in and the inside goes out, it's seamless, and the two complement each other.

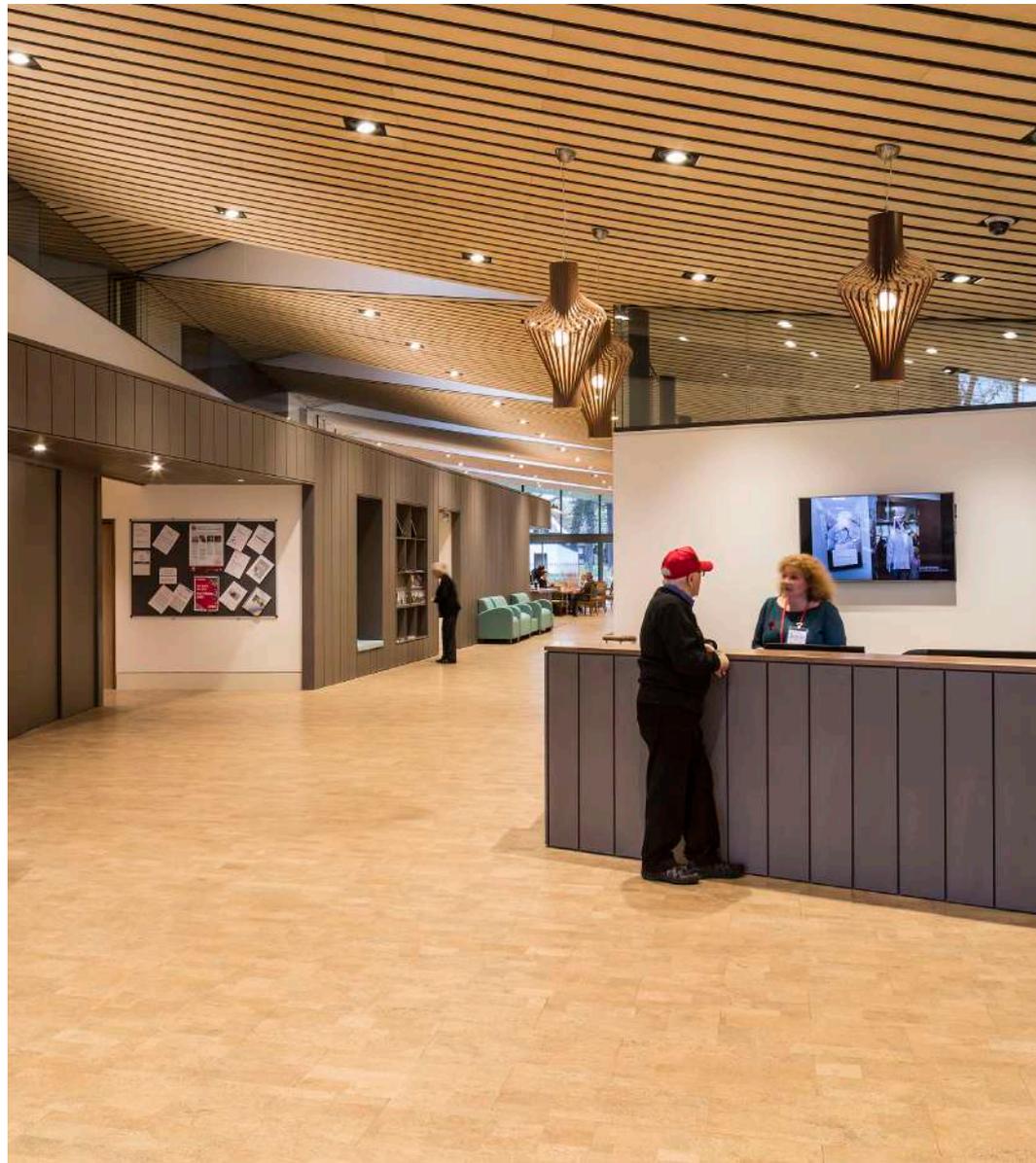
How has your life changed from using this building?

