



**BARRATT**  
DEVELOPMENTS PLC



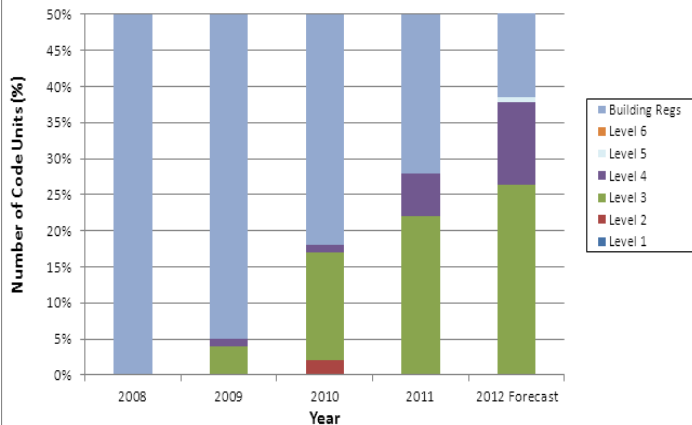
# **Zero Carbon Hub Conference 2012**

**Mark Clare, Chief Executive  
Barratt Developments PLC**

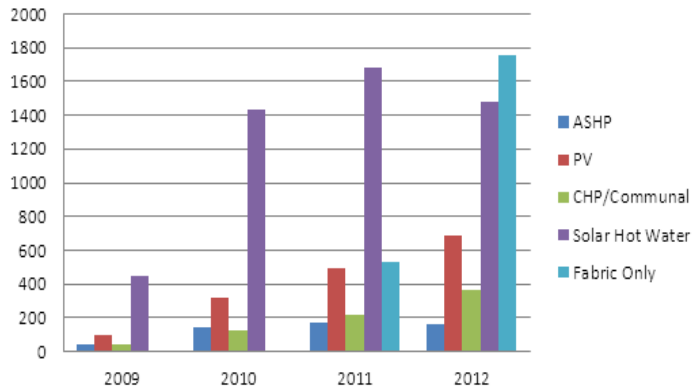
**2<sup>nd</sup> February 2012**

# It's all about delivery

Total number of units legally completed in the reporting period with CfSH certificates



Technologies used to achieve exemplar standards



*"It is already becoming mainstream"*



# It's also about technology

## Timber Frame Construction



### Pros

- Already mainstream
- Fast construction
- Off site construction
- High thermal performance
- Low air permeability

### Cons

- Higher cost
- Supply chain limitation
- Exposure to timber prices
- Weather management
- Lower rise only



# It's also about technology

## Light Steel Frame



### Pros

- Fast construction
- Kit based
- High thermal performance
- Low air permeability
- Flexibility of design

### Cons

- Higher cost
- Exposure to steel prices
- Supply chain limitation
- Embodied carbon
- Weather management



# It's also about technology

Thin Joint Block



## Pros

- Faster construction
- High thermal performance
- Low air permeability
- No capacity limitation
- No weather issues

