Practical experience

S M L XL

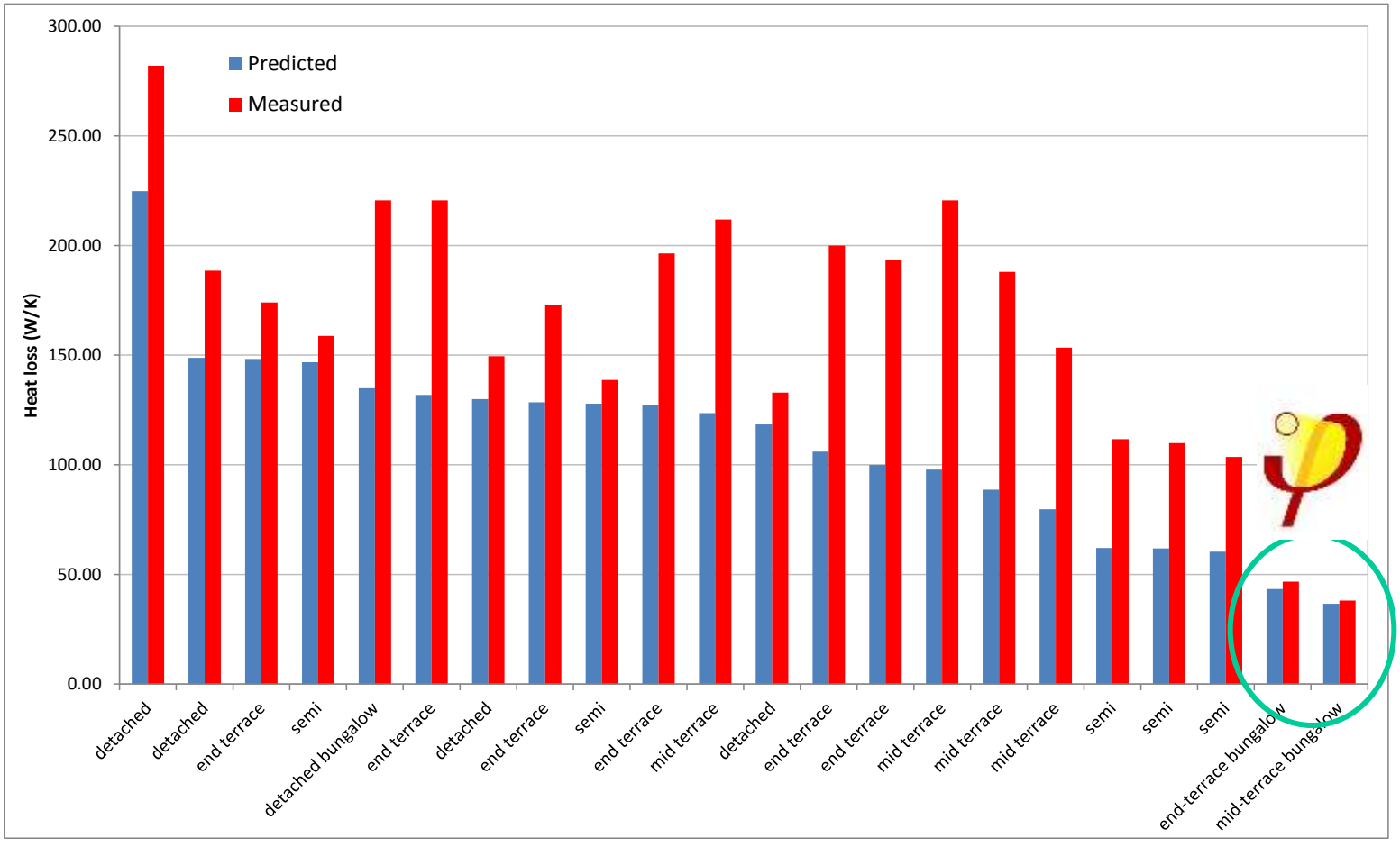
Detailed design, air-tightness and on-site QA

Practical experience

S M ~~L XL~~

Detailed design, air-tightness and on-site QA

Measured performance



Measured versus predicted heat loss coefficients

22 dwellings from the Leeds Met Coheating database

BSRIA 2011

- 40 random properties
- 95% of everything evaluated failed to meet the requirements of the Building Regulations with some installations having a number of failure modes

Institute of Acoustics Conference 2013

Review of over 1000 homes

Noise levels

….People switch off ventilation systems

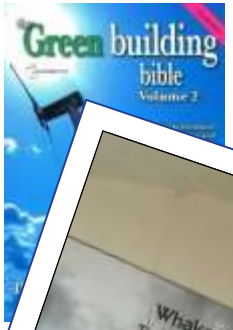
Finland experience:
Bedroom < 22 dB(A)
At boost setting boost

Type of space and source	Class / Leq ,dB(A), and dissatisfaction, %				
	A	B	C	D	E
Rooms in dwellings; ventilation / heating installation	≤ 20	≤ 24	≤ 28	≤ 32	≤ 36
Occupant dissatisfaction	≤ 5 %	≤ 10 %	≈ 20 %	≈ 40 %	≥ 60 %

Table 1: Class limits for service equipment noise proposed in COST Action 0901

…30 dB_{LAeqT} recommended by Building Regulations
~30% occupant dissatisfaction

Who is Mark Siddall?



