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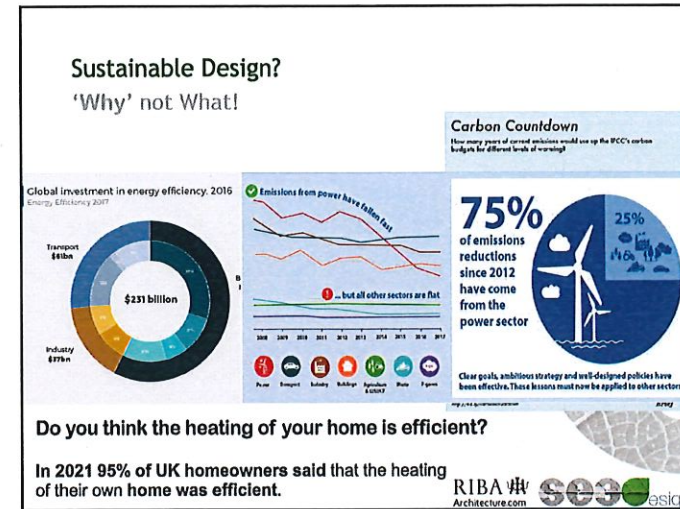
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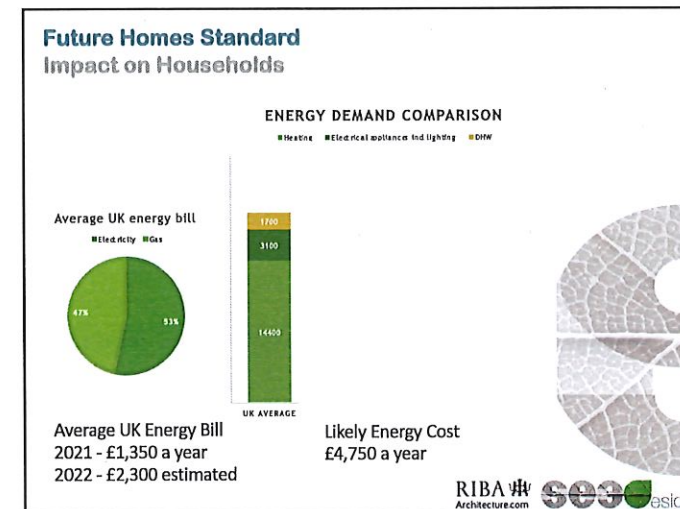
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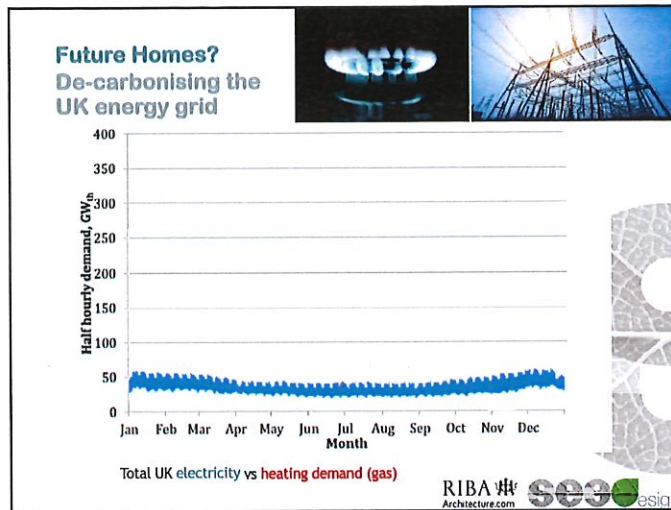
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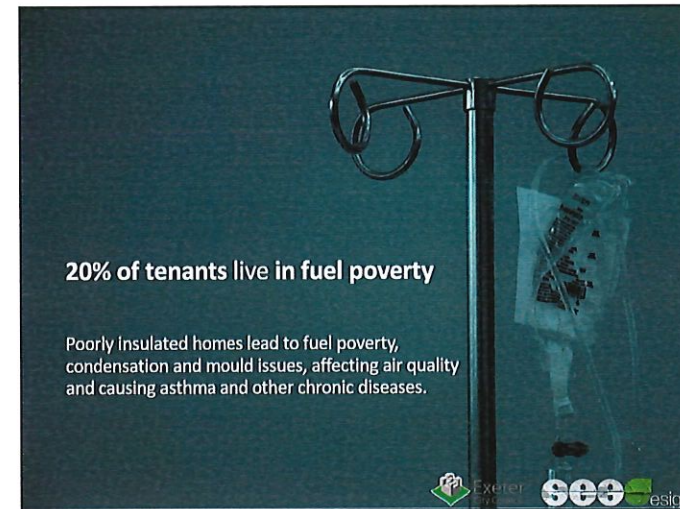
