

The role of offsite construction in building new homes for social landlords'



Presentation Contents

- ▶ F1 Modular - Introduction
 - ▶ Certification
 - ▶ Factory
 - ▶ Accreditation
 - ▶ Products
 - ▶ Clients
- ▶ Today's high performance products
- ▶ Summary

Modular construction

background - F1 Modular

- ▶ F1 Modular is a Welsh manufacturer of factory finished modular buildings based in Newtown, Powys.
- ▶ F1 - 'Fabric First'
- ▶ Achieve 2015 L1A Elemental Values as standard
- ▶ We specialise in the design and manufacture of affordable housing solutions via a 'Volumetric approach.'
- ▶ We offer a full turnkey service from inception through to sign off - including planning applications and all onsite enabling works.
- ▶ We approach schemes with a totally holistic approach - Design through Delivery
- ▶ We provide a totally integrated supply chain via the LHC Procurement route

Accreditations

- ▶ ISO 9001
- ▶ ISO 14001
- ▶ 60-year Agremont Certification
- ▶ LABC Registered system approval
- ▶ NHBC Warranty insurance
- ▶ Premier
- ▶ NEBOSH



Where we work from



F1 has over 35 years of manufacturing industrial and modular buildings both on and off site for the commercial, housing and educational markets

- ▶ We operate from a 9 acre site
- ▶ Our Manufacturing plant covers 75,000 square feet
- ▶ We operate 8,000 square feet spray facility and have 10,000 square feet of storage available to us
- ▶ Fully inclusive internal design resource
- ▶ Metal shop. We have guillotine, folding and plasma cutting facilities
- ▶ Wood Shop. We utilise lamination, router and panel saw technology

What we manufacture

Volumetric units

- ▶ Housing - Public and Private sector - PRS
 - ▶ Low rise to 1 to 6 stories
 - ▶ High Rise 7 to 18 storeys +
- ▶ Hotel solutions
- ▶ Care Homes
- ▶ Senior / Assisted living
- ▶ Student rooms
- ▶ Re-locatable accommodation units
- ▶ Retail Units



Who we work with.

avis budget group

amec

BOC

LHC

CAPITA SYMONDS



Balfour Beatty

KIER

carillion

webuyanycar.com



The UK's favourite car buying service

Elliott

The Major Parts to Building Systems

Nationwide

Network Rail

orange

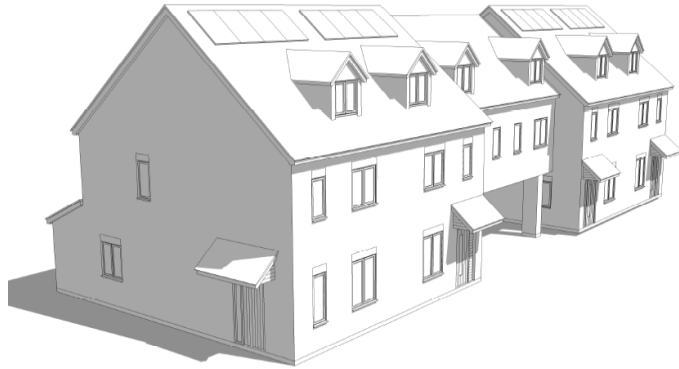
vodafone

ScottishPower

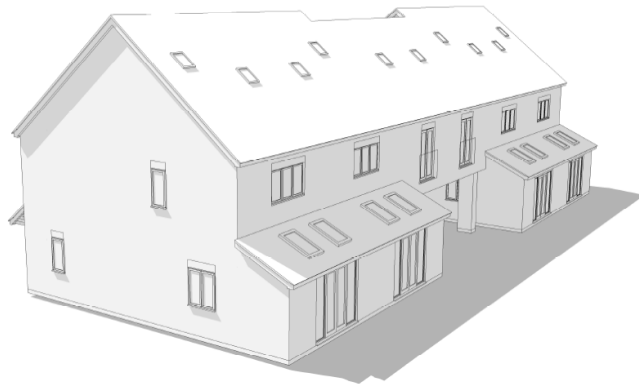
TESCO

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Today - High Performance Modules



3D Perspective - Looking North East - Not to Scale



3D Perspective - Looking South West - Not to Scale

Today - High Performance Modules

Meeting 2015 Building regs - 'Fabric First'