Architects Registration Board

CONSTRUCTING EXCELLENCE IN THE NORTH EAST

Passivhaus Trust
The UK Passive House Organisation

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LEAP
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AECB
building knowledge

Passivhaus Claims

Clear & easily verifiable

- blower door
- thermography
- PHPP
- components

Trades description

- fake goods
- consumer law
- annoys those doing it properly

Claiming The Passivhaus Standard free download:
www.passivhaustrust.org.uk

How to Build A Passivhaus

Rules of Thumb

- Key considerations

Passivhaus Quality Assurance: L and XL

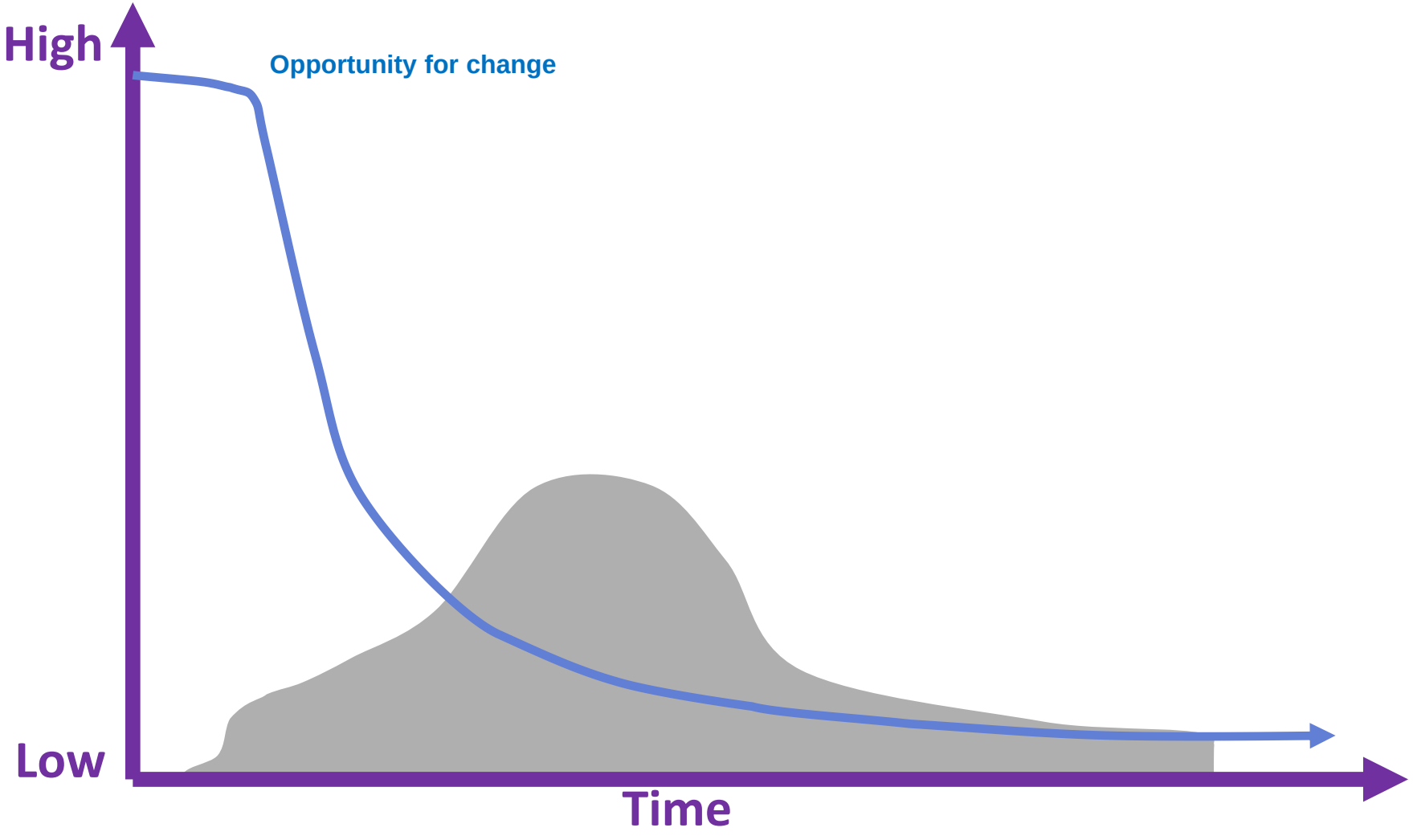
For:

- Clients
- Design teams
- Contractors

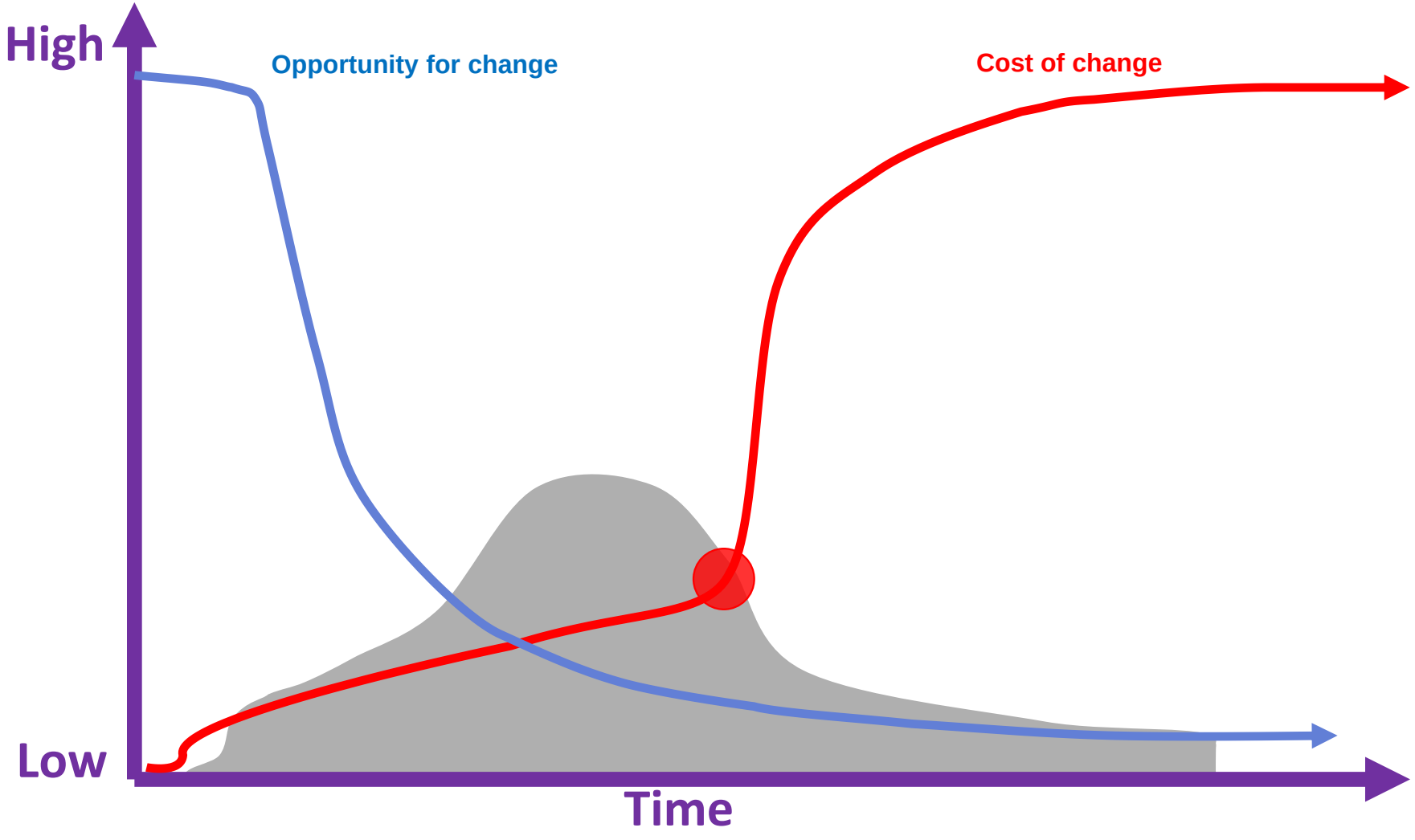
Problem:

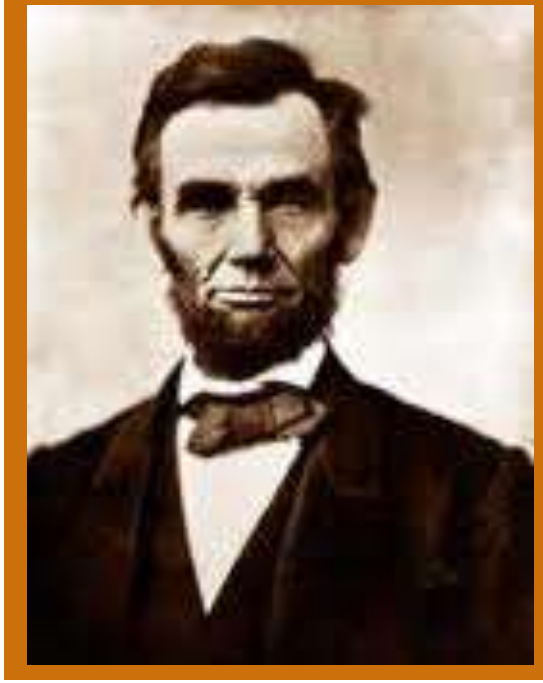
Scale

Opportunity for change



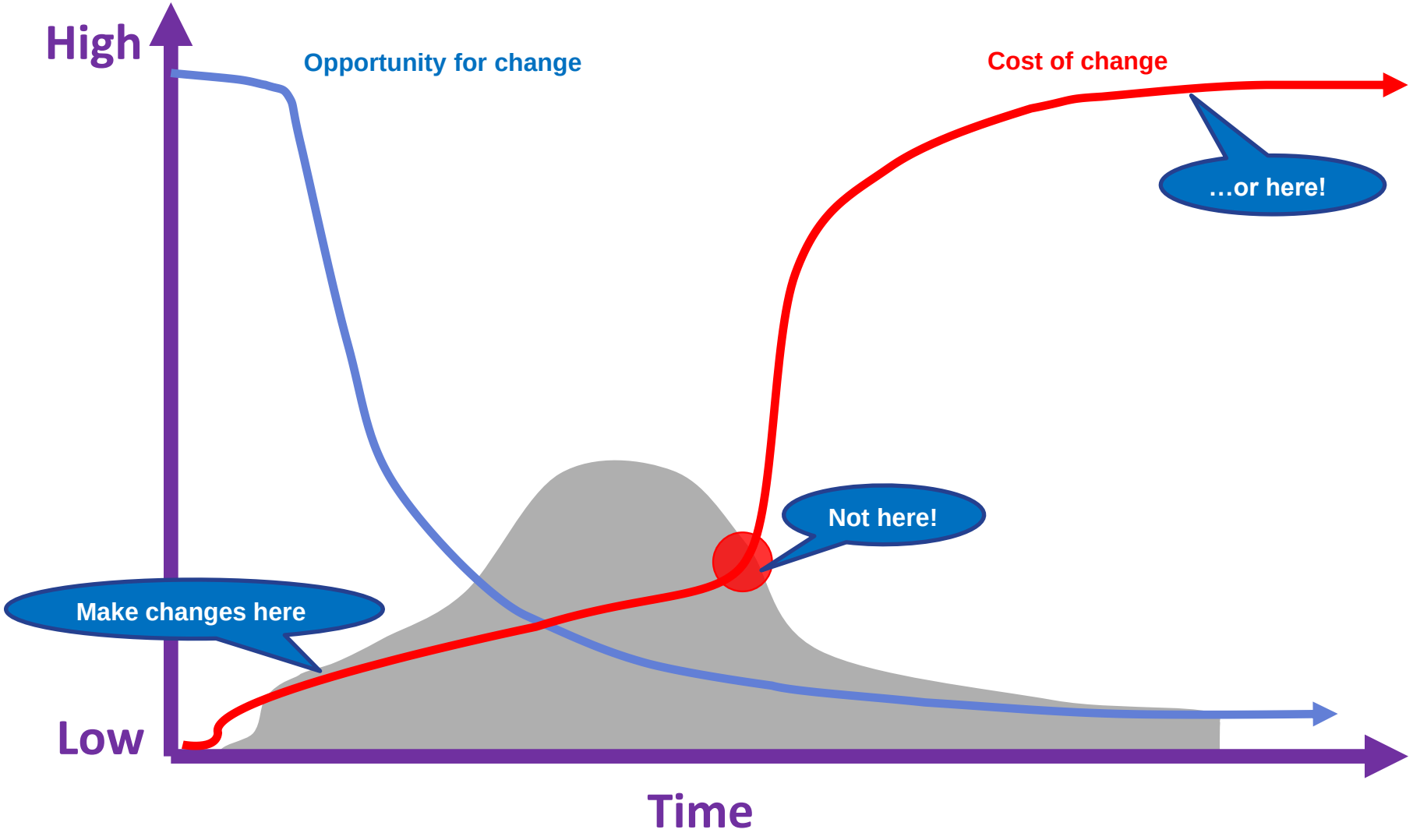
Cost of change



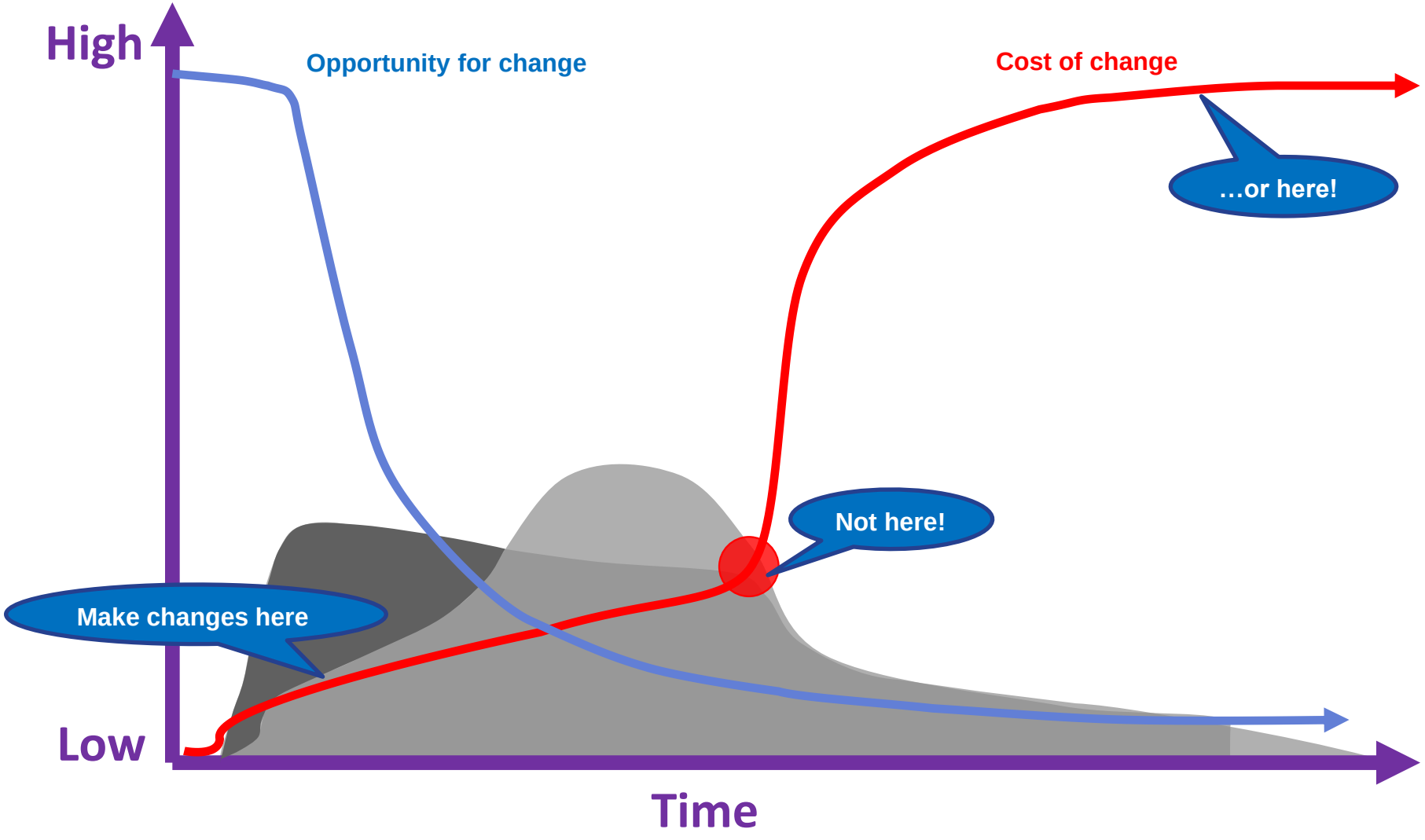


"If I had nine hours to chop down a tree, I would spend the first six hours sharpening my axe."

Traditional Design



Integrated Design



Performance standards are great, but you need a tried and tested method if you want to deliver them cost effectively.

The Passivhaus Parachute

The Secret Formula For Creating Large and Complex Passivhaus Projects

…a simple 4-step process for minimising risk and successfully building large, complex projects to the Passivhaus Standard

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4 Step Passivhaus Protocol:

1. Commit to teamwork
2. Value engineer from day 1
3. Harness Passivhaus experience
4. Trigger success by using a tried and tested management protocol
5. Feedback loop

Common Risks: Client Organisations

Problem:

- Clients without Passivhaus experience may not appreciate
  - The step change imposed upon the average design team or building contractor.
  - The extent to which inexperienced design teams will be learning at the clients expense
  - The benefit of using an experienced Passivhaus Designer (or Consultant)

