

BUILDING THE FUTURE

Energy performance in new buildings



Our Homes – Innovation As Standard

- Our experts have evaluated housing designs and requirements from markets around the world
- Recognise the need and opportunity for standardised components
- Frames made from British produced rigid light gauge galvanised steel allowing fully completed factory manufactured panels to be lifted into place
- Panels produced from modern composite materials that means the developments are both low carbon and energy efficient in their construction and in their operation
- Future proofed integrated renewables for long term low energy costs
- Designed for a minimum 60 year life with minimum maintenance



**Berkeley Innovation Centre,
Gloucestershire, UK**



Clean, smart living – renewable energy as standard

- Energy efficient design - up to 75% energy independent:
 - Solar PV supply for House / Apartment as standard
 - Integrated battery storage
 - Electric storage heating or air source heating (low heating requirement using electricity generated from PV)
 - Water heated by renewable energy
- LED lighting
- EV charging (bi-directional)
- Smart control systems



**Technology innovation being developed at our
Berkeley Innovation Centre, Gloucestershire, UK**

Modular appearance - no different!

- Modular housing should look no different
- We work with Architects to maximise the benefits of using our standardised modular construction while achieving the appropriate external appearance
- Traditional foundations and ground floor with incoming service connections
- Cladding systems installed after fast frame assembly and no longer on the critical path



Front Elevation



Rear Elevation

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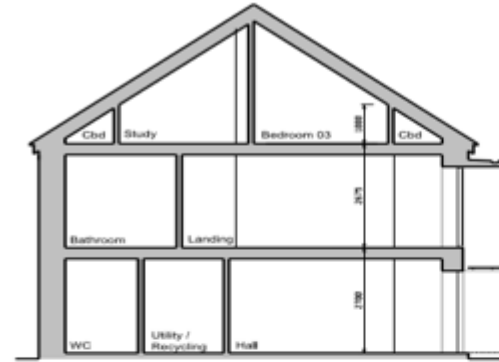
Simple to provide roof living space



Front Elevation



Rear Elevation



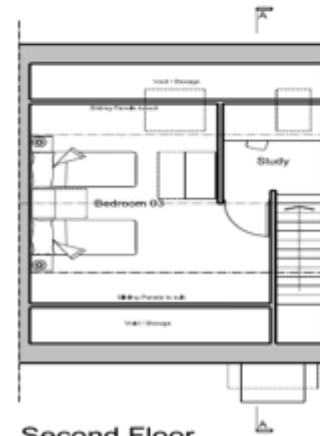
Section A-A



Ground Floor



First Floor

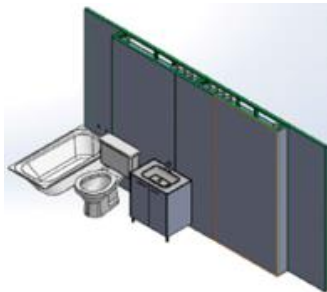
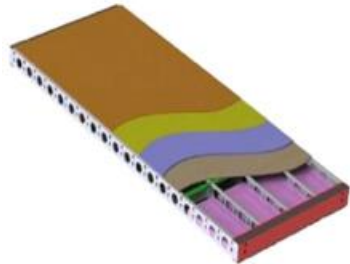
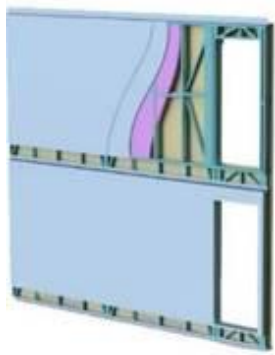


Second Floor



Roof Plan

Flat Pack Components



- Light weight galvanised steel framed structural panels – using **BRITISH produced steel (60% recycled)**
- Fully insulated sandwich construction (various external finish treatments to suit local planning requirements)
- Appropriate boards selected / fire rated / acoustic performance (as required for application / regulation)
- Designed to benefit from standard size boards (reduces wastage)
- Triple Glazed PVC windows integrated into panel
- High specification doors
- Airtight construction (draught free)
- Factory controlled close tolerances
- Secret panel fixing systems
- Integrated services and electrics

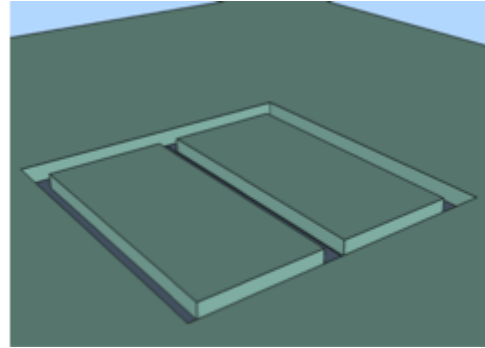
HIGH QUALITY FINISHES

DESIGNED FOR FAST ASSEMBLY

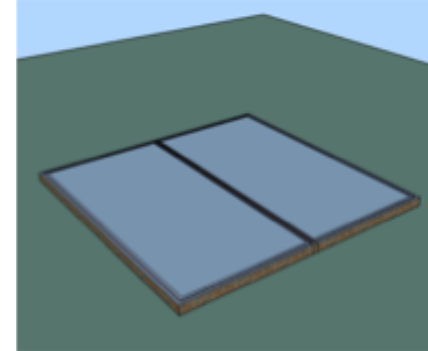
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Assembly procedure