## Cons

- Retraining of skills
- Embedded carbon



# It's also about technology

## Sips Panels – Hanham Hall



### Pros

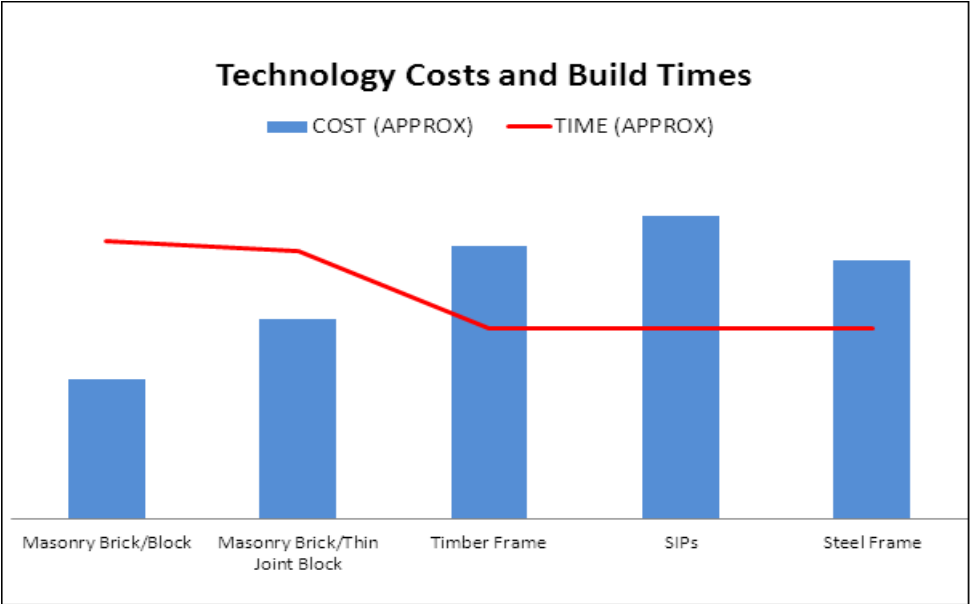
- Very fast construction
- Offsite manufacture
- High thermal performance
- Low air permeability
- Air tightness of 0.74 Cu.m/h/sqm

### Cons

- Higher cost
- Exposure to timber prices
- Lower rise only
- Supply chain limitation
- Weather management



# It's also about technology



# It's also about technology

Combined Heat and Power unit - Lewisham



## Pros

- Linked to local school
- Off site assembly
- ESCO economics
- Allowable solutions

## Cons

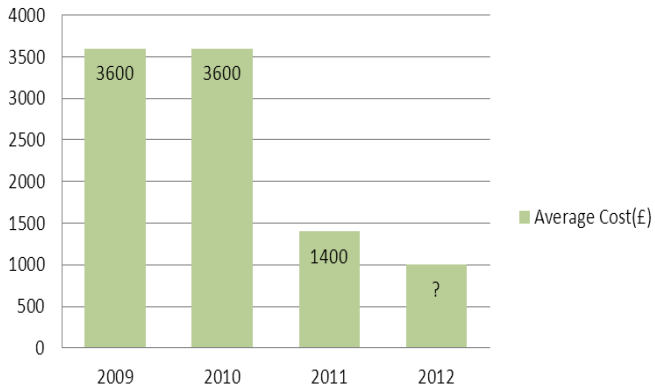
- Large scale solutions only
- Fuel sourcing
- Supply chain
- Space requirements



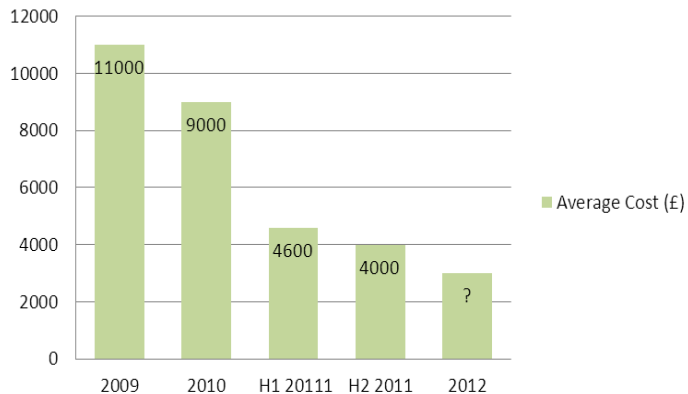


# And getting the costs down

## Cost of Achieving Code Level 3 ENE1



## Cost of Achieving Code Level 4 ENE1



# And getting the costs down

AimC4 - Corby



## Learnings to date

- No requirement for renewables
- Gap closed between C4 & C3 costs
- Conventional look of new homes
- Sandpit learnings significant
- Lean techniques very positive
- Customer focus groups helpful
- Some trades required retraining
- Looking forward to customer feedback



