

First Wessex 

# Building Better Buildings

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## First Wessex Design Guide and Demonstration Project

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# Taking the learning from BPE

- Design Guide and Employers Requirements review.
- Working group established.
- Technical support from ZCH.
- 6 month project.
- Opportunity to simplify document.
- Update to reflect housing standards review.
- Potential to save significant sums of money relating to unforeseen costs / unintended consequences.



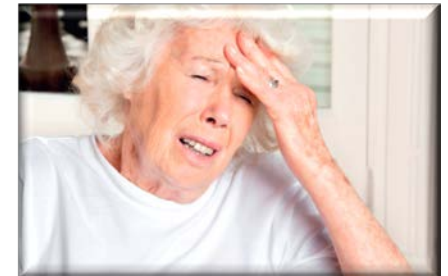
# Key review focus areas based on BPE learning

## Clear link between main problems experienced:

- **Communal heating / district heating systems**
  - Billing meter type and reliability
  - Commissioning, balancing, flow & return temps
  - Best practice guide (appendix)
- **Overheating**
  - Insulation of pipework and HIU
  - Requirements for Dynamic Thermal Modelling
- **Ventilation**
  - MVHR best practice guide (appendix)
  - Automatic MVHR summer bypass as standard
  - Window design / opening and restrictors
  - Indoor air quality

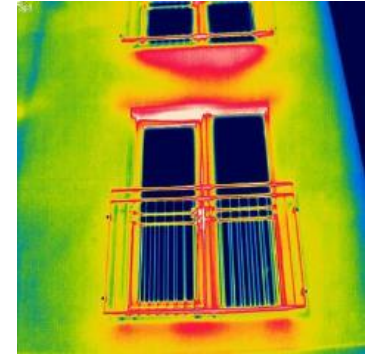


Loosely fitted insulation which allows great inefficiency.



# Focus areas cont'd...

- Continuity of fabric insulation and air tightness.
- Testing and onsite control:
  - Inspection / sign off of installations.
  - Intermediate air pressure testing and IRT.
- Working with residents, user guides, simple controls.
- Adaptation to climate change – resilience.



East Street Elevation 1:200



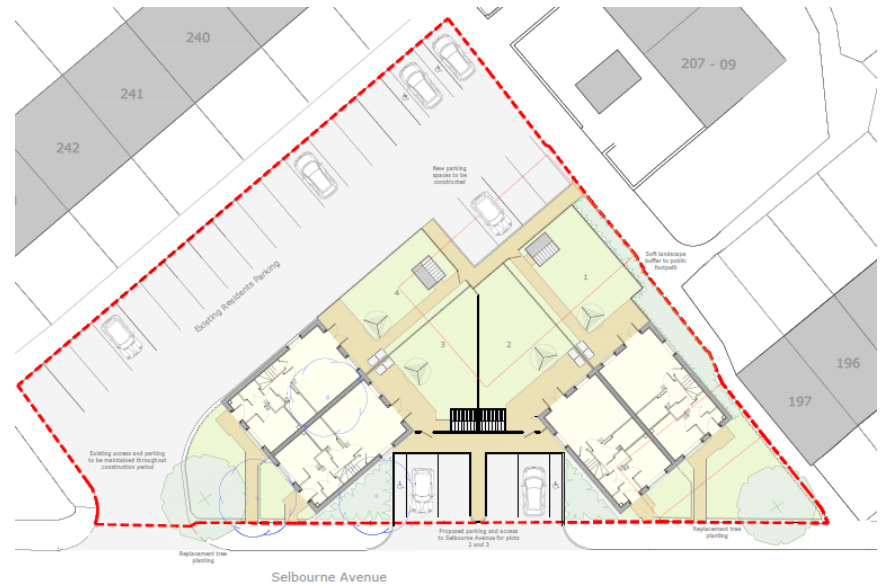
South Street Elevation 1:200



# Lyndhurst project - overview



- Aldershot, Hampshire
- Redundant garage site
- 4 x 3 bed family homes
- Affordable rent
- Due to commence June 16
- 6 month programme



## Project Aspirations

- Designed to be compliant with 2016 zero carbon housing standards - *According to ZCH definition recommended to Government.*
- Now to be revised re nZEB 2020
- Close the 'Design versus as built performance' gap.
- Control site.

# THANK YOU FOR YOUR ATTENTION

*The Zero Carbon Hub's ambition is, from 2020, to be able to demonstrate that at least 90% of all new homes meet or perform better than the designed energy / carbon performance.*