



# Energy Efficiency in New Homes

## Oaklee Homes Group

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## Energy Efficiency in New Homes

- Oaklee Homes Group
- Examples of New Developments
- Experiences and Advice
- Occupant lifestyles



## Oaklee Homes Group

- One of the largest Housing Associations in NI
- Group Structure and future growth
- Energy Officer Role
- New Developments
- Existing Homes



## Examples of New Developments

**Oaklee have developed a number of schemes to higher building standards.**

The mandatory standard (until 2012) was Level 3 of The Code for Sustainable Homes, however Oaklee have developed a number of schemes to increased standards.

- 7 schemes completed to Code Level 4
- 1 Scheme completed to Code 4 using Renewable Building Materials - Drumalla Park
- 1 Scheme to Passivhaus Standard (& Code Level 4) - Lisnahull Terrace
- 1 Scheme on site being developed to Code Level 5 - Killynure Road



## Homes built to Code Level 4



## Drumalla Park, Carnlough



**One of the top 50 places to live in Northern Ireland!**  
(Belfast Telegraph)

**CIH NI Awards 2012:**  
Building Sustainable Communities through Development or Regeneration

**UK Green Apple Awards 2011:**  
Ireland: Building & Construction  
Bronze Winner

**Action Renewables Association Award 2012:**



## Lisnahull Terrace, Dungannon

First Social housing development in Ireland certified to the Passivhaus Standard

Timber frame construction, highly insulated and airtight, with triple glazed windows and consideration for thermal bridging. The small heat demand is met by an LPG boiler and Solar panels, with heating primarily through the air.



# Killynure Road, Carryduff





## Experiences and Advice

- Changing Building Standards
- Fabric First
- Financial “Payback”
- M&E Concerns
- Future Contractors



Changing Building Standards

2016 Zero Carbon Target?

How do we achieve this?

What standard should we adopt?

How will Building Regulations change?



Fabric First

**Good!!**

But...

What are the consequences?

What are we missing?

Do the occupants understand or share a vision?



## Financial “Payback”

We are obsessed with “payback” and ROI when we talk about energy efficiency!

Relationship between fabric first and payback of equipment?

What if you are a developer or landlord?

Financial Incentives - ROCs and RHI

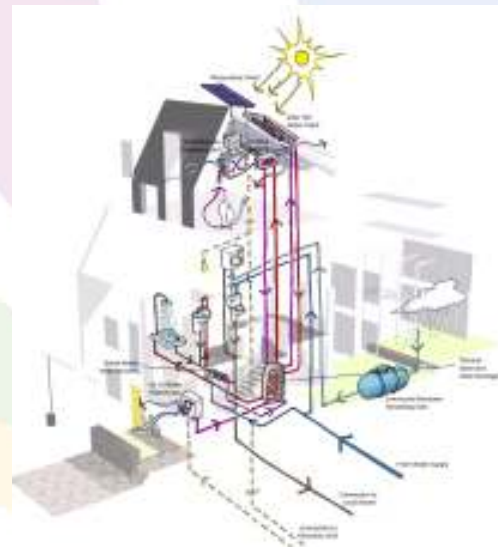
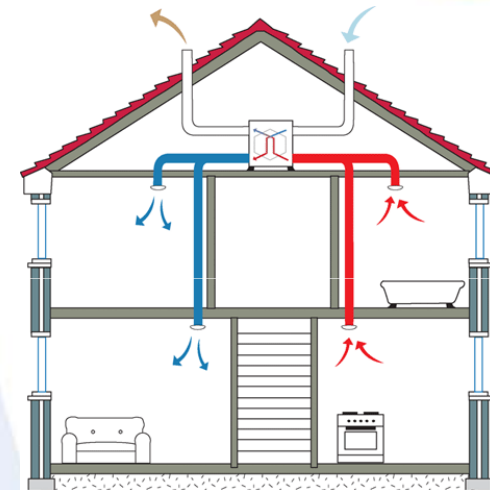
(RHI to be based on deemed energy consumption?)

Investment in Biomass	5k Biomass Installation	
	Typical Build	Passivhaus
Yearly Saving	£1,000	£500
Payback	5 Years	10 Years



## M&E Concerns

- MVHR issues
- “Secondary Technologies”
- Simplified systems
- Correct Use of Renewables
- User Friendly Controls
- Thermal Stores
- Rainwater Harvesting



## Future Contractors

How many contractors will visit a home after it's built?

What do they know about the home and how would they find out?



## Occupant Lifestyles

SAP and PHPP etc are all based on assumed patterns of occupancy and living.

How many people are in the home?

How long are they in their home each day?

Do they have any special circumstances?

What temperature do they want they home?

A technology generation?



Thank you.

