

Greener Homes: People & Energy

Greenoak & Sustainable Homes

WWF, Woking - 26th September 2014

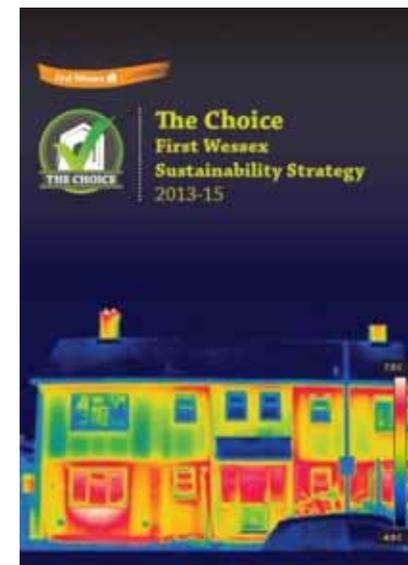
Paul Ciniglio – Sustainability & Asset Strategist

First Wessex 



About First Wessex:

- Hampshire and Surrey based HA
- Formed 2007
- 18,000 existing housing assets
- Build up to 400 new homes each year
- Part of Wayfarer consortium of HA's
- £35m pa RR&PM spend
- 'The Choice' and my role
- Greenoak & Sustainable Homes



New housing environmental standards

- The Code for Sustainable Homes
 - Holistic EAM and recognised industry benchmark
 - To be withdrawn as part of housing standards review
 - Move to national Building Regulation standards
 - What did the Code achieve?
- Building Regulations versus the Code
 - Narrowing of gap in requirements
 - Has the Code served its purpose?
 - Retaining most relevant code criteria in Bldg Regs
 - But what about Materials, Cycle storage, Ecology...?



New housing environmental standards cont'd...

- Single national compliance standard proposed
 - LA's unable to set higher Code requirements
 - An end to 'Merton' type renewables rules
 - Is this good or bad?
 - Local resources?
 - Consistency and simplicity to be welcomed
- Code may exist as best practice model
 - BRE considering a voluntary option!
- So:
 - A relaxation in standards or a more realistic future?



Code for Sustainable Homes –
Mandatory minimum energy and water use standards



| Code Level | Energy | Water |
|------------|--|---|
| | % better than 2010 Building Regs part L* | Litres per person per day (predicted – see also part G) |
| 3** | 0% | 105 |
| 4 | 25% | 105 |
| 5 | 100% | 80 |
| 6 | Zero Carbon (approx 141%) | 80 |

* DER improvement on TER

** Same as Bldg Regs part L 2010

Move away from % improvements on Part L towards absolute compliance limits

Code 6 - Southampton



Where people flourish



The Monksbrook development involves the comprehensive re-development of existing First Wessex homes to provide 237 new eco-homes designed and built to achieve 'Code for Sustainable Homes' level 4 rating.

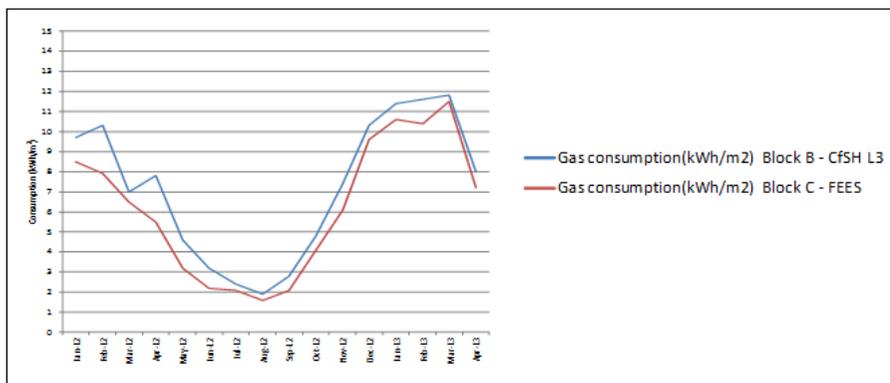


Partnership projects with the Zero Carbon Hub



Rowner research project, Gosport

- Helping to inform the new 2016 energy standards
- First full FEES trial
- Sophisticated testing and monitoring
- Helping to identify the 'Design versus As Built' performance gap



First Wessex & ZCH partnership projects cont'd...