# And getting the costs down

## Allowable Solutions key

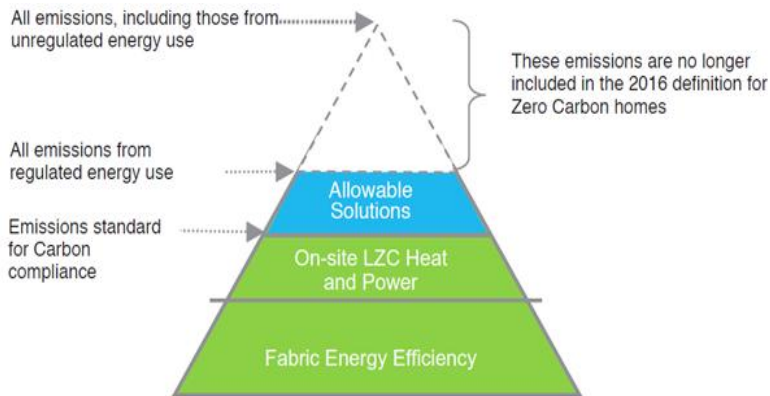


Figure 1 The Zero Carbon Policy 'Triangle', showing the post-Budget 2011 extent of Allowable Solutions and its relationship with Carbon Compliance.

## Key points

- **Fabric options first**
- **Technology must drive solutions**
- **Developers need flexibility to deliver**
- **Credits transferrable – only 5 yrs**

## And

- **Carbon cost exceeds EU ETS**
- **Customer will pay**
- **Leverage may not be achievable**
- **Must deliver carbon reductions**



# Getting consistency of approach

“All major new developments incorporate onsite renewable energy production equipment to offset at least 10% of predicted carbon emissions for the period up to 2010, rising to 15% for the period 2010-2016.”

“At least 10% of the energy requirements of all new developments to be generated from renewable sources on site.”

“The supply of at least 10% of the energy consumed in the new development to be provided from decentralised and renewable or low-carbon energy sources.”

“Proposals for major development will include renewable or low carbon energy generating technologies. These should have energy generating capacity equivalent to 10% of the predicted total CO<sub>2</sub> emissions of the proposal. This should be achieved on-site wherever possible.”

“The Developer Contributions guide states that major developments must include renewable or low carbon energy equivalent to 10% of the development’s emissions.”

## Key points

- We must always deliver “fabric first”
- It’s less costly
- It’s simpler for the customer
- It won’t breakdown
- It doesn’t require on-going maintenance
- It won’t need to be replaced
- It uses less carbon



# And 'selling it' to the customer

## Discovery House at Bluebell, Mercia



# And 'selling it' to the customer

### Your energy efficient home at Meiros Farm, Ashington



Your new home at Meiros Farm is being built to offer improved thermal efficiency which in turn offers lower energy consumption. In a world of rising energy costs, it may benefit you to live in a thermally efficient new home which will have lower heating costs.

Our approach to reducing energy costs is through what we describe as 'retrofitting' the house. This means that the insulation products incorporated into the walls, floors and roof of your new home provide excellent insulation against heat loss.

Your new home is also being built to comply with the Government's standard for new homes, the Code for Sustainable Homes. The new homes at Meiros Farm will be rated as Level 3 to accredit with the Code, which sets standards on sustainability and environmental impact of new housing.

Some of the features of a Code Level 3 home are:

- Lower levels of air permeability to reduce heat loss
- Improved floor, foundation to reduce energy consumption and therefore the costs you pay to heat your home
- 20% low energy light fittings
- Rainwater collection water tanks

The combination of energy efficiency with sustainable features means that you can look forward to enjoying the benefits of living in a new home that is designed with your comfort in mind.

Meiros Farm is an example of a high quality new build for your convenience.

[dwh.co.uk](http://dwh.co.uk) **Where quality lives**  
David Wilson Homes

### Your energy efficient home at Pan Meadows has a number of features that make it better for the environment and better for you.