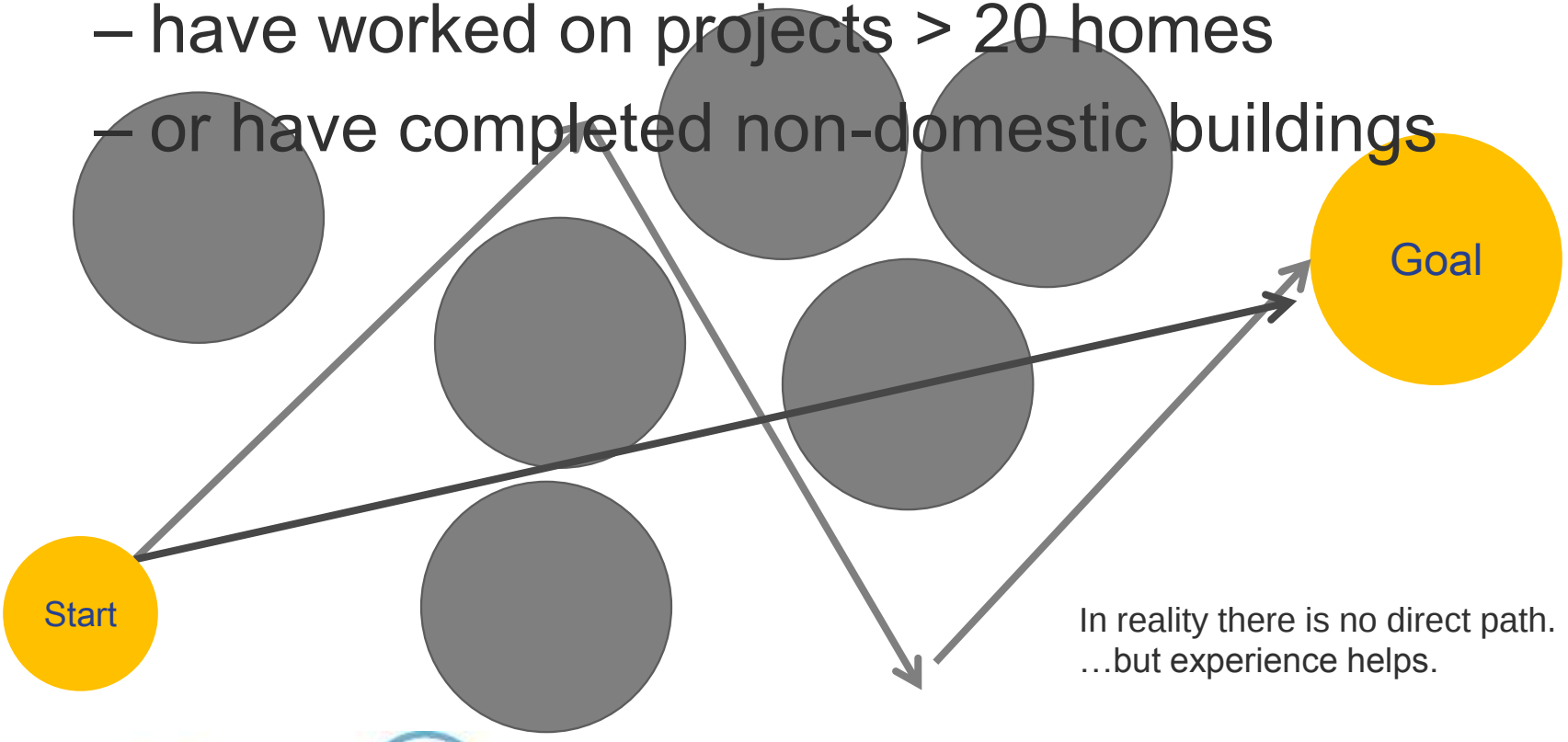
Common Risks: Client Organisations

Solution:

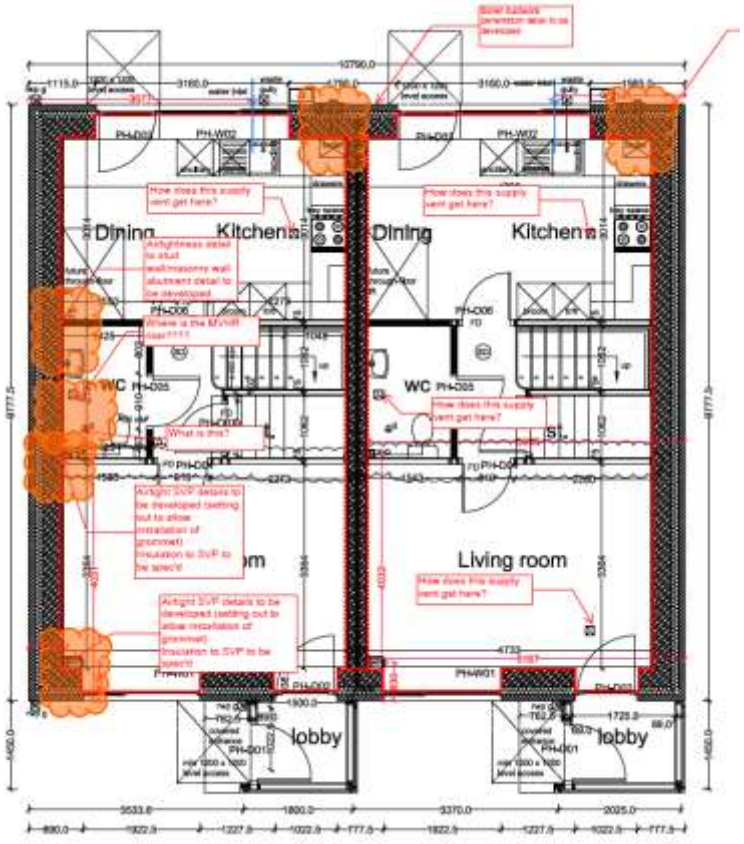
- Assess the design team experience
- Consider teams ability to deliver cost effective Passivhaus buildings
- Consider strategic advice regarding procurement from an experienced Passivhaus Certifier or Passivhaus Designer

