Thinking radically:
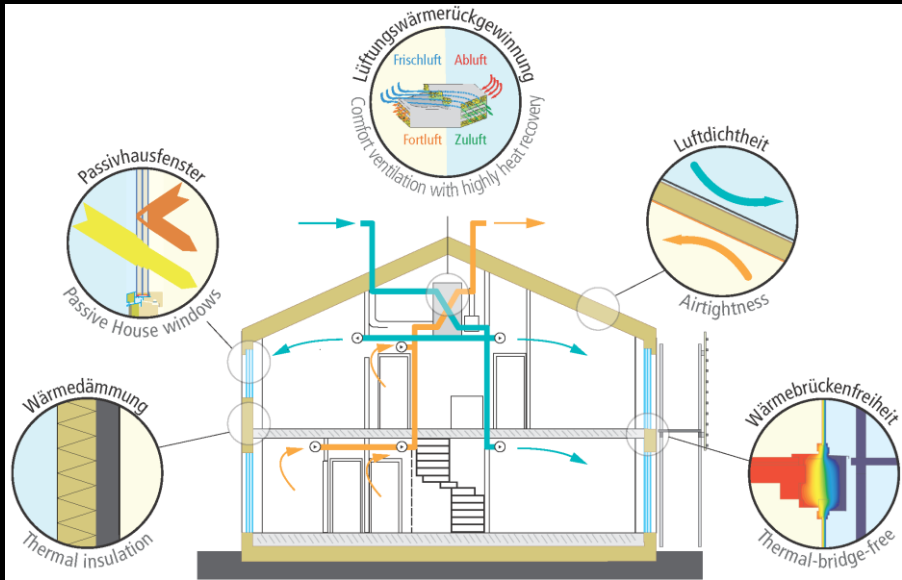# reliable delivery of healthy, low carbon buildings

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(i) people who use buildings can do so safely and without endangering their health; and

(ii) buildings have attributes that contribute appropriately to the health, physical independence, and well-being of the people who use them; and

(iii) people who use a building can escape from the building if it is on fire; and

(iv) buildings are designed, constructed, and able to be used in ways that promote sustainable development:

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Building Act 2004

The Passive House Standard

Lüftungswärmerückgewinnung
Frischluft | Abluft
Comfort ventilation with highly heat recovery
Fortluft | Zuluft

Passivhausfenster / Passive House windows

Luftdichtheit / Airtightness

Wärmedämmung / Thermal insulation

Wärmebrückenfreiheit / Thermal-bridge-free

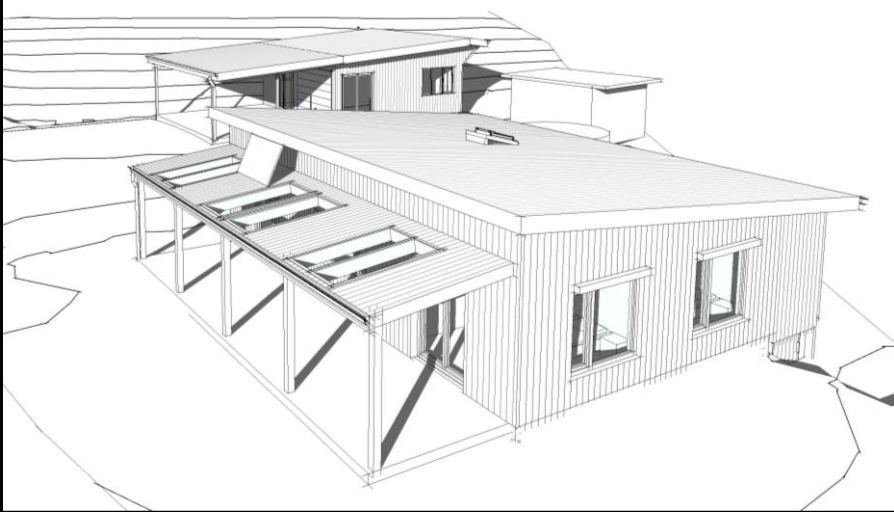| Specific building characteristics with reference to the treated floor area						Criteria	Alternative criteria	Fullfilled?[2]
	Treated floor area	m²	174.6					
Space heating	Heating demand	kWh/(m²a)	14.90	≤		15	-	yes
	Heating load	W/m²	11.54	≤		-	10	
Space cooling	Cooling & dehum. demand	kWh/(m²a)	-	≤		-	-	-
	Cooling load	W/m²	-	≤		-	-	
	Frequency of overheating (> 25