Hanham Hall

- What is the Carbon Challenge?
- Progress and Energy Issues
- Our Solutions
- The Real Carbon Challenge
The Carbon Challenge

- Comprehensive brief encompassing the best UK standards.
- Delivering a Practical Solution
- Creating a Great Place to Live alongside the Technical Requirements
- Building a High Quality Product
Carbon Challenge Brief

- Community Engagement
- Building For Life – Gold Design Standard
- Secured by Design
- Delivering Efficiency – CALIBRE monitoring
- Space Standards
- Integrated Tenure
- Life Time Homes
- BREEAM Very Good
- Overheating
- CEEQUAL
- Zero Carbon
The Site
The Site
The Site

Oblique Aerial Photo Showing Existing Buildings
The Site
Planning Granted - November 2009
Site Preparation From Spring 2010
Commencement of Test Units – May 2010
Test units Complete Feb 2011
Testing commenced Feb 2011
Testing commenced Feb 2011
Energy Issues
The Original Code 6 Energy Solution

Biogas Technology
The 2010 Code 6 Energy Solution

Gas CHP + PV
District Heat Network
The Zero Carbon Solution
July 2011
The Carbon Challenge

Allowable Solutions Policy

## Code 6 vs Zero Carbon 2016

<table>
<thead>
<tr>
<th>Code 6</th>
<th>Zero Carbon 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>150% Carbon Reduction</strong></td>
<td>100% Carbon Reduction (regulated only)</td>
</tr>
<tr>
<td>Energy Centre, with Gas CHP + District heat Network</td>
<td>No Energy Centre, HE gas boilers</td>
</tr>
<tr>
<td>£2.5m PV provision</td>
<td>Acceptable levels of PV provision</td>
</tr>
<tr>
<td></td>
<td>Circa £670k</td>
</tr>
<tr>
<td>No additional public subsidy available (FiTs, ROCs)</td>
<td>Allowable Solutions Trial – South Gloucestershire Council</td>
</tr>
<tr>
<td><strong>Higher than average energy bills</strong></td>
<td>Lower energy bills / less burden on management trust</td>
</tr>
<tr>
<td>House Type</td>
<td>Saving including FITs &amp; export tariff</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>1 bedroom coach house</td>
<td>£588</td>
</tr>
<tr>
<td>2 bedroom coach house</td>
<td>£613</td>
</tr>
<tr>
<td>2 bedroom cottage</td>
<td>£650</td>
</tr>
<tr>
<td>3 bedroom cottage</td>
<td>£683</td>
</tr>
<tr>
<td>4 bedroom cottage</td>
<td>£731</td>
</tr>
<tr>
<td>4 bedroom townhouse</td>
<td>£673</td>
</tr>
<tr>
<td>5 bedroom townhouse</td>
<td>£759</td>
</tr>
<tr>
<td>2 bedroom apartment</td>
<td>N/A</td>
</tr>
<tr>
<td>2 bedroom apartment</td>
<td>N/A</td>
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<tr>
<td>1 bedroom apartment</td>
<td>N/A</td>
</tr>
<tr>
<td>1 bedroom apartment</td>
<td>N/A</td>
</tr>
</tbody>
</table>
The Solution
Tetris insulated suspended floor – U value 0.11 W/m²K
Kingspan Tek High Thermal Efficiency Performance – U value 0.15 W/ m$^2$K
Air tightness (1.5m³/(h.m²) at 50 Pa)

Attention to Detail Thermal Bridging (y value 0.02)
Mechanical Ventilation and Heat Recovery – Ventaxia Sentinel Kinetic B with summer bypass
Meeting Overheating Concerns – CIBSE Calculations - Solar Shading
Rainwater Harvesting
Sustainable Homes

• Lifetime Homes compliant design
• Certified Green Materials
• Improved waste management
• Monitoring Energy and water consumption
• Increased Open Space – Species diversity
• Bike Storage
• Secured by Design – Police Liaison

Code for Sustainable Homes
Technical guide
May 2009
Version 2
Community Website and Management

Welcome to Hanham Hub
"Keep up to date with all the latest news at Hanham and access useful information about your home”

Latest News
All the latest news from Hanham Hall and it’s residents.

Service Charge
Latest service charge bills and information on how to pay.

Hanham Hall FAQs
Everything you need to know about Hanham Hall.

Refuse & Recycling
Information household refuse and recycling and collection days.

Your Home
Household information, certificates and instruction manuals.

Useful Contacts
Useful contact information.
Progress to date

Show Home Complex opened July’12
Progress to date

Show Home Complex opened July’12
Progress to date

First Occupations Feb’13
Progress to date
Progress to date
Progress to date

Occupations by June’14
Progress to date

Hall Renovations completed
Progress to date

Hall Renovations completed
The Real Carbon Challenge

- Regulatory Certainty / Feedback to Policy Makers
- Zero Carbon Hub verification
- Local Government knowledge sharing
- HCA feedback
- Ongoing testing and energy consumption monitoring – informing on as built performance
- Industry visits – Energy Saving Trust, Housing Forum, Green Building Council, Good homes Alliance, EA, NHBC, HBF
The Real Carbon Challenge

• Supply Chain Partnership

• Developing consultant partnerships to meet regulatory challenges
• Developing new working practices for the building trade
• Testing the supply chain to meet the new standards
Creating a great place to live

www.hanhamhall.co.uk