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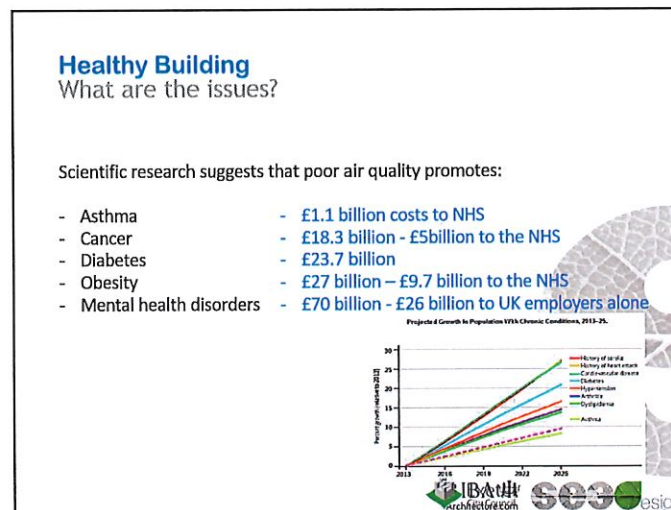
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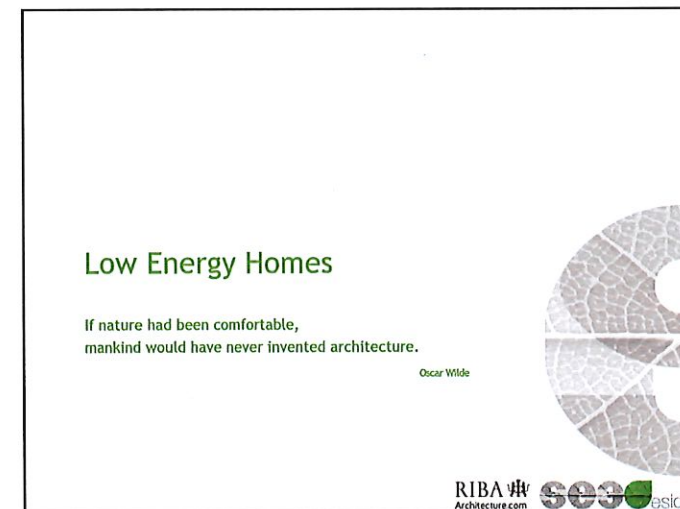
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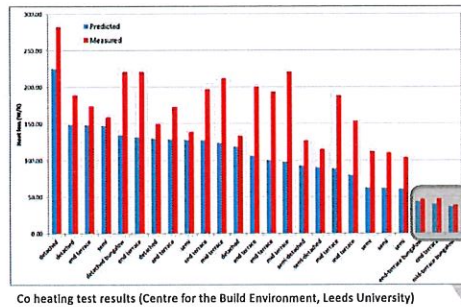
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Low Carbon Design – Performance Gap?