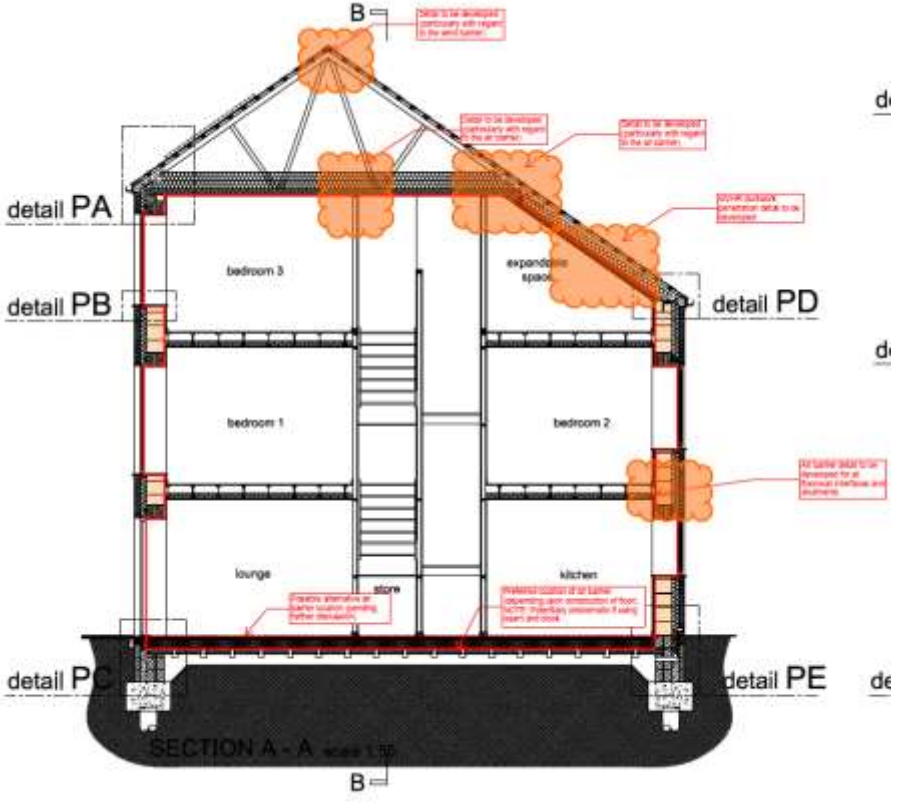
The Passivhaus Protocol:

- Experienced Certified Passivhaus Designers
  - have worked on projects > 20 homes
  - or have completed non-domestic buildings