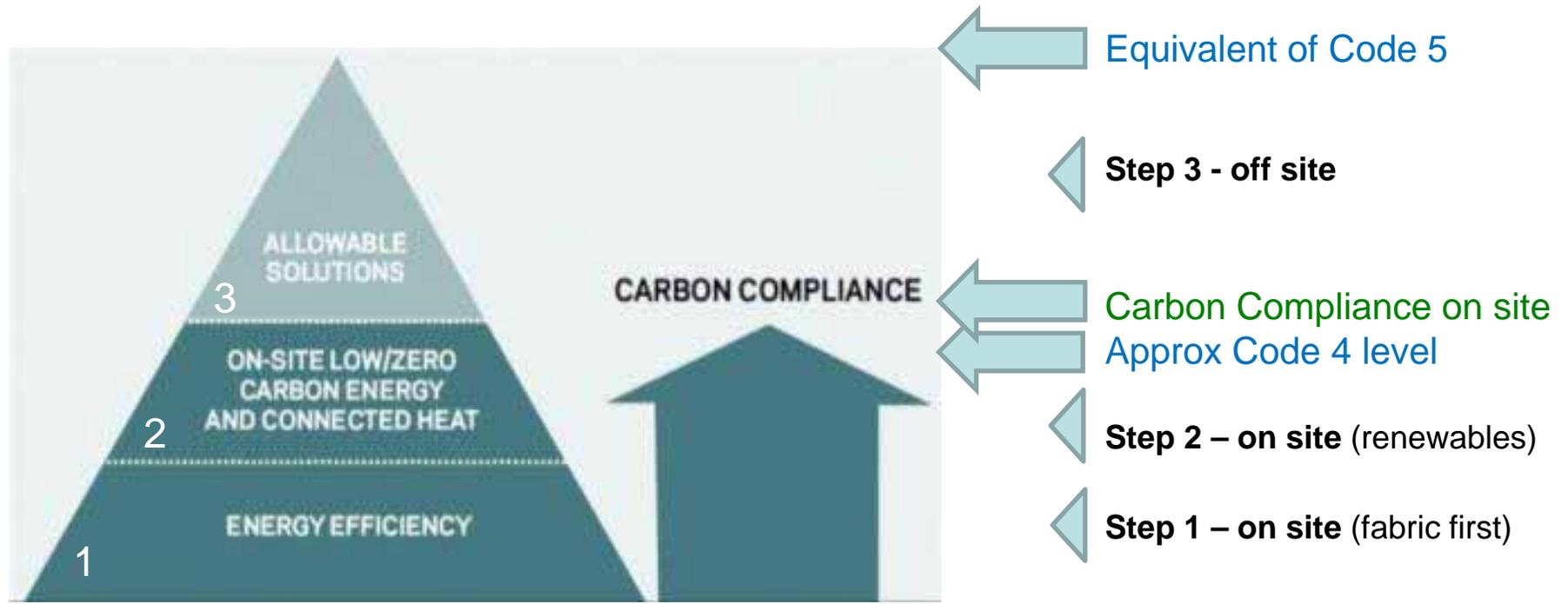
- Live 2016 demonstration project (+ with St Gobain)
 - Two small sites in Aldershot
 - Robust, affordable and replicable design solution
 - Will be showcased to house building sector
- Allowable solutions pilot (+NHF & Sustainable Homes)
- FW Design Brief review
- Overheating study project partner (adaptation)



Proposed South Elevation



Proposed 2016 standards: 3 steps to zero carbon compliance



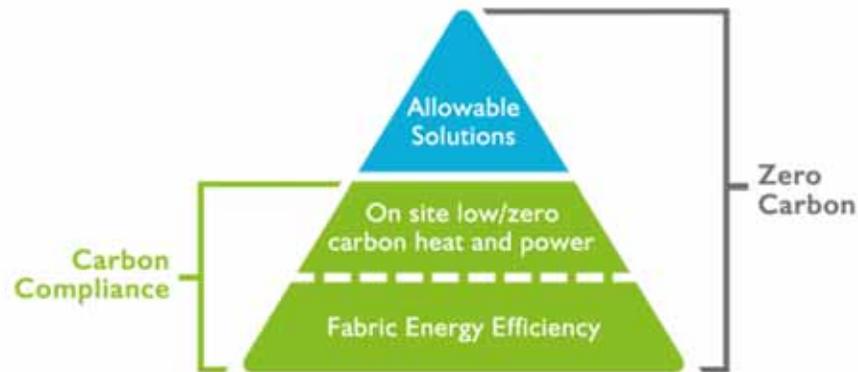
A move to absolute compliance standards
(energy and CO₂ / m² floor area) away from % improvements
on Building Regulations *(as with Code)*

Step 1

Fabric Energy Efficiency Standards

FEES are expressed in terms of space heating and cooling energy use:

- Approx 46 kWh/m²/year detached and semi detached
- Approx 39 kWh/m²/year mid terrace, flat / apartment