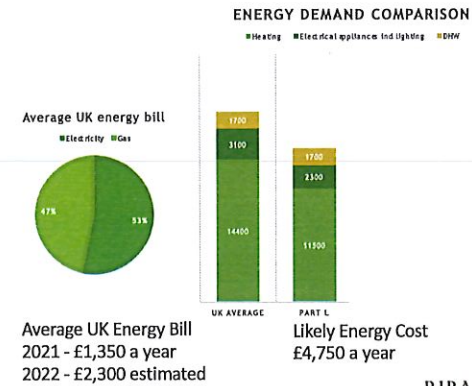
Green building - the Industry Standard - performance gap



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Passivhaus vs Future Homes Standard



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The Passivhaus Standard

The principles behind the Passivhaus design methodology and what's needed to achieve it

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Passivhaus - What makes it?

The Passivhaus Institute defines three sets of criteria that a building has to comply with to meet Passivhaus standard:

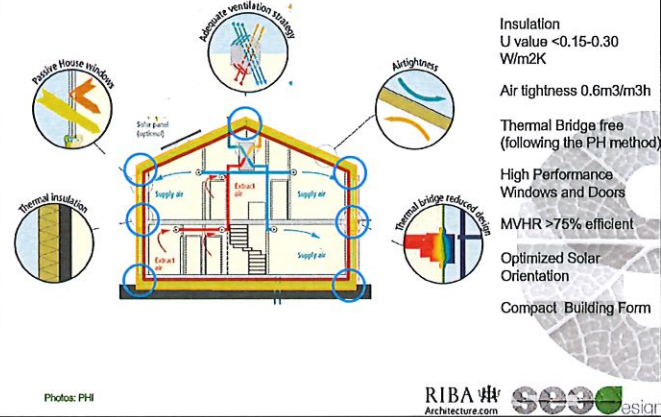
- ▶ Energy Criteria
- ▶ Comfort Criteria
- ▶ Hygiene Criteria

Photos: PH

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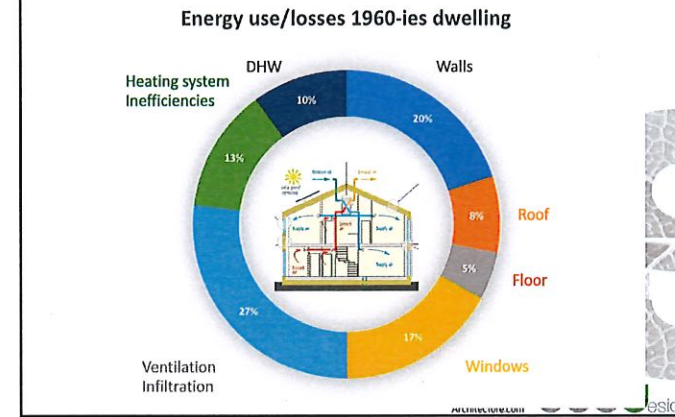
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Passivhaus – How does it work?



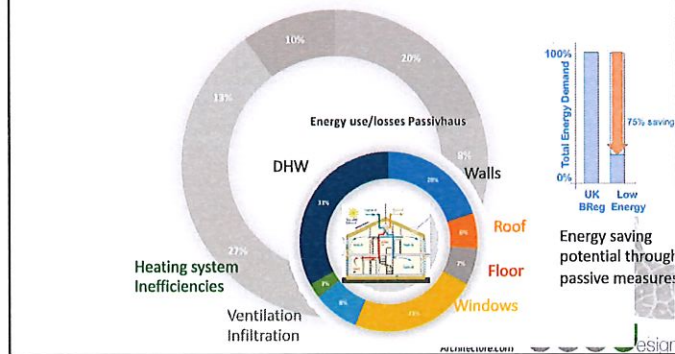
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Low Energy Retrofit – How does it work?



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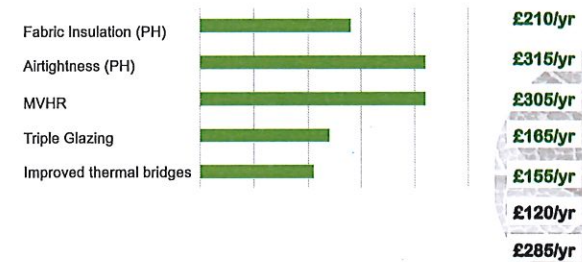
EnerPHit – How does it work?



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Benefit of Passivhaus/renewables over BRegs?

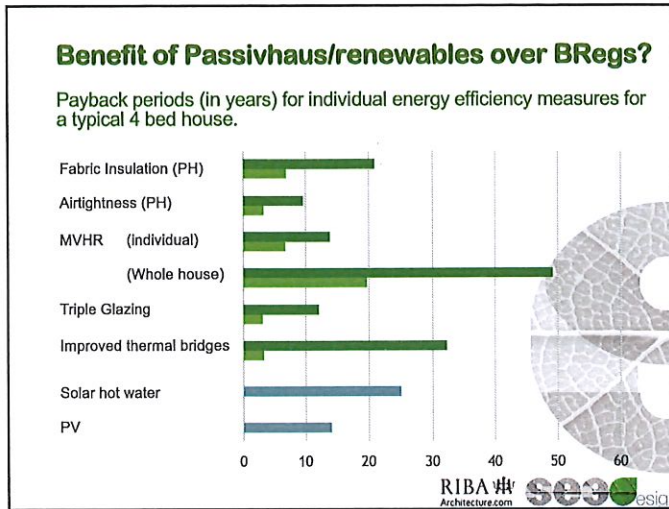
Comparison of energy saving potential of 'passive' strategies (fabric improvement) vs active strategies (renewable technology) in kWh/a for a typical 4 bed house.



