Renovation and Regulation

Part 1: Overview of Approved Document L1B

Part 2: Issues to be Considered

Part 3: Case Study: Otterhead Coach House

Seminar Discussion:
Working towards at a consistent approach

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Part 1: Overview of Approved Document L1B

Conservation of fuel and power in existing dwellings

L1A - New Buildings
L2A - New non-domestic
L2B - Existing non-domestic

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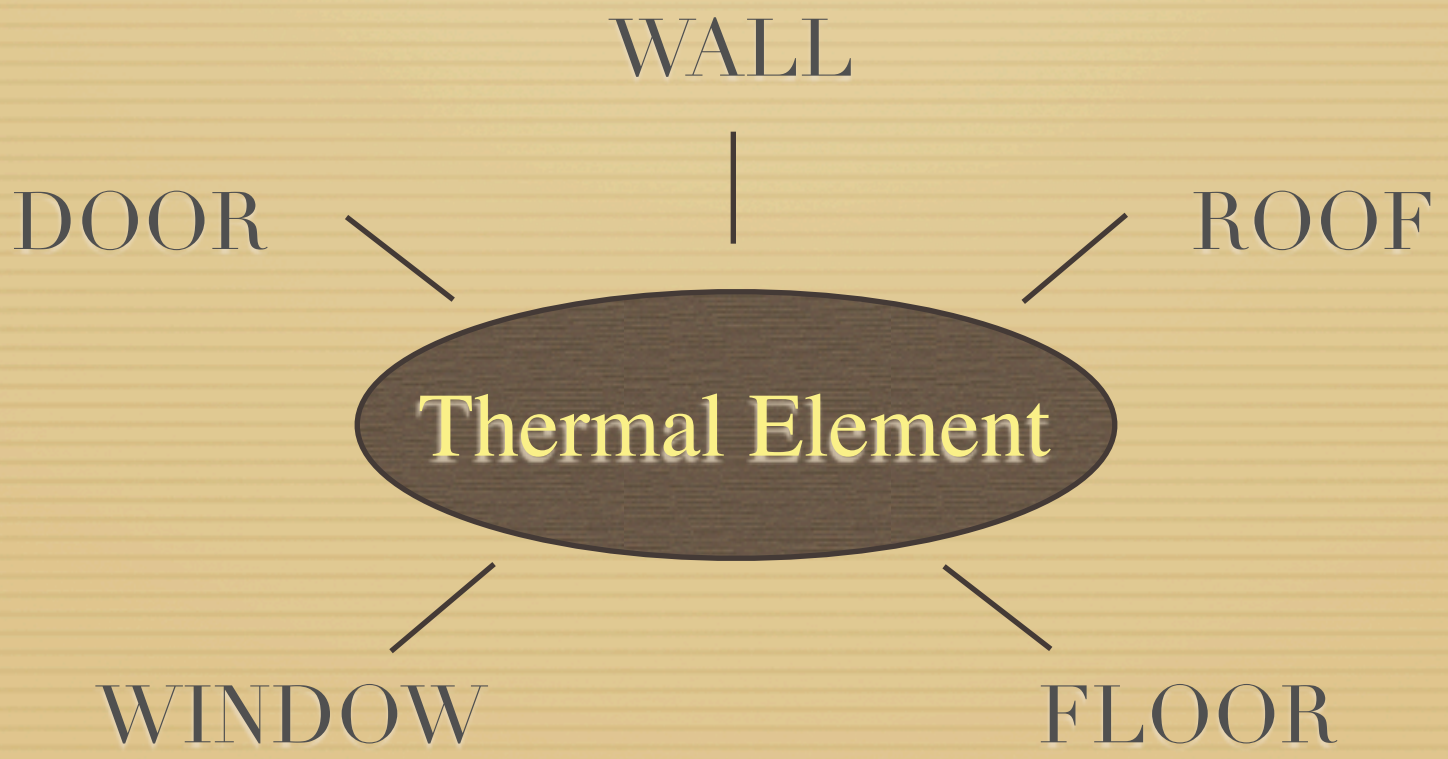

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Roofs: Maximum u-value

Pitched roof with insulation at rafter level	0.20 W/m²K
Pitched roof with insulation at ceiling level	0.16 W/m²K
Flat roof	0.25 W/m²K

Applies whenever a roof is being re-covered

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Walls: Maximum u-value

All walls: 0.35 W/m^2K

"Renovation in relation to a thermal element means the provision of a new layer in the thermal element or the replacement of an existing layer"

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Floors: Maximum u-value

All floors: 0.25 W/m^2K

"Renovation in relation to a thermal element means the provision of a new layer in the thermal element or the replacement of an existing layer"

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Windows & Doors: Maximum u-value

Windows:	2.20 W/m^2K
Doors:	2.20 W/m^2K

Applies whenever a door or window is being replaced

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Alternative Approaches

a) Offsetting

b) CO_2 calculations
(change of use)
(extensions)

} Subject to limiting values

BUT not simple renovation

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Limiting Values (Table 1)