Key Features	Elemental Recipe
Opening areas	Same as actual up to 25% of floor area
External Walls (W/m ² K)	0.18
Floor (W/m ² K)	0.13
Warm Pitched Roof (W/m ² K)	0.13
Cold Pitched Roof (W/m ² K)	0.13
Window (W/m ² K)	1.40
Doors (W/m ² K)	1.00
Air tightness (m ³ /h.m ² at 50Pa)	5.00
Thermal bridging	Standard psi values - see SAP Appendix R, except use of $\gamma=0.05\text{W/m}^2\text{K}$ if the default value of $\gamma=0.15\text{W/m}^2\text{K}$ is used in the actual dwelling
Ventilation type	Natural (with extract fans)

Housing. Zero Carbon to 'Off Grid'



Alva Scotland

Development for LINK HA to Scottish Gold Standard



48 Accommodation Units

- ▶ 16 x Apartments (50M²)
- ▶ 24 x 2 Storey, 2 Bed Houses
- ▶ 8 x 3 Storey, 3 Bed Houses



Alva Scotland

Development for LINK HA to Scottish Gold Standard



Alva Scotland

Development for LINK HA to Scottish Gold Standard



Alva Scotland

Development for LINK HA to Scottish Gold Standard



Modular construction - Alva House Types

Expected Annual Energy Costs

ALVA House Type	Area m ²	Heating Demand kWh pa	DWH Demand kWh pa	Annual Heating & DHW Cost	PV Array kW	PV Annual Energy Saved kWh	PV Annual Energy saving	Nett Annual Energy Cost
2 Bed Semi	80.2	1615	586	£289	0.75	644	-£84.56	£204.51
1 Bed Apartment	49.7	903	493	£183	0.5	365	-£47.92	£135.28
3 Bed Semi	108.1	2026	626	£348	1	858	-£112.86	£235.14

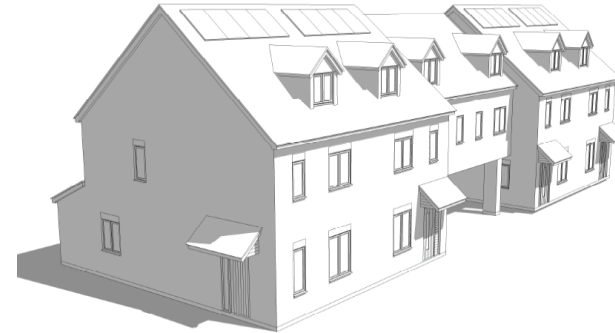
Our Products-finished internally



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Our Products-Cherwell

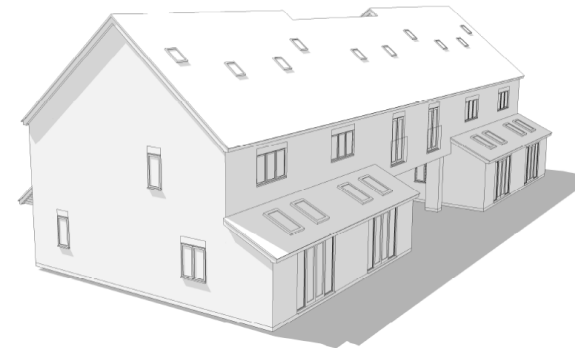
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3D Perspective - Looking North East - Not to Scale



3D Perspective - Looking North - Not to Scale



3D Perspective - Looking South West - Not to Scale

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Our Products-Cherwell



Actual Modules in production on factory floor

Volumetric Modular Housing

And first units on site - all placed within 3 hours. Completely finished internally