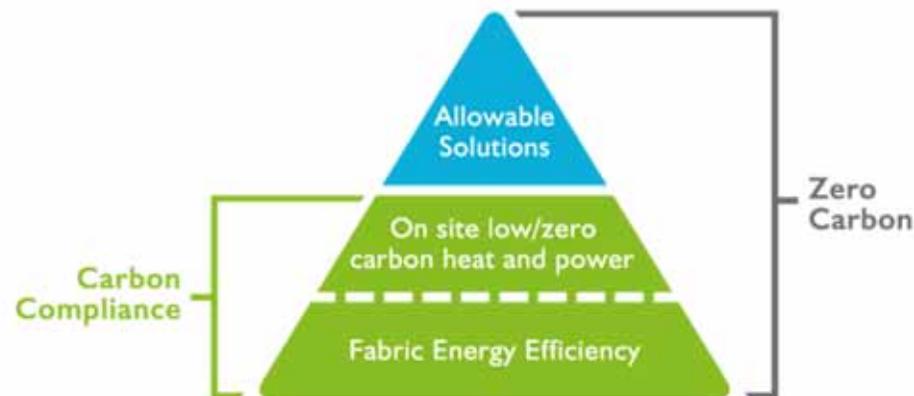


Step 2

Carbon compliance

'On-site' / connected heat and power

- 10 kg CO₂(eq) /m²/year for detached houses
- 11 kg CO₂(eq) /m²/year for attached houses
- 14 kg CO₂(eq) /m²/year for low rise apartment blocks

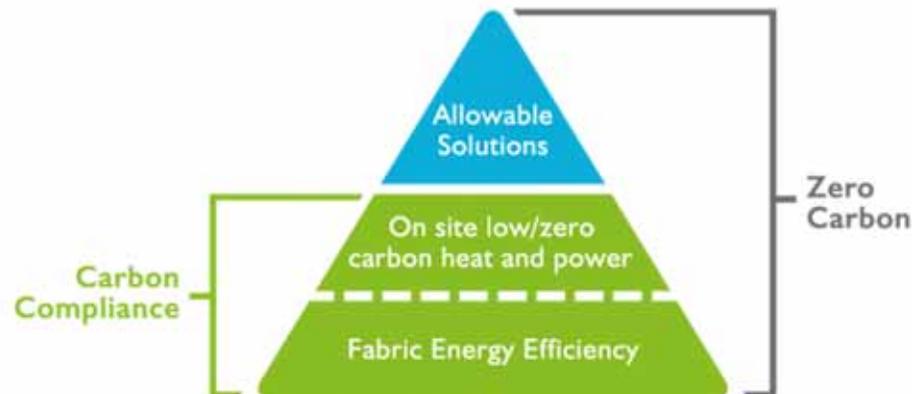


Step 3

Allowable 'off site' solutions

Off setting / 'buying out' of residual regulated dwelling emissions e.g. emissions between on-site carbon compliance level and Code 5 equivalent.

Money invested in off site carbon saving projects e.g. retrofitting homes, wind turbine etc



Allowable Solutions

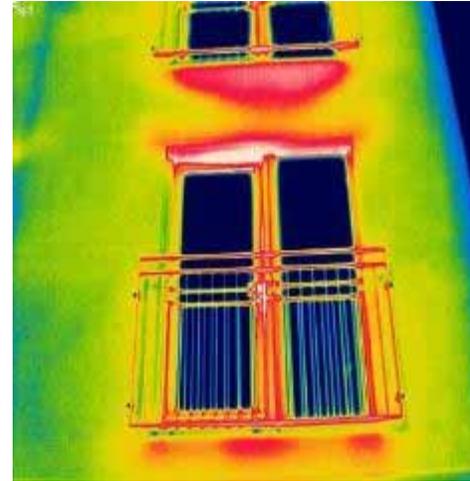
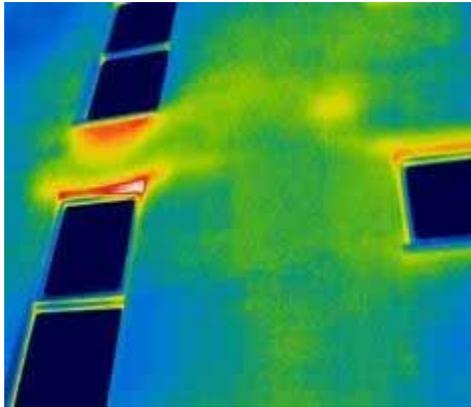


- Approach to AS is still being determined
- Various compliance routes:
 - National or Regional Fund
 - Third Party Contracting
 - DIY
- Expect creation of a National AS certification and verification body
- AS consultation refers to a financial contribution of £36-90/tonne CO₂ over 30 years
 - Could typically be in range of £1,800 per home to buy out if £60/tCO₂

Allowable Solutions cont'd...

- Will £1,800 save equivalent amount of CO₂ off site?
- Ability to bring forward / unlock stalled projects?
- Must have additionality and avoid double counting
- Excellent retrofit opportunity for Housing Associations
 - DIY or Third Party Contracting options likely to be preferred
- AS exemption for small sites expected initially in 2016
- My view is:
 - All AS funds should be spent on retrofitting existing housing
 - Money should be spent on retrofitting local homes
 - A LA approach for might be simpler e.g. DIY
 - Concern it could become too complex in operation
 - Is this a true zero carbon housing standard / is it credible?

Closing the Performance Gap 'Design v As Built' – On site testing?



Thank you

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