At full production capacity, construction can take just 12 weeks to complete – over a third faster than traditional construction



1



2



3

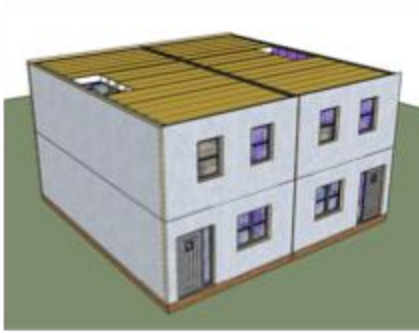


4



5

Assembly procedure



6



7



8



9

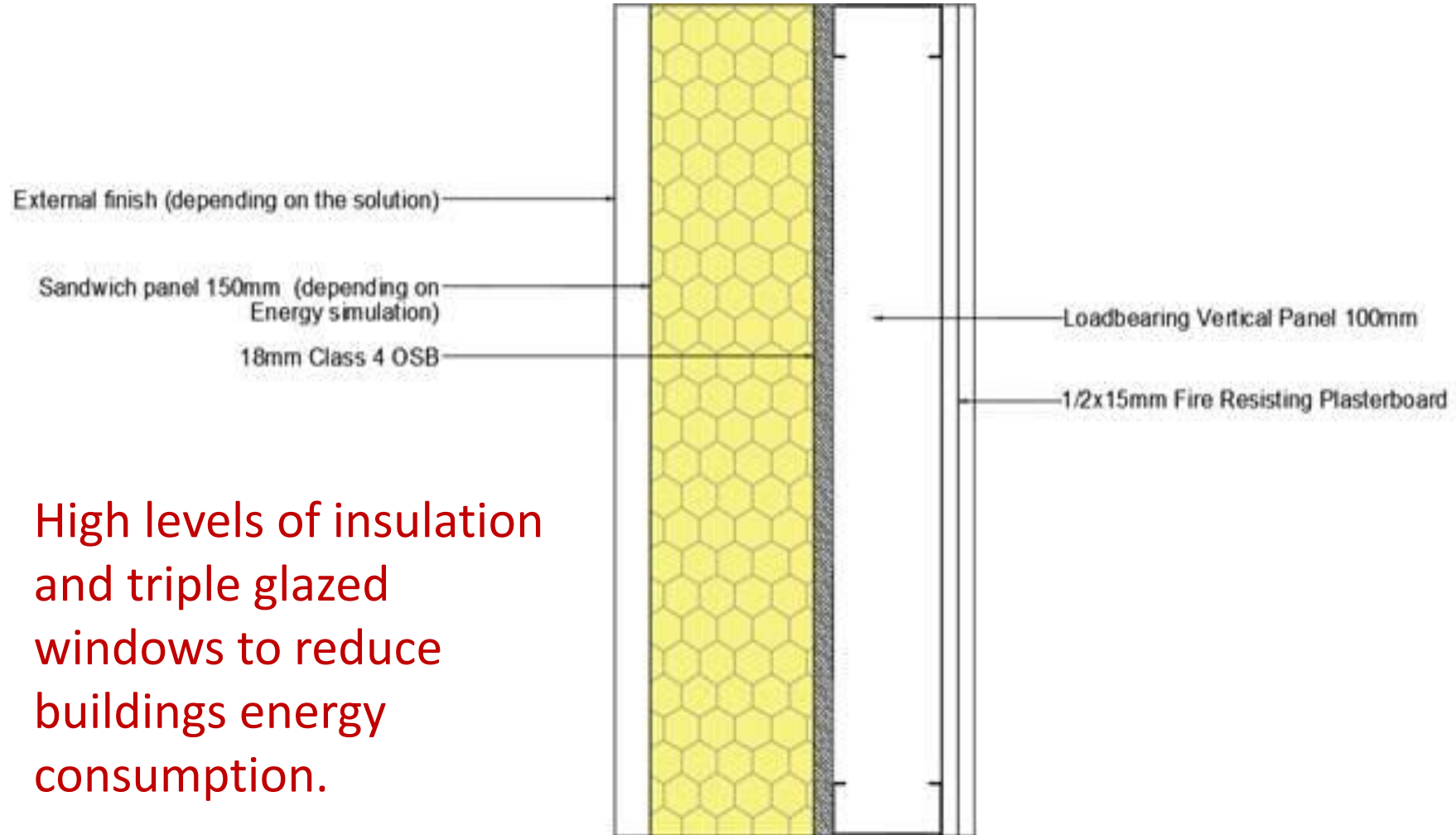


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11

External Wall Construction



High levels of insulation and triple glazed windows to reduce buildings energy consumption.