It gets me out. If I'm down, one day amongst friends and staff at the Centre can make a difference to how I feel. The staff not only look after our well-being, they are also interested in our well-being. The staff team have been selected well with each member of staff selected for their own qualities. Procedures run smoothly with discipline but not as we know it in the military, like a well-oiled mechanism of a clock.

Every season of the year is visible from the building and is reflected by the activities on offer; Christmas, BBQs etc. The building makes me feel homely, comfortable and safe. This feeling of being safe extends to my home as the Centre Officers and Outreach workers cater for well-being out with the Centre too.

I have learnt new skills, such as archery. I have met new people and made new friends whilst taking part in activities. I have participated in outings. All that is helping me to keep active in mind and body and got me thinking about my time there. I like that there is no age distinction at the Centre and I have learnt a great deal from others, sometimes others that are a lot older than me. We support each other here, the building and the environment encourage that behaviour between the members.

The staff and the building give you a happy feeling altogether, this feeling extends out with once you go home. A feeling of worth, I'm not swept under the carpet and I'm part of something. It's recognition.



Lochside House

SHORTLISTED

Location: Lochside House
Date Completed: June 2017
Building Type: Residential
Architect: Haysom Ward Miller Architects
Main Contractor: Spey Building and Joinery
Timber Supplier: Dinesen
Photography: Richard Fraser & the owner

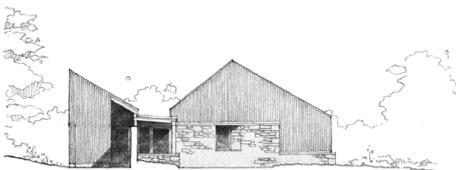
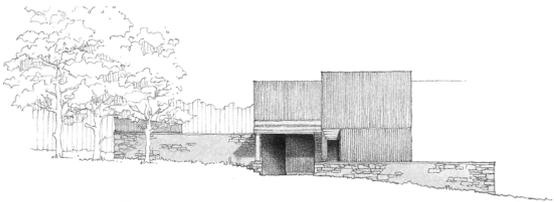


Built on a remote rural site, Lochside House presented many challenges to both architect and builder. It was clear from the outset that the building would have to meet high standards of energy efficiency. In addition to this, every part of the house had to be brought to site in small trailers down a narrow and rough track, and all construction waste removed via the same route. This made it essential to minimise the amount and weight of material required.

All energy used by Lochside House must either be generated on-site from sustainable sources or from fuel delivered to the remote location. The first step in the energy strategy was to opt for solar, thermal and photovoltaic panels along with Mechanical Ventilation with Heat Recovery (MVHR) to minimise energy usage and ensure very high thermal performance and airtightness.