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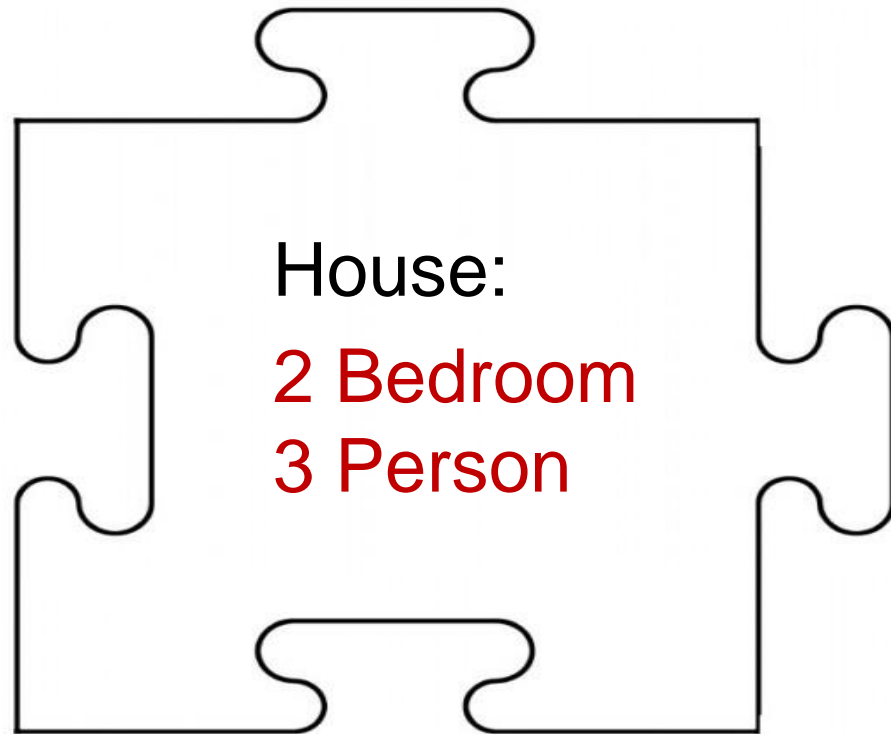
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Volumetric Modular Housing



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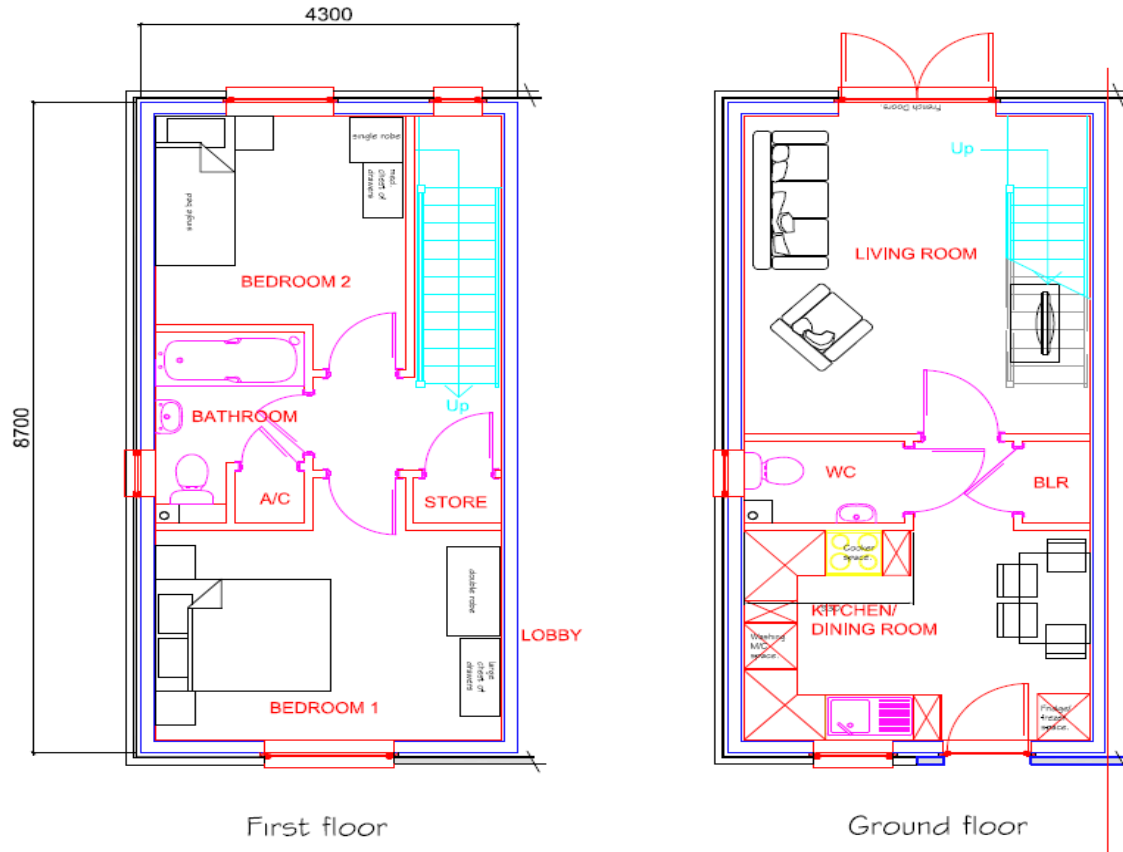