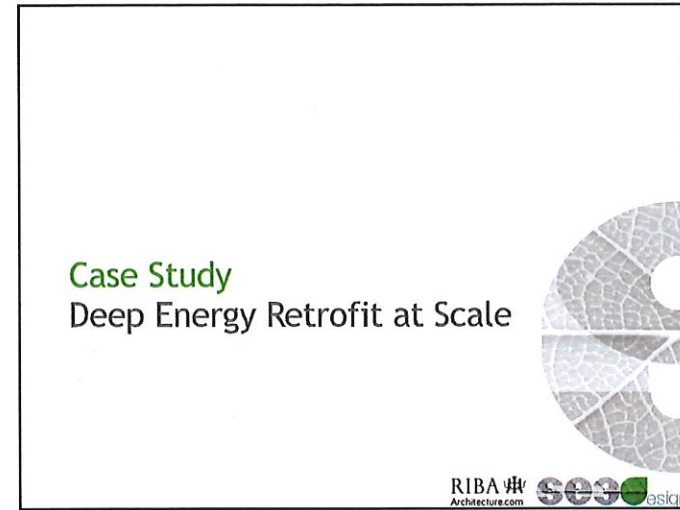
(Cost savings based on electricity price of 15p/kWh)

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Whole House Deep Energy Retrofit

The Brief

- Net Zero Energy over the course of a year.
- Subsidy free
- Retrofit complete within 10 working days with residents in place
- 30-year minimum performance guarantee for energy and comfort
- Reproducible at scale

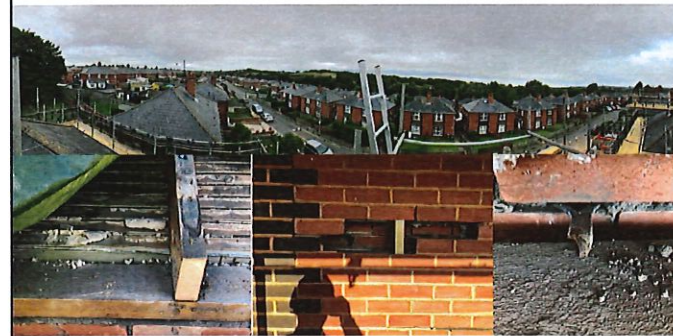


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Energie Sprong

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Whole House Deep Energy Retrofit

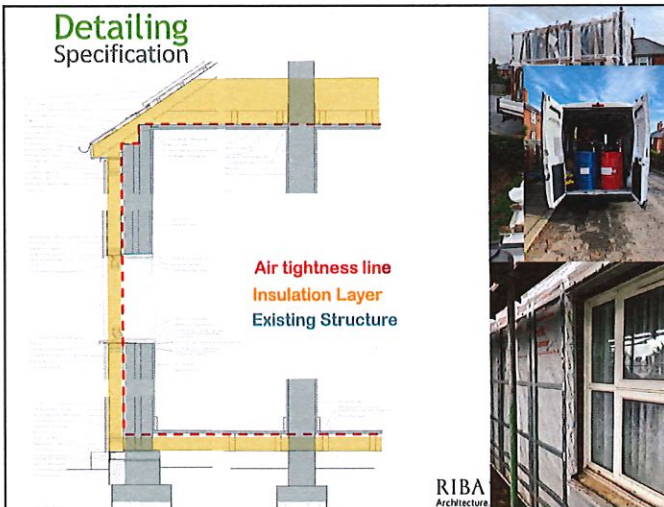


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Detailing Specification



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Construction

Windows/Ventilation Units



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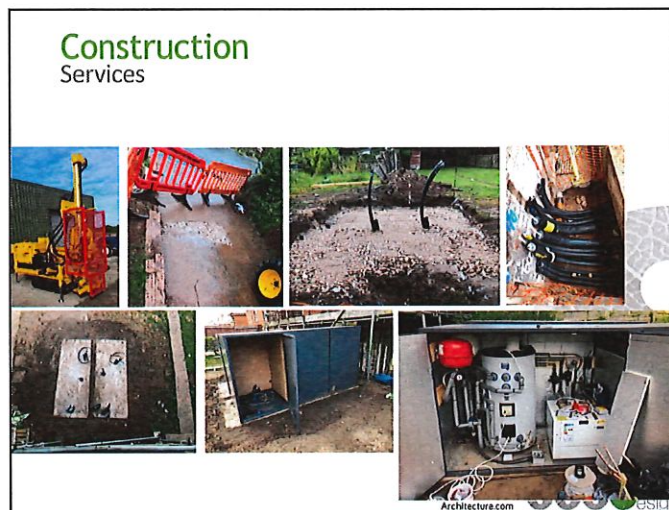
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