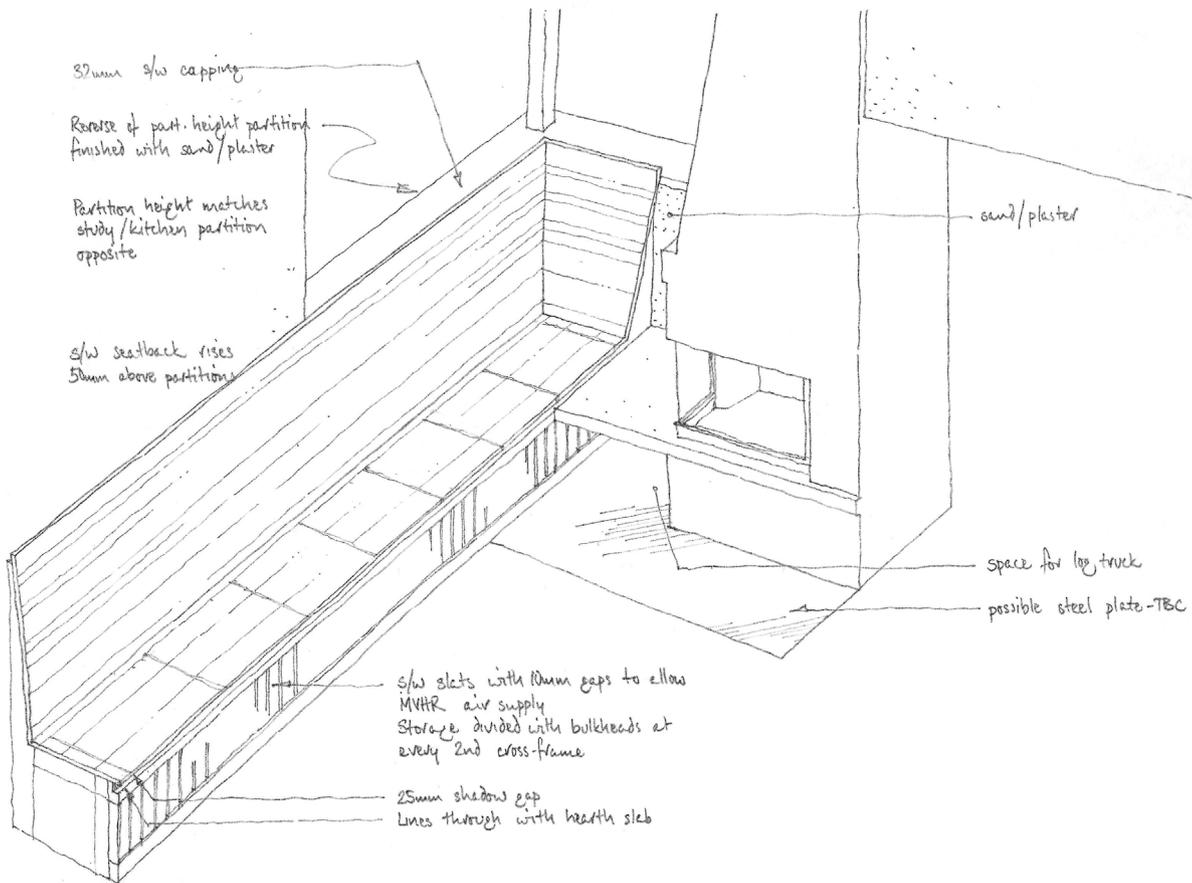
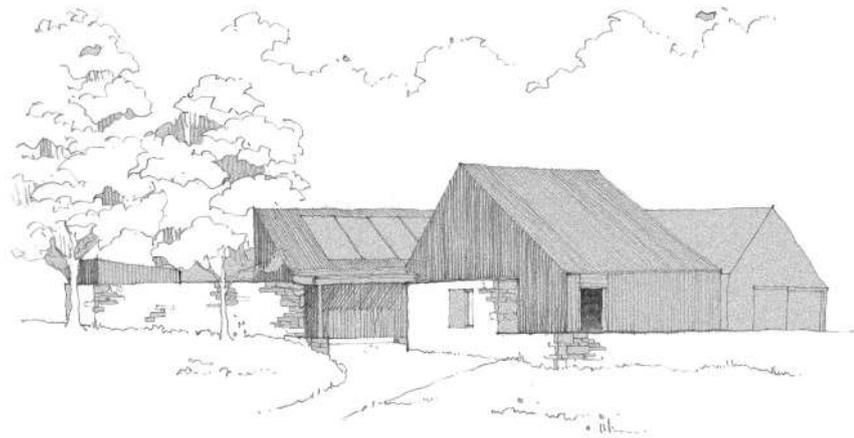
Structural Insulated Panel (SIP) construction provided excellent thermal performance and a short build time to suit the unpredictable weather in the area. Specifying narrow SIP panels simplified handling and allowed smaller trailer loads. The few joints between panels made it simpler to achieve the very high level of airtightness required, while off site fabrication minimised site waste.

Lochside House is clad with Scottish Larch, charred by the contractor at their yard before being brought to site. The charring increases durability, but also darkens the tone of the timber in a natural way. The organic colours echo those in the surrounding landscape. The same charred boarding has been used for shutters over the windows and doors. Under the shelter at the entrance, the boarding has been given a contrasting paler finish, hinting at the pale timber finishes on the floorboards and bespoke joinery inside.









Curated by Architecture & Design
Scotland, Scotland's champion
for architecture and the built
environment, on behalf of Scottish
Forestry and Wood for Good.

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technologies in this publication
you can visit:

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A Library of Sustainable
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Level 2

The Lighthouse

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Glasgow G1 3NU

or visit:

materials.ads.org.uk