<p>FOR THE ARCHITECT ONLY NOT FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED</p>
<p>Architect's name and contact information</p>
<p>Project name and location</p>
<p>Scale: 1:50</p>

Eco-mods ref. EM.200-8700x4300.V001.3P.2B.2M Rev A

<p>Architect: Architecture Ltd Replacement Properties for RCT Homes Bryn Awdler, Caerwyn, Aberdare</p>	<p>Units: 2B & 3P (2B 3P Houses) (Elevation As Proposed)</p>	<p>Scale: 1:50 @ A1 (1:250 @ A2)</p>
<p>1049</p>	<p>019</p>	<p>19/01/2024</p>





Drawing shows proposed plan/layout of a house-pod excluding external brickwork.

Gross internal floor area = approx. 65.96m²

Scale: 1:50 @ A3

Drawn: eco-mods ltd

Title:

2B 3P House, Plan / Layout.

Drawing No:

EM.200-8700x4300.V001.3P.2B.2M

Issue: A

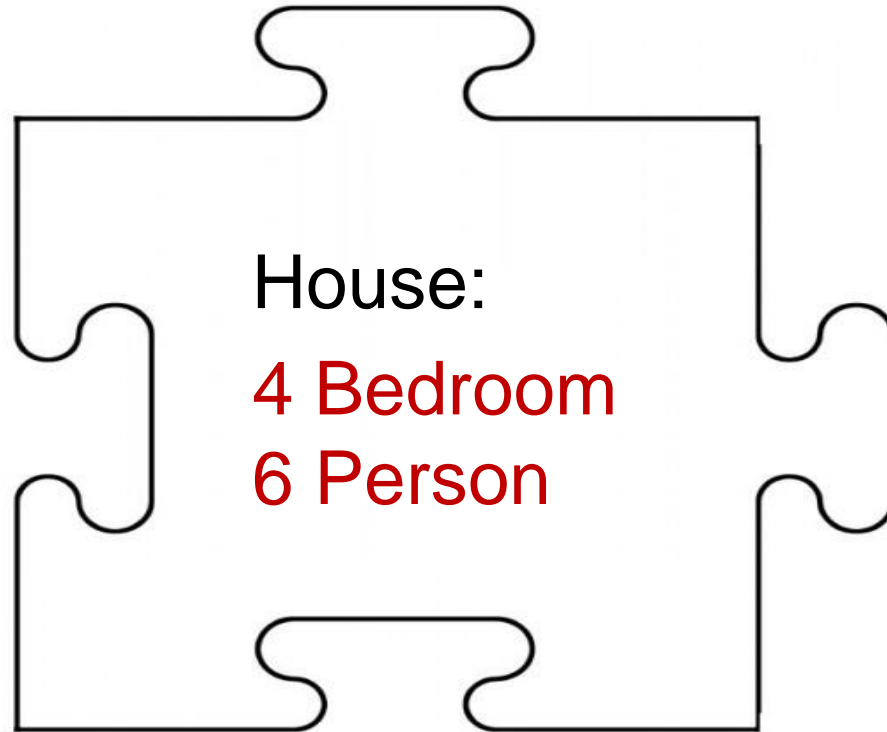
Date:

Project:

Date: 01.10.2012

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4 Bed 6 Person House – Elevation



