

## BOBIN DEVELOPMENTS

### Becowall Form Block 10 1 x 2 Bedroom and 1 x 3 Bedroom General Needs Houses



Bobin Developments are very pleased to be part of a partnership contributing to this year's exciting Housing Innovation Showcase.

Alan Bobin, Director, said: "Beco Wallform is a cost effective and quick to erect system which will provide a good value answer for future affordable housing."

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Peter Riddoch, Architect for Bobin's development at Block 10 on the Dunfermline site, said: "Beco Wallform gives great design flexibility and easy compliance with Building Regulations and co-ordination with different types of floors roofs and windows. The system provides the benefits of 'off site' techniques 'on site'. Simple low skill erection using local labour and locally supplied materials, such as concrete and aggregates, results in a very sustainable and fabric first solution."

Robin Miller of Beco Wallform added: "The system is now well tried in the UK for over 20 years and has been built successfully throughout Scotland including the Highlands and Islands. The system can economically accommodate improved fabric insulation using 375 and 438 thick blocks."

Bruce Waddell of Titon said: "Titon products have been used extensively in Scotland for many years and we are pleased to have been selected to provide a high quality energy efficient Mechanical Ventilation system with Heat Recovery to reduce heat waste without compromising indoor air quality, ensuring on-going benefits for the occupants for many years to come."

The main advantages of the Bobin/Beco Wallform on Block 10 are:

- Lower whole life costs to clients
- Low maintenance with less reliance on untried and untested technologies
- System can be built using unskilled labour providing jobs for local workers
- Proven energy savings making it economical to heat
- Time and cost savings due to no external leaf, reduced scaffolding and reduced wastage
- Local resources are used throughout the construction to minimise the environmental profile and maximise local involvement
- High levels of occupancy comfort
- Reliable robust materials, with a long life and easily recycled at end of life
- Outstanding thermal performance means less dependency on solar solutions and intermittent fuel sources

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DESIGN OUTPUTS	PLOT 32 2 Bedroom House	PLOT 33 3 Bedroom House
CONSTRUCTION	ICF (Insulated Concrete Formwork)	
GROSS INDICATIVE FLOOR AREA M <sup>2</sup>	83.42	95.76
AVERAGE SUPERSTRUCTURE COSTS PER UNIT (INCLUDING RENEWABLES / EXCLUDING PRELIMS)	£67,845	£78,840
AVERAGE M <sup>2</sup> SUPERSTRUCTURE COSTS PER UNIT (SEE NOTE 1)	£813	£823
<u>CONSTRUCTION PERIOD</u> (SUPERSTRUCTURE)	NUMBER OF WORKING DAYS OFF / PRE SITE : 0	
	NUMBER OF WORKING DAYS ON SITE : 104	


## WALL MAKEUP

SIZES (mm)

WALL THICKNESS: 354.5mm

PLASTERBOARD  
PLASTER DABS

12.5 10




BECO WALLFORM  
ICF SYSTEM

313

RENDER

19



**BLOCK 10**

**BecoWallform**  
BUILDING FOR THE FUTURE

**Bobin Developments**  
HOUSE BUILDERS & DEVELOPERS

CONSTRUCTION METHOD:  
**ICF**  
(INSULATED CONCRETE FORMWORK)

PREFERRED PARTNER:  
**BOBIN DEVELOPMENTS**



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DESIGN OUTPUTS	PLOT 32 2 Bedroom House	PLOT 33 3 Bedroom House
SAP RATING (BASED ON 2009 SAP)	83B	84B
C02 RATING (BASED ON 2009 SAP)	87B	88B
<b>U VALUES</b>		
WINDOWS	0.8	0.8
DOORS	1.20	1.20
EXTERNAL WALLS	0.19	0.19
FLOORS	0.16	0.16
ROOF	0.13	0.13
RENEWABLES	Not Applicable	
ELECTRICITY GENERATED	Not Applicable	
AIR PERMEABILITY (at Design Stage)	3.00	3.00
AIR PERMEABILITY (Actual)	2.9	2.18
VENTILATION SYSTEM	N/A	Mechanical Ventilation Heat Recovery(89%)
BOILER EFFICIENCY	90.5%	90.5%
<b>ENERGY USE</b>		
SPACE HEATING (KWH/YEAR)	1448.68	1255.56
WATER HEATING (KWH/YEAR)	2757.06	2849.57
LIGHTING (KWH/YEAR)	413.58	462.77
ANCILLARY (KWH/YEAR)	431.46	469.41
TOTAL (KWH/YEAR)	5050.90	5037.24
<b>ENERGY COST</b>		
SPACE HEATING (£/YEAR)	£44.91	£38.92
WATER HEATING (£/YEAR)	£85.47	£88.34
LIGHTING (£/YEAR)	£47.40	£53.03
ANCILLARY (£/YEAR)	£155.39	£159.80
TOTAL ENERGY COST (£/YEAR) EXCLUDING SAVING FROM ENERGY GENERATED	£333.17	£340.09

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