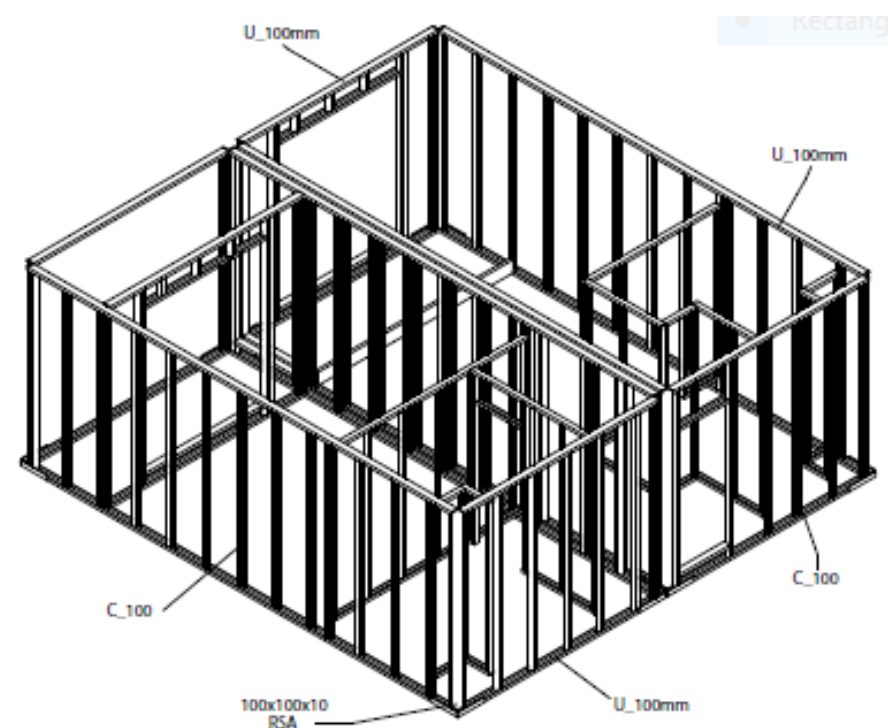


## Offsite Modular Housing for Ukraine Reconstruction – June 2025

The rapid re-building of Ukraine will require new ways of building that are fast to construct, are high quality and energy efficient, and will create new and vibrant urban environments. Ukraine will require the replacement of over 1 million completely destroyed and repair of 3 million damaged houses and apartments over a period of 5 to 10 years, and this will require a huge input of resources in materials and manpower on a scale not seen in Europe for 60 years. Off site construction techniques will be required to meet this demand and to minimise resource use.

Modular construction using three-dimensional fitted-out units in light weight construction is well placed to meet these demands, particularly for 3 to 6 storey residential buildings, and will build on experience in other countries. Modules may be manufactured in regional factories and transported to the nearby construction sites, where they installed at rate of 6 to 8 per day. Whole buildings can be completed in a few days rather than months.

The following building types of residential buildings in modular construction may be used as a 'pattern book' of future projects in Ukraine. The modules are typically 3.6m wide x 7.5m long x 3m high (3.3m x 7.2m x 2.5m internal), which satisfies the space planning standards in 2 or 3 module configurations.



## Type 1: 6-storey urban residential building

This 6-storey building form may be used as a good example of modular construction in an urban environment and it consists of modules placed either side of an access corridor with a central stair and lift core.

The plan form is shown as 8 single bedroom apartments and one studio apartment but the plan form can be adapted to create larger apartments comprising 3 modules. All apartments have an integral balcony. The top floor may be set back from the levels beneath. The modules may be manufactured also to include the corridor.



Some rendered views are proposed below for Type 1



## Type 2: 3-storey urban housing

This 3-storey building form may be used as a good example of modular construction in an urban environment. The terraced building consists of a repeated group of 5 modules with two modules placed either side of a central stair and lift core module.

The plan form shows a series of single bedroom apartments and this may be extended to create a 2-bedroom apartment by the additional of a third module in a group of 6 or 7 modules accessed from the stair core. The plan form may also be adapted to create 2 storey housing. All apartments have an integral balcony.

The top floor with its sloping roof and dormer windows may be built in modular form or from a light weight structure supported by the module walls.





Some rendered views are proposed below for Type 2