Quick to assemble

- Panellised modular construction
- Fast to erect
- Dry construction
- Minimises shrinkage cracks
- Minimises fit out time



Lightweight Advantages



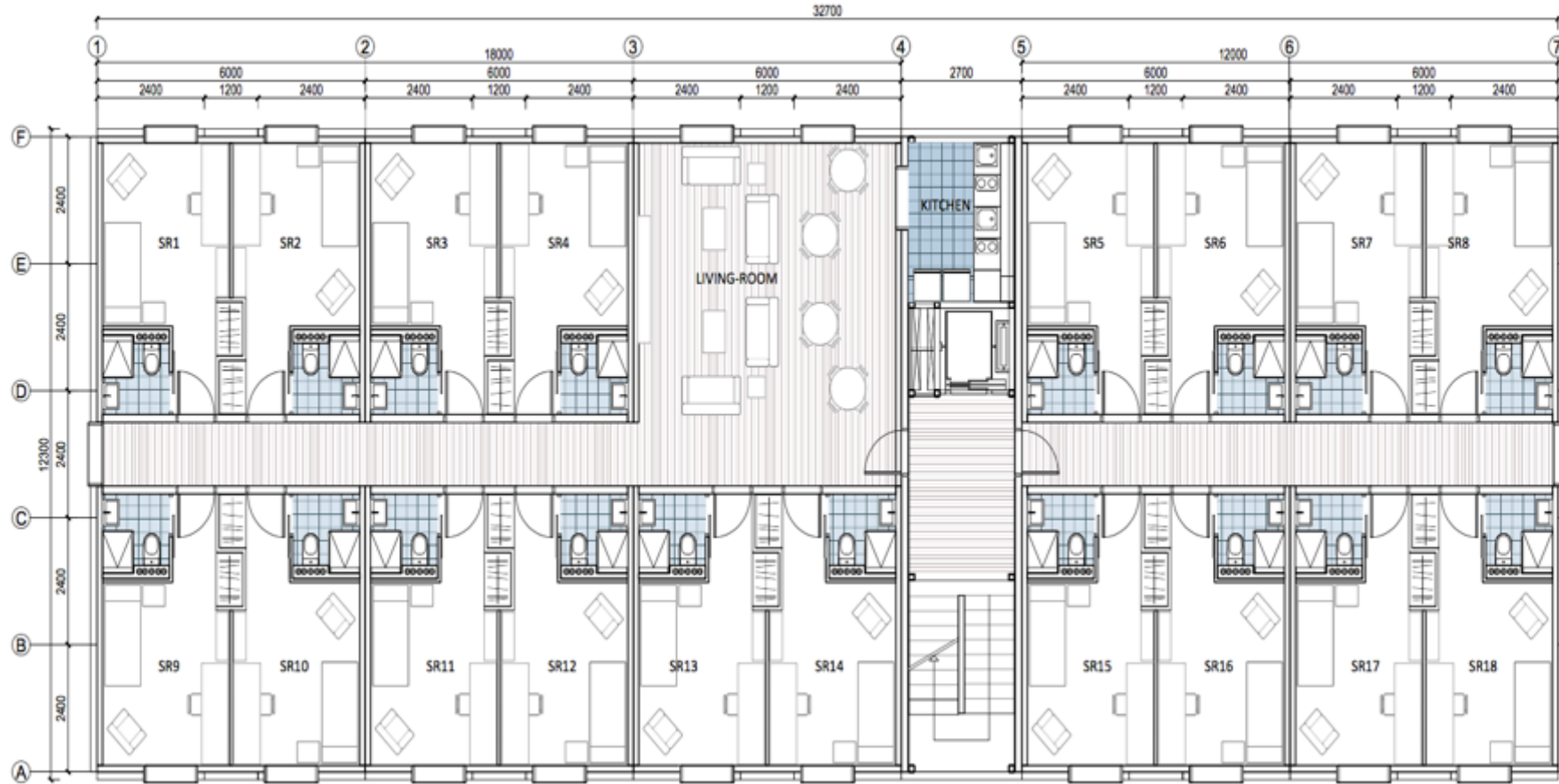
2 and 3 Storey Houses



Continuous R&D - Techniques, Materials and Products



Student Accommodation Layout



Latest NEWS

- “Live Verde” - New name for our UK projects
- Your Housing Group – first planned JV covering the NW Region
- Looking to do at least 5 more JV’s across the UK
- 6 Factories to be built
- Capability of delivering 2,000 houses per year per factory
- Intended maximum travel distance of 100miles
- Initial investment £2.5bn
- R&D and training at Berkeley





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