

5a LETI retrofit energy targets (modelling method)

Our analysis demonstrated that what LETI considers to be a pragmatic, affordable and realistic level of retrofit matches closely with the AECB Retrofit standard in terms of both space heating demand and final EUI. LETI considers this to be a **best practice** retrofit.

► **SIGNPOST** Chapter 4 - LETI home retrofit targets - 4.2 Modelling method

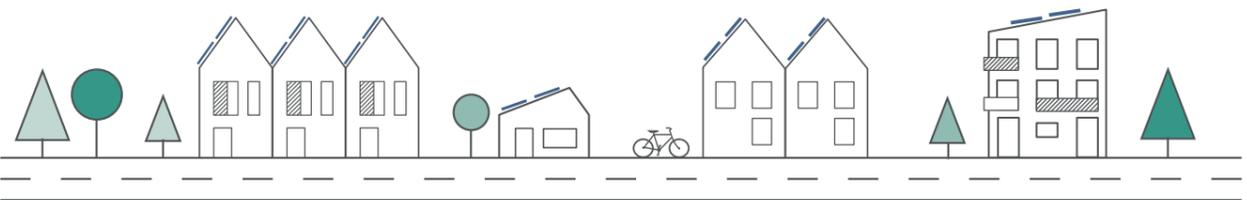
The more demanding Passivhaus EnerPhit retrofit standard achieves further reductions and is aligned with LETI's **exemplar** targets in terms of retrofit ambition.

Use of either energy target requires detailed energy modelling to be carried out.

LETI best practice retrofit



LETI exemplar retrofit



► **SIGNPOST** Chapter 4 - LETI home retrofit targets - 4.5 LETI typical house archetype examples

5b LETI retrofit fabric and system targets (constituent element method)

This constituent method can be used where detailed energy modelling is not possible or financially feasible on a small project.

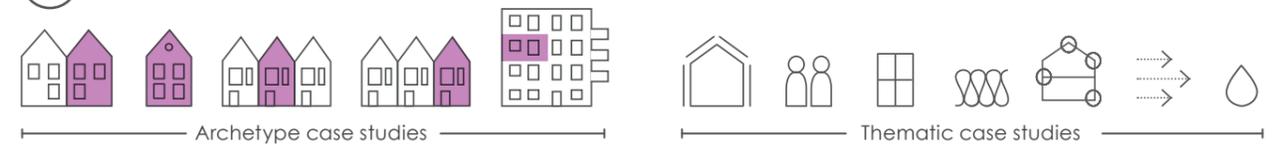
The fabric and system components of the retrofit works should achieve the target parameters set out below.

► **SIGNPOST** Chapter 4 - LETI home retrofit targets - 4.3 Constituent element method

Building element	Retrofit actions	LETI best practice		LETI exemplar	
		Constrained retrofit	Unconstrained retrofit (cool temperate climate)	All retrofit types	
Walls	Cavity	0.24 W/m ² .K	0.18 W/m ² .K	0.15 W/m ² .K	
	Solid uninsulated	0.32 W/m ² .K	0.18 W/m ² .K	0.15 W/m ² .K	
	Timber frame	0.21 W/m ² .K	0.18 W/m ² .K	0.15 W/m ² .K	
Roofs	Cold	0.12 W/m ² .K	0.12 W/m ² .K	0.12 W/m ² .K	
	Warm/flat	0.22 W/m ² .K	0.12 W/m ² .K	0.12 W/m ² .K	
Floors	Suspended timber	0.20 W/m ² .K	0.18 W/m ² .K	0.15 W/m ² .K	
	Solid uninsulated	0.80 W/m ² .K	0.15 W/m ² .K	0.15 W/m ² .K	
Windows and doors	Windows	1.30 W/m ² .K	1.00 W/m ² .K	0.80 W/m ² .K	
	Doors	1.00 W/m ² .K	0.80 W/m ² .K	0.80 W/m ² .K	
General envelope	Thermal bridging	0.10 W/m.K	0.10 W/m.K	0.08 W/m.K	
	Airtightness	3.0 ach@50Pa	2.0 ach@50Pa	1.0 ach@50Pa	
Systems	Systems and appliances	Fossil fuel free	Fossil fuel free	Fossil fuel free	
	Ventilation type	MVHR*	MVHR	MVHR	
	Lighting power	50 lm/W	100 lm/W	100 lm/W	
Hot water	Hot water tank	1.5 W/K	1.5 W/K	1.5 W/K	
	Primary pipework	90% of pipework insulated	90% of pipework insulated	90% of pipework insulated	
	Shower demands	16 litres/pers.day	16 litres/pers.day	16 litres/pers.day	
	Other demands	9 litres/pers.day	9 litres/pers.day	9 litres/pers.day	
Renewables	Photovoltaic generation	Rooftop installation	0% of roof area covered in PV panels	40% of roof area covered in PV panels	40% of roof area covered in PV panels

* If not possible use demand control dMEV or demand control cMEV

6 Case studies



► **SIGNPOST** Chapter 6 - Case studies