	Average	Limit
Wall	0.35	0.70
Floor	0.25	0.70
Roof	0.25	0.35
Windows & Doors	2.20	3.30

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Other Exemptions

Payback: within 15 years

Floor Area: loss of more than 5%

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Part 2: Issues to Consider

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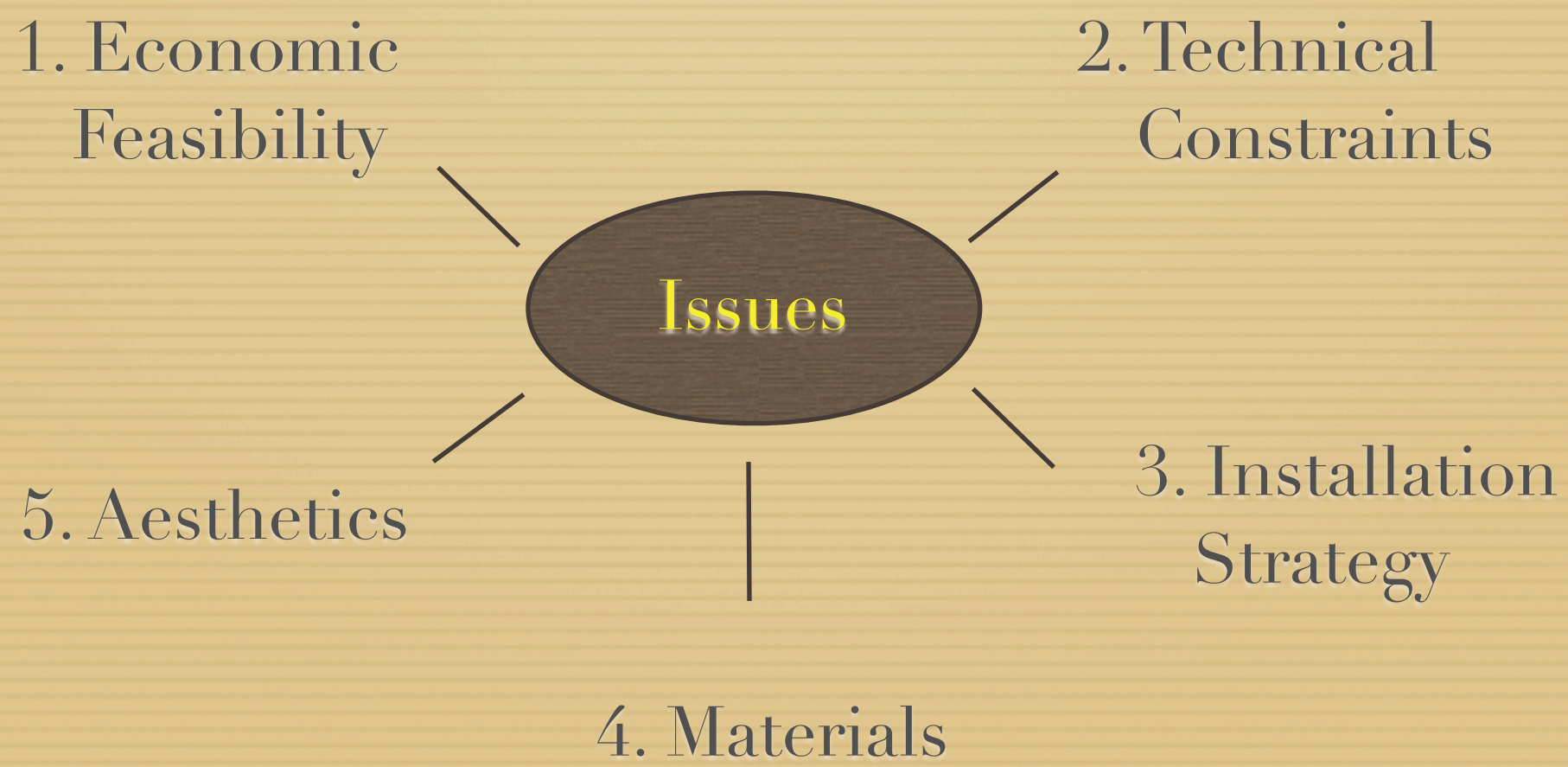
Part 2: Issues to Consider



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Part 2: Issues to Consider

1. Economic Factors

Cost of the insulation works

Inspection Fees

An Englishman's home is his castle

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Part 2: Issues to Consider

2. Technical Constraints

Interstitial Condensation

Damp

Ventilation

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Part 2: Issues to Consider

3. Installation Strategy

Regulations-driven approach: Piecemeal

An army of white vans

Inefficient, high embodied energy

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Part 2: Issues to Consider

4. Materials

Minimising loss of internal space

Mitigates against use of renewable insulation materials

What is available?