<p>FOR ALL INFORMATION CONTACT THE ARCHITECT</p>
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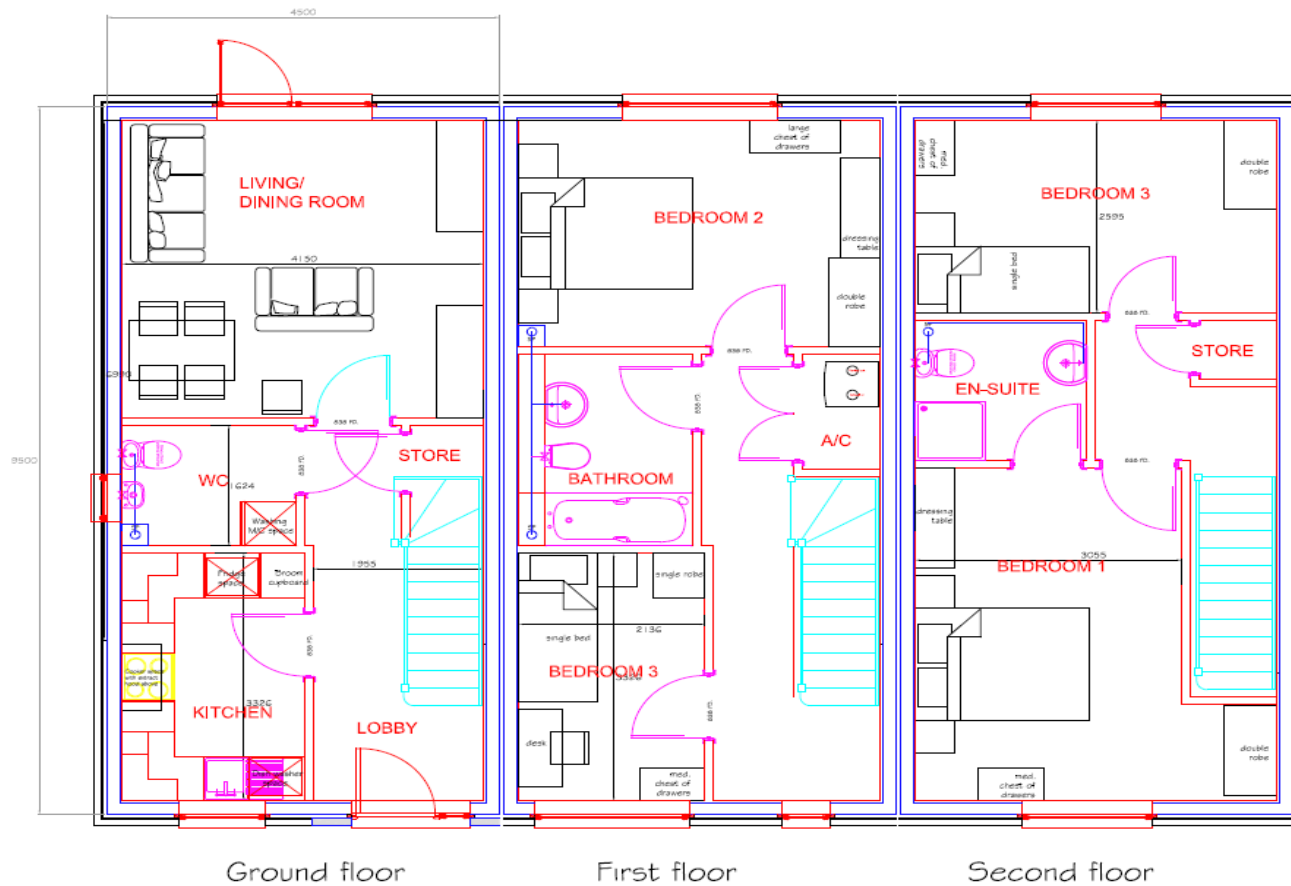
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<p>Eco-mods ref. EM.400-9500x4500.V001.6P.4B.3M Rev A</p>
<p>Eco-mods ref. EM.400-9500x4500.V001.6P.4B.3M Rev A</p>
<p>Eco-mods ref. EM.400-9500x4500.V001.6P.4B.3M Rev A</p>

<p>FOR ALL INFORMATION CONTACT THE ARCHITECT</p>
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<p>Architecture Ltd Replacement Program for RCT Homes Bryn Awdwr, Caerphilly, Aberdare</p>
<p>UNITS 38 & 39 (4B 6P Houses) Drawn As Proposed</p>
<p>1049 018</p>

<p>Architecture architects</p>
<p>FOR ALL INFORMATION CONTACT THE ARCHITECT</p>
<p>FOR ALL INFORMATION CONTACT THE ARCHITECT</p>



Drawing shows proposed plan/layout of a house-pod excluding external bnckwrk.			Gross internal floor area = approx. 113.91m ²		
Scale: 1:50 @ A3	Drawn: eco-mods ltd	Tels: 4B GP House, Plan / Layout.	Drawing No: EM.400-9500x4500.V001.GP.4B.3M	Issue: A	THIS DRAWING IS THE PROPERTY OF eco-mods ltd AND MAY NOT BE COPIED OR REPRODUCED EXCEPT WITH THEIR EXPRESS PERMISSION NOR MAY THE DESIGN OR ANY INFORMATION SHOWN THEREON BE DISCLOSED TO ANY THIRD PARTY.
Project:	Date: 01-10-2012			Date:	



Temporary accommodation



Temporary accommodation



Thank you



Wayne Morgan
CEO



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