#### Sustainable Living



**Roofing**  
• High quality roof tiles  
• Insulated roof structure  
• High quality roof tiles  
• High quality roof tiles

**Walls**  
• High quality brickwork  
• High quality brickwork  
• High quality brickwork

**Floors**  
• High quality floorboards  
• High quality floorboards  
• High quality floorboards

**Windows**  
• High quality windows  
• High quality windows  
• High quality windows

**Doors**  
• High quality doors  
• High quality doors  
• High quality doors

**Lighting**  
• High quality lighting  
• High quality lighting  
• High quality lighting

**Water**  
• High quality water  
• High quality water  
• High quality water

**Energy**  
• High quality energy  
• High quality energy  
• High quality energy

**Other**  
• High quality other  
• High quality other  
• High quality other

### Houndwood, Sustainability by design



As a company committed to the environment, sustainability is of primary concern to Barratt Homes. Houndwood exceeds standard building regulations and all homes achieve Code Level III of 'The Code for Sustainable Homes'.

#### Reducing your carbon footprint

Sustainable homes at Houndwood exceed your energy change that this has led to a 20% reduction in global emissions against 2006 building regulations. Double glazing, low energy lights, a rainwater tank and a solar panel can help to reduce energy.



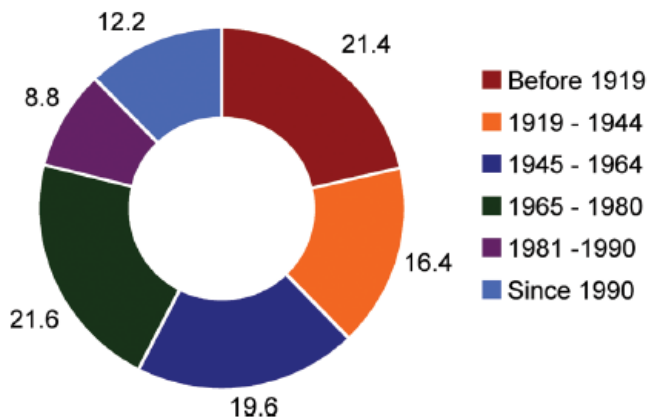


[www.barratthomes.co.uk](http://www.barratthomes.co.uk)

## Key points

- It's about the quality of your new home
- The benefit of lower running costs
- Sometimes with free energy
- A more comfortable and cosy home
- Water as well as energy
- 5 year warranty of fixtures & fittings
- Changing the way you live
- But we have much more to do to promote our energy efficient homes

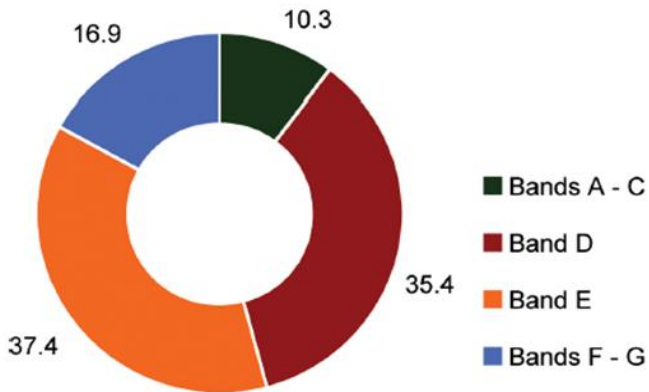
# And let's not forget existing homes!



Source: English Housing Survey, 2009.



Age of existing stock



Source: English Housing Survey 2009.

Energy rating by band



# Conclusions

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- **It's already becoming mainstream**
- **But we have some challenges to optimise the technology solutions**
- **The costs are falling but they are still too high**
- **It's important that allowable solutions provide incentives to innovate**
- **We must have informed planning decisions and not 'greenwash'**
- **And we need to start communicating the benefits to customers**
- **The focus must now move to existing homes**
- **And developers must get on and deliver more and better new homes**