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Part 2: Issues to Consider

5. Aesthetics

External insulation: the piecemeal approach

Internal insulation: cornicing
window and door reveals
skirting board
architraves

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Part 3: Case Study: The Otterhead Coach House

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Planned Micro Hydro

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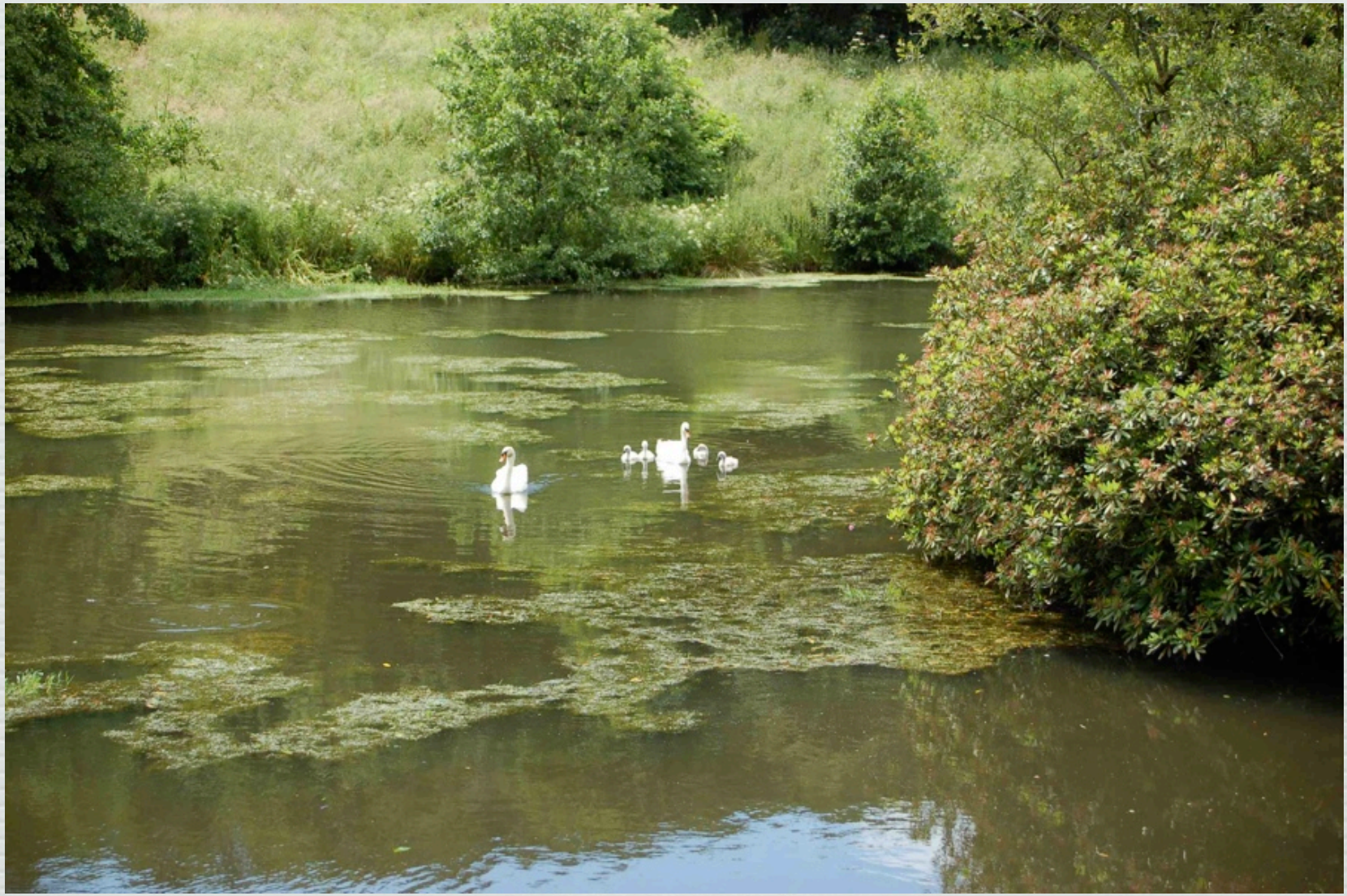

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Would you
want to
cover this up
or clean it up?

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Add:

100mm Thermafleece
Studs, Plasterboard

Lose:

Stone
Lime plaster
Curved reveal
Patina

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One last get-out clause:

L2B (non-domestic) only, under material change of use

"To provide more deign flexibility, an approved calculation tool may be used to demonstrate that the CO2 emissions from the building as it will become are no worse than if the building had been improved following the guidance set out in paragraph 36.

In these cases, the u-values of any individual element should be no worse than the values set out in column (b) of Table 3."

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Seminar Thoughts

1. How much of the UK's CO2 emissions from solid walled housing ?
2. What is the likely number (or %) of Regs Applications per year
3. How long would it take to achieve 75% insulation this way ?
4. What **IS** the embodied energy of carrying out the work ?
5. How much is saved through loft insulation and draughtproofing?
6. What might we achieve by putting the same effort/money elsewhere?

Alternative Strategies

1. Greater intervention - eg when houses are traded
2. Offsetting through renewables
3. Local CHP