Marsden Island

Sustainability Statement

Proposed sustainable development of 75 low-carbon homes at Cellars Clough Mills, Manchester Road, Marsden, Huddersfield

CITU

Date 26.09.25

1. Introduction

1.1 This report has been prepared by Citu to support the proposal of Marsden Island. It has been produced as part of the full planning submission. The report addresses how Citu's proposal adopts the appropriate sustainability design principles in accordance with local policies (LP24, LP26, LP28).
1.2 As the local plan states the council has an ambition to have net zero carbon emissions by 2038. The following report will demonstrate how the proposed development supports this ambition.
1.3 In brief, the design takes a fabric first approach – increased insulation, improved airtightness, reduced thermal bridging, and appropriate ventilation – as well as addressing the fundamentals of building orientation and dwelling layouts. Green space on the site has also been maximised to improve biodiversity, as well as to benefit the health and wellbeing of residents and local community.
1.4 The scheme will also utilise PV panels on every building to generate renewable energy to reduce the in operational carbon of the site.

2. Sustainability through design

2.1 The following section address LP24
2.2 Citu takes a fabric first approach to dwellings and utilises the Passivhaus Planning Package (PHPP) software to analyse the refine dwellings fabric performance.
2.3 Citu provides a holistic view to place making and design. This report should be read in conjunction with the wider planning application to fully understand Citu's design process and proposal for the scheme.
2.4 The following good design principles have been used in the development of the scheme:
2.4.1 Orientation – the development undertook early stage sun studies to analyse building massing form against sunlight and shadowing. The design reflects trying to maximise light in public spaces and into habitable rooms within the dwellings.
2.4.2 Light quality – Citu utilise skylights with "Voids" in deeper plan dwellings to maximise natural light within in all habitable rooms.
2.4.3 Air tightness – Citu targets exceptional levels of air tightness that reduce heat loss from the external envelope of the building.
2.4.4 Bespoke thermal modelling – Citu works with specialists to undertake detailed thermal bridging models of key junctions within the building design.
2.4.5 Increased insulation – the dwellings will have insulation levels that significantly exceed the requirements of Part L. This both keeps occupants cool in the summer and warm in the winter. This passive measure drastically reduces the amount of energy required by dwellings to keep occupants thermally comfortable.
2.4.6 The layout of the scheme has been designed to minimise the dominance of the car and encourage other modes of sustainable travel (walking and cycling). This creates streets suitable for socialising and playing in. It also significantly increases the amount of soft landscaping that can be seen when looking out from the dwellings.
2.4.7 A landscaping led scheme that maximises biodiversity net gain and champions native species.

3. Renewables and low carbon energy

3.1 The following section address LP26
3.2 Citu developments strive to innovate with renewable energy generation systems. Previous developments have created microgrids to utilise energy most effectively across the development. During detail design Citu will review the possibility of pushing the scheme to achieve net zero operational energy.
3.3 The proposal utilises the following sustainable technologies:
3.3.1 Air Source Heat Pumps (ASHPs) – during detailed design Citu will work with MEP designers to model and design the most efficient method of heating hot water for the proposed dwellings. In larger dwellings heat pumps will be used to provide a lower carbon heating alternative.

3.3.2 Citu houses do not use any gas which significantly reduces the operational carbon of the dwelling. The fabric of the dwellings and PV panels then reduce the amount of electricity the occupant has to pay to heat the dwelling.

3.3.3 Mechanical Ventilation with Heat Recovery (MVHR) – the proposed dwellings use this efficient ventilation to create comfortable homes that have a consistent filtered air supply.

3.3.4 LED lighting throughout

3.3.5 Smart technologies to minimise energy use and create user accountability.

3.3.6 Photovoltaic Panels (PV) – these are used to generate electricity for the site. During detail design, Citu will assess how many PV panels can be installed on each roof, but the team work to maximise generation on every available roof.

3.3.7 All of the above technologies are integrated inside of the homes, or in the case of the PV panels are inset into the cladding. This avoids any detrimental visual impact from seeing the technologies in the landscaping and allows for easy occupant maintenance.

3.3.8 The site proposes to have an EV charging point for each household.

4. Drainage & Water

4.1 The following section address LP28

4.2 The proposed development will improve water efficiency through a mixture of measures to use less treated water and reduce wastewater. These include:

4.2.1 Sustainable urban drainage is utilised as far as practicable to support the proposed drainage system.

4.2.2 Rainwater collection on site, for use of maintaining the landscaping.

4.2.3 Use of low flush toilets and aerated taps throughout the development.

4.2.4 Ensuring showers with water-efficient heads are available in all residential units.

4.2.5 Education residents on water conservation as part of the sales and handover process

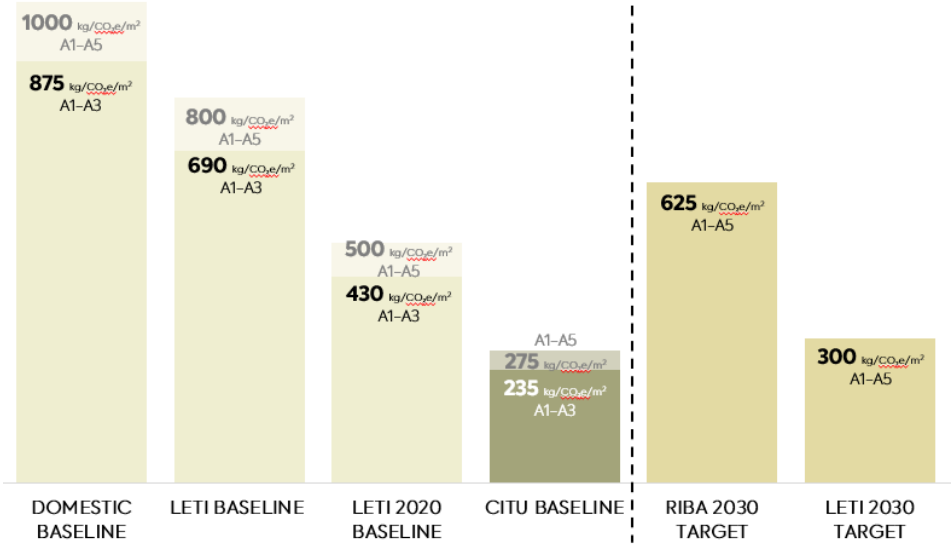
4.3 During detail design, Citu will assess and target to meet the RIBA 2030 water target of >75L per person per day.

5. Embodied Carbon and Material Selection

5.1 Materials for the proposed development are responsible and ethically sourced. Citu's timber frame factory works closely with its suppliers to us make sure the timber is sustainable sourced. Citu's factory also utilise waste/bi-products of the timber industry. The timber frame and cladding materials are light compared to other methods of construction and therefore allow for optimised foundations which reduce the carbon in the ground.

5.2 Citu's sustainability team undertake embodied carbon reviews at the design and post construction phases of the project to analyse the projects carbon impact and to look for improvements in quantities or specification. Citu compares these results to the RIBA climate guide and the LETI whole life carbon standards. Due to Citu's careful material specification and optimisation during design, we are meeting or exceed both industry guidelines.

5.3 Below is a comparison undertaken for a recent Citu project, demonstrating the significant embodied carbon reduction using RICS A1-A5 criteria.



6. Conclusion

6.1 As outlined in this statement, Citu's proposal has sustainability at the heart of the development. From the design, landscaping and place making, and renewable technologies, the scheme will enable occupants to reduce their carbon footprints both passively and actively. All the proposed measures will also benefit occupant wellbeing and health.