

## Energy Strategy Statement

The build thermal value shall demonstrate compliance with the relevant Part L energy and carbon compliance. The initial approach is to upgrade all existing fabric elements to achieve the minimum standards required as shown in Table 4.3

### Renovated and retained elements

4.11 The U-value of an existing thermal element that is being renovated should both:

- a. be no worse than that of the element before it was renovated
- b. meet the limiting standards in Table 4.3.

4.12 Guidance on when an existing element should meet the standards in Table 4.3 is given in Section 11.

Elements that should meet the standards include both of the following.

- a. Thermal elements being renovated in existing dwellings. Renovated elements should achieve the U-values in Table 4.3, column (b)

Table 4.3 – Proposed minimum building fabric standards

**Table 4.3 Limiting U-values for existing elements in existing dwellings**

Element	U-value <sup>(1)</sup> W/(m <sup>2</sup> ·K)	
	(a) Threshold	(b) Improved
Roof <sup>(2)(3)(4)</sup>	0.35	0.16
Wall – cavity insulation <sup>(2)(5)</sup>	0.70	0.55
Wall – internal or external insulation <sup>(2)(6)</sup>	0.70	0.30
Floor <sup>(7)(8)</sup>	0.70	0.25

**NOTES:**

1. Area-weighted average values.
2. For dormer windows, 'roof' includes the roof parts of the windows and 'wall' includes the wall parts (cheeks).
3. If meeting such a standard would limit head room, a lesser standard may be appropriate. In such cases, both of the following should be achieved.
  - a. The depth of the insulation plus any required air gap should be at least to the depth of the rafters.
  - b. The insulant should be chosen to achieve the lowest practicable U-value.
4. If there are problems with the load-bearing capacity of the frame or height of the upstand, for a flat roof or roof with integral insulation, a lesser standard may be appropriate.
5. This applies only to a wall that is suitable for cavity insulation. Where this is not the case, it should be treated as 'wall – internal or external insulation'.
6. If meeting such a standard would reduce the internal floor area of the room bounded by the wall by more than 5%, a lesser standard may be appropriate.
7. The U-value of the floor of an extension may be calculated using the exposed perimeter and floor area of the whole enlarged dwelling.
8. If meeting such a standard would create significant problems in relation to adjoining floor levels, a lesser standard may be appropriate.

## Building Services

Snipping Tool

High efficiency building services are proposed for the dwelling's elements, as shown in Table 2 below.

**Table 2 – Proposed building services specification for residential areas**

Main heating system:	Boiler systems with radiators or underfloor heating
	Gas boilers and oil boilers
	Fuel: mains gas
	Info Source: Boiler Database
	Database: (rev 468, product index 017916) Efficiency: Winter 80.5 % Summer: 90.6
	Brand name: Vaillant (or similar performance)
	Model: ecoTEC pro 24 H combi A or similar
	Model qualifier: VUW GB 246/5-3 A R4
	(Combi boiler)
	Systems with radiators
	Central heating pump : 2013 or later
	Design flow temperature: Unknown
Boiler interlock: Yes	
Main heating Control:	Time and temperature zone control by suitable arrangement of plumbing and electrical services
Water heating:	From main heating system
Ventilation:	Decentralised whole house extract
Lighting:	100% Efficient Lighting