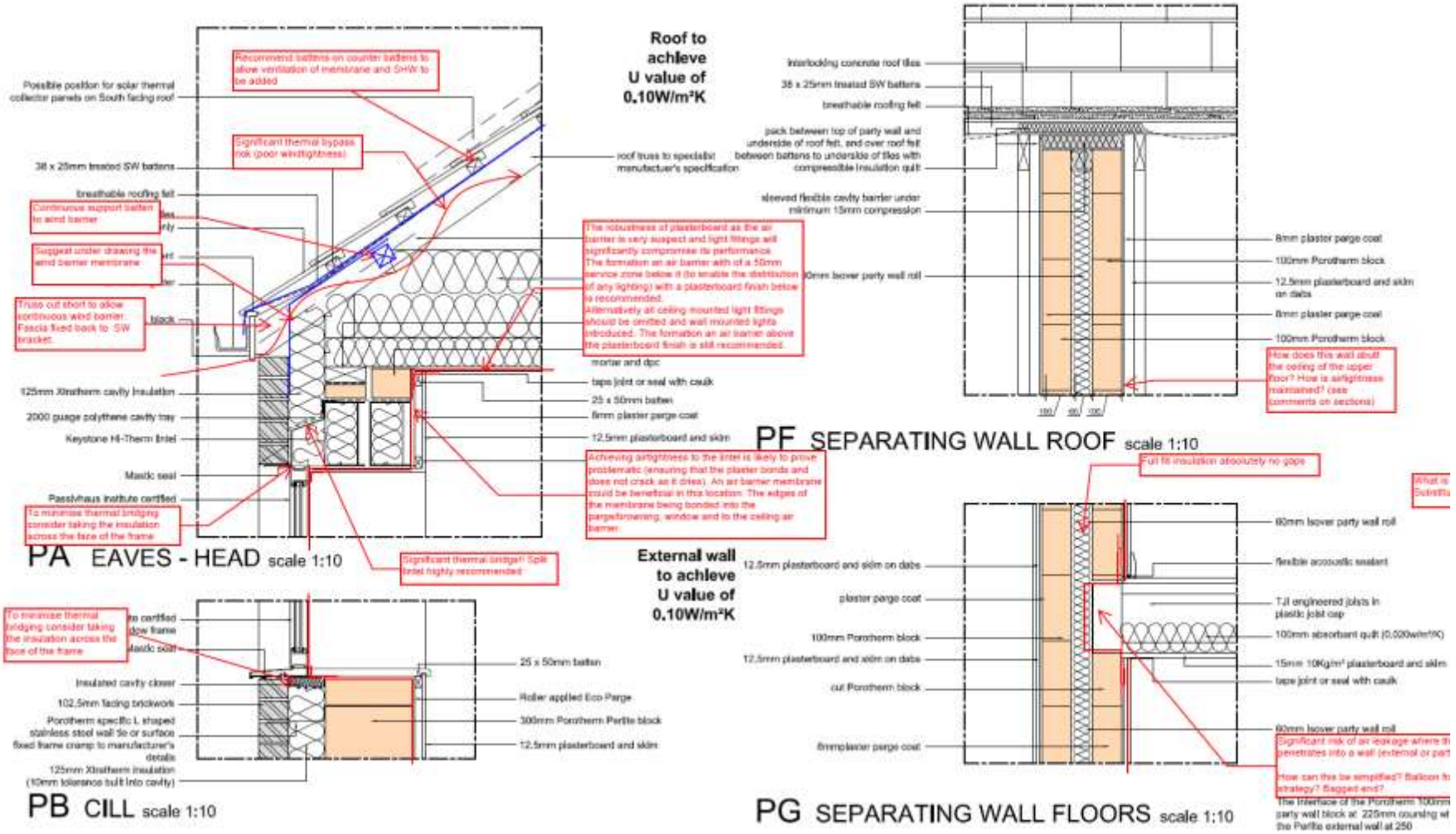


Design Reviews & Workshops:





Desktop Buildability Reviews & Workshops:



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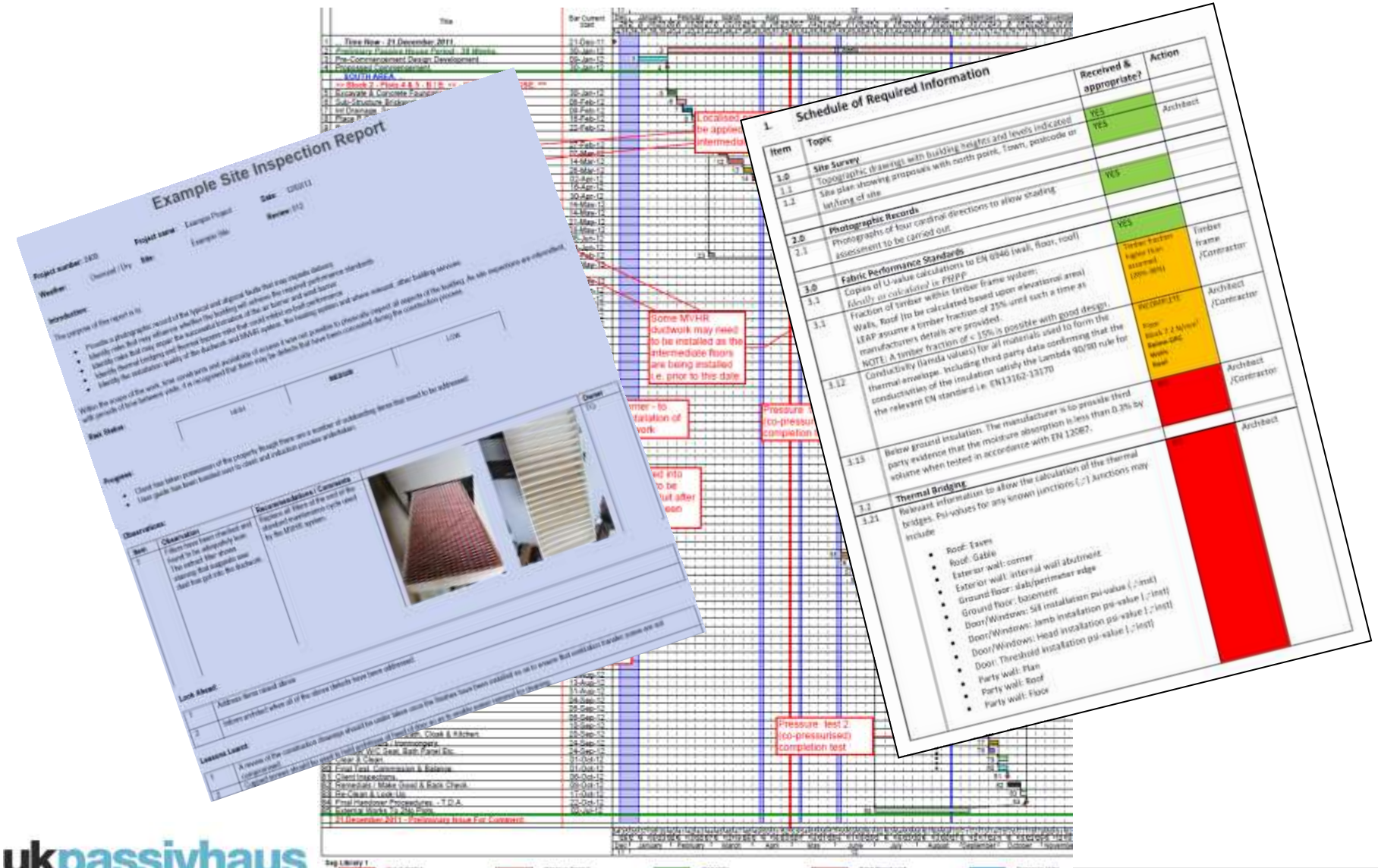
Desktop Buildability Reviews & Workshops:



Result:

Discover more at:

PassivhausMastery.co.uk