



Design and build of modular homes with full site services



About us

Connect Modular, part of The Wee House Group, supplies affordable, modular homes to housing associations, local authorities and housing developers across the UK.

We strongly believe that our modular construction process is the most cost-effective, efficient and sustainable method for addressing the UK's housing shortage.

Under most contracts, we take on the principal contractor role, managing all aspects of the project from design and statutory consents to manufacture of housing and construction of ground and site works. This ensures a single point of responsibility for affordable housing clients.

Accreditations from the Build Off-site Property Assurance Scheme (BOPAS), ISO 900 and ISO 14001 systems approval, ensure that our homes and our practices are held to the highest standards.



Modular Construction

Connect Modular homes are constructed in modules in our manufacturing facility in Cumnock, Ayrshire.

All houses are more than 90% complete before leaving our factory, where they have been fitted out with kitchens, bathrooms, plumbing and electrics.

Arriving on site, the modules are craned into position and made wind and water tight. Our on site team will then complete the final external works, allowing the homes to be ready for occupancy in a matter of weeks.

Our design process considers the specific needs and requirements of housing associations and local authorities, ensuring that the modules can be customised to meet their unique needs.

We also consider factors such as transportation logistics, site assembly, and integration with existing infrastructure/architecture. By utilising innovative design techniques, modular construction can deliver visually appealing and functional buildings while maximising efficiency and cost-effectiveness.



Benefits of Modular Construction



Better Quality Homes

Standardised make ups, methods and manufacturing detailing creates repetition for the effective implementation of a robust scheme of quality assurance checks.



Project Programme Certainty

With such a high percentage of works taking place under controlled conditions, and not subject to adverse weather conditions, we can offer greater certainty on dates from the outset of the project.



Reduced Waste

Cardboard and plastic packaging is kept dry prior to baling, making recycling simpler whilst off-cuts are stock piled according to size to ensure suitable repurposing.



Minimal Disruption to Neighbours

With site preparation works and module manufacture happening simultaneously, the project timeline is condensed and the offsite nature of construction ensures deliveries to site are minimal.



Improved Materials Storage & Quality

Controlled conditions allow all materials to be stored in a dry environment, unpacked and quality checked at point of arrival with unsuitable items quarantined.



Carbon Capture

Our build system is timber frame and 1m3 of timber contains almost 1 tonne of Co2 captured from the atmosphere as it grows. Research suggests that 2.1 tonnes of carbon is saved from entering the atmosphere for every tonne of wood produced instead of steel.



Reduced Emissions

Manufacturing and storage facilities allow for bulk delivery of materials, reducing vehicle movements by as much as 57%, versus traditional construction.



Controlled Factory Conditions

Controlled factory conditions make it easier to improve the future sustainability of homes. For example, better air tightness can be achieved as standard.



Case Study - 63 Affordable Modular Homes for Riverside Scotland

Location:
Dundonald, South Ayrshire

Number of homes:
63

Property range:

19	2 bedroom townhouses
16	1 bedroom cottage flats
2	4 bedroom houses
16	3 bedroom houses
10	2 bedroom amenity bungalows

Project timeline:
March 2021 - November 2022

In March 2021 Riverside Scotland partnered with Connect Modular to undertake its first ever modular housing project and Scotland’s largest affordable modular housing development at that time.

This £9.8 million development, was handed over in November 2022. Completed within budget and one month ahead of schedule, the project delivered much needed affordable housing in the village of Dundonald.

For Riverside Scotland, Connect Modular provided the innovative solution it had been searching for to help address the shortage of affordable housing.

In contrast to a traditional build project, fabrication under factory conditions diminishes waste, improves quality, negates the impacts of adverse weather and allows for overlap of site preparation and build phases – a more efficient process all round.

The modular homes in this development were designed with solar PV panels and a highly insulated building envelope, resulting in lower energy consumption and huge savings on energy bills for tenants.

"From the beginning, this sector-leading project hit the ground running, and despite the Covid-19 pandemic and spells of bad weather we were never behind schedule or short of materials – one of the many benefits of Connect Modular being able to store materials in their Cumnock factory. And there's the benefit of dealing with just one contractor throughout the project. We cannot fault the process. From the very first modules being craned in, to handing over to the homes to happy tenants, it was so efficient and straightforward for us as the client.

We are so proud to be flying the flag for affordable modular homes in Ayrshire and have been delighted to welcome representatives from government, the housing sector and industry bodies to the Dundonald site and Connect Modular's factory at various stages of the development. No request is too much for the Connect Modular team.

From presenting to industry professionals, awards ceremonies and drone footage, to social media and press coverage they have covered all bases.

The accelerated build time and improved quality control has resulted in a first-class development, completed ahead of schedule. We are delighted to be providing high-quality, low energy homes at speed and scale whilst helping to tackle climate change, prevent homelessness for our veteran community and help tenants to live in affordable, energy efficient, warm homes during the largest cost of living crisis our nation has faced for the past 40 years".

Diana MacLean
Managing Director, Riverside Scotland.



Case Study- 6 Amenity Bungalows for North Ayrshire Council

Location:
Stevenston, North Ayrshire

Number of homes:
6

Property range:
2 bed amenity bungalows

Project timeline:
January - July 2023



Our second affordable housing project for North Ayrshire Council using our innovative modular construction method.

Connect Modular was appointed to deliver six new amenity bungalows at Afton Court, Stevenston on a brownfield site.

Working collaboratively with North Ayrshire Council, we ensured designs were capable of modular construction whilst also achieving the long term needs of the end user to encourage independent living.

The residents of Afton Court benefit from excellent energy performance through a highly insulated building fabric, complimented by the installation of air-source heat pumps and photovoltaic panels. The properties also feature a misting fire suppression system.

Afton Court is a tight, urban infill site on the corner of a busy road junction to the south of Stevenston town centre. Connect Modular worked hard to further maximise the amount of work completed in the factory and thereby minimise onsite works and associated disruption to local residents.

A flexible, silicone based K-rend render was applied within the factory as the final external finish. Cleverly designed cladding panels were quickly applied on site to cover connections and complete the external finish. The render was completed during a week of cold weather when temperatures plummeted below zero during the drying period but heaters were utilised to maintain programme. These works would not have been possible on site and would have been further delayed by heavy rainfall the following week.

“North Ayrshire Council has built a strong working relationship with Connect Modular on innovative housing projects in Seamill and Stevenston. The projects were delivered to a high standard and were well received by residents.”

Fiona Ellis,
Senior Manager, Housing and Public Protection, North Ayrshire Council



Case Study- 4 Affordable Modular Homes for Mull & Iona Community Trust

Location:

Isle of Mull;
Oskamull and Acharonich

Number of homes:

4

Property range:

2 and 3 bedroom bungalows

Project timeline:

July 2020 - May 2021



This rural housing project was crowned winner of the ‘Excellence in development for affordable housing’ category at the 2021 Scotland Housing Awards

In 2021 we completed four affordable homes on two separate sites (Oskamull and Acharonich) in the remote location of Ulva Ferry on the Isle of Mull.

The efficiencies gained through running site preparation and module construction concurrently meant the build was completed within seven months, delivered on time and on budget, in spite of taking place during the Covid-19 pandemic.

The style of the houses is in keeping with the local architecture and complements the picturesque setting - traditional cottage proportions clad in vertical larch with corrugated metal roofs and coloured front doors sit comfortably in the stunning, rural landscape with its rolling hills and outlook to the sea; quiet, tranquil and calm.

In terms of design, a lot of consideration was given to island living - larger than normal larder cupboards were included in the kitchen area to store additional shopping when ferries are intermittent in winter months and there is generous

storage for outdoor apparel in the porch area.

Though traditional in appearance the houses are produced as modular units, under controlled factory conditions enabling precision as well as making quality control easier. Part funded by Ecology Building Society, the homes had strict environmental performance criteria to meet. This was achieved through a combination of high-quality insulation, better air tightness and the use of solar PV panels.

Local residents enjoyed watching the modules be craned into position on site, after being delivered to Mull via the Oban to Craignure ferry. Module dimensions were designed with meticulous accuracy to ensure safe passage on the ferry and across single track roads on the final leg of the journey.

Following years of feasibility work and fundraising to purchase land and meet construction costs, the delivery of these homes has secured the future

sustainability of the fragile Ulva Ferry community, increasing the resident working age population by 10% and the school roll by 50%.

"We have found working with Connect Modular a really positive experience. From design and planning through to construction and the logistics of transporting the modules to site, their team have been brilliant to work with, quickly resolving any issues along the way. The new affordable homes sit so well in the Ulva Ferry landscape and will make such a difference to our community. I would highly recommend The Wee House Company and their modular construction approach to other community groups seeking sustainable, affordable housing solutions."

Helen MacDonald,
Housing Project Officer
Mull and Iona Community Trust



Case Study- 101 Affordable Modular Homes for Cunninghame Housing Association

Location:
Kilmarnock, East Ayrshire

Number of homes:
101

Property range:

- 5 wheelchair bungalows
- 10 amenity bungalows
- 66 2 bedroom house
- 18 3 bedroom houses
- 2 4 bedroom houses

Project timeline:
July 2022 - November 2024

This development is Cunninghame Housing Association’s first ever modular housing project and the largest modular low-rise housing development in Scotland.

Connect Modular is proud to be delivering 101 affordable homes for Cunninghame Housing Association in partnership with East Ayrshire Council and The Scottish Government.

The £17million project will see a mixture of 2, 3 and 4 bedroom general needs houses constructed, together with ten amenity bungalows and five wheelchair bungalows.

The collaboration between Connect Modular and Cunninghame Housing Association represents a shared commitment to addressing the pressing need to quickly and efficiently deliver affordable housing.

In August 2023, the first stage of this project was completed. Handovers will continue until the project is fully completed in Summer 2024.

“The Association is committed to delivering high quality homes for rent and it’s been exciting to see this fantastic modular housing development take shape. The handover of these first completed houses to the new tenants is an important milestone in the delivery of 101 new homes in an area where demand for housing is much needed. We’re excited to continue our successful partnership with Connect Modular through to Summer 2024 when the site will be fully complete. The project has benefitted from significant investment from the Scottish Government and this invaluable ongoing support allows us to carry on providing quality new homes as we continually strive to make our communities better places.”

Linda Anderson,
Acting Chief Executive Officer,
Cunninghame Housing Association



Case Study- 31 Affordable Modular Homes in Seamill for North Ayrshire Council

Location:
Seamill, North Ayrshire

Number of homes:
31

Property range:
2 bed houses
1 and 2 bed flats

Project timeline:
January -
November 2019



In 2019 North Ayrshire Council engaged an innovative programme to deliver 31 affordable homes using the innovative modular construction approach.

The development at Ardrossan Road, Seamill was designed and built by Connect Modular. Homes were constructed in our Ayrshire factory before being transported to site; ready-fitted with kitchens, bathrooms, plumbing and electrics.

The affordable housing is a mix of general needs houses, general needs flats, amenity flats, and a fully wheelchair accessible flat.

Homes were thoughtfully designed for the efficient delivery and erection of 4 homes in a single day. Homes were made fully wind and watertight on site within this period, with only final painting left to be completed internally. The Connect Modular team worked quickly and effectively on site, minimising disturbance to neighbouring residents.

A block and render finish alongside slate-effect roof tiles made these modular homes indistinguishable from their

traditionally constructed counterparts in other areas of the site. Further still, the affordable housing incorporates traditional features such as painted cast window surrounds and decorative chimneys, tying in with the vernacular architecture.

The entire project took less than a year to complete, beating targets. Work began in January 2019, with the first homes being occupied by tenants in July. All homes were complete and occupied by November 2019.

"Connect Modular worked well with all council departments and were always really accommodating. Although an innovative, new type of project, it was delivered on time and on budget."

**Greig Wilton,
Affordable Housing Co-ordinator,
North Ayrshire Council**



Sustainability

Our modular construction process is an inherently more sustainable way to deliver new, affordable housing.

The offsite location of our operations facilitates greater control over the storage and management of materials, resulting in the minimisation of waste. Our manufacturing process is controlled by rigorous quality management procedures, in compliance with ISO 9001, which enables us to achieve precise detailing and performance.

Our modular solution is based on timber frame construction and utilises standard structure, fixture and fitting components. This means completed Connect Modular homes do not have any onerous maintenance requirements and when aligned with our quality control procedures, ensure sustainability over the lifespan of the property. We adopt a fabric first approach to ensure maximum energy efficiency without necessitating higher maintenance requirements, costs and changes to resident behaviours.

Our houses have been designed to meet the Bronze Active level of sustainability and Section 7, Silver Aspects 1 and 2 of the Building Standards as a minimum. We also work with clients to achieve desired energy strategies beyond this baseline. Our houses utilise zero direct emission heating systems such as Air Source Heat Pumps and we make use of available renewable technologies via photovoltaic solar panels.

We are currently participating in a business transformation accelerator programme to identify our carbon emissions and develop an action plan to ultimately achieve Net Zero Carbon.



How Sustainable Are Our Modular Houses?

- Controlled factory conditions make it easier to improve the future sustainability of homes. For example, better air tightness can be achieved as standard.
- Construction waste is up to 84.7% less than on traditional sites.
- Cardboard and plastic packaging is kept dry prior to bailing and recycling and general waste can be more efficiently segregated.
- Reduced on-site time minimises construction traffic and related emissions by up to 50% and disruption to neighbouring residents.
- All timber is sourced from sustainable FSC approved suppliers.
- Suitable off cuts are used elsewhere in the production line.
- Compared to an equivalent, traditionally built project, up to 67% less energy is required to produce a modular building.

Energy Efficiency in Homes

AVERAGE ENERGY BILLS IN A TWO BED SEMI DETACHED HOUSE*



U-Values

- Ground floor 0.13
- Roof 0.12
- External wall 0.17

Social Impact

Community Engagement

In every project we undertake, we are striving to make a positive impact in the surrounding area via our community benefits programme.

Recent activities and initiatives we have been involved in include:

- Engaging with local children and inviting them to attend the official opening of our development sites.
- School media group initiatives – involving school children in documenting progress of our developments.
- Construction talks at local schools, focusing on career opportunities and promoting health and safety.
- Organising and hosting 'Design Your Dream Home' competitions in various schools.
- Contributing to local charities through our own fundraising and community initiatives.
- Collaborating with local schools – designing and producing new home cards to welcome residents.
- Assisting college and university students with construction projects.
- Participating in the Auchinleck Community Development Initiative where our apprentice joiners built a log cabin which will be used for meditation to support individuals in recovery.

Training & Apprenticeships

We are proud to promote careers in construction and are committed to nurturing new talent within the industry.

Apprenticeships can offer a great career path for young people and our factory is the perfect environment where they can learn from our skilled and experienced workforce.

We have a number of 1st, 2nd and 3rd year joinery apprentices currently working in our factory.

We support and encourage all existing and new staff members to learn a range of new skills, whether this be learning on the job or attending college or training courses.





Quality Assurance

To maximise quality, we implement a 'right first time' policy and 'zero defects' ethos. To achieve zero defects, we have embedded ISO9001-aligned quality assurance procedures into our manufacturing and construction processes, incorporating regular checks and hold points.

Other accreditations include:

BOPAS

Connect Modular holds Buildoffsite Property Assurance Scheme (BOPAS) accreditation. The scheme provides quality assurance for non-traditional methods of construction.

We manage the design and delivery of modular manufacture and on-site construction of 1 and 2 storey structural timber buildings.

We hold accreditation in the following areas:

- Project Management Designer
- Manufacturer
- Constructor

ISO 9001

Connect Modular has been assessed and approved in accordance with ISO 9001:2015 quality management systems, standards and guidelines.

ISO 14001

This is an international standard for auditing an organisation's environmental management system. Here at Connect Modular we examine environmental issues relevant to our operations, including waste management and resource efficiency.

Safe Contractor

We are fully approved by Safe Contractor, demonstrating commitment to Health & Safety best practise.





www.connect-modular.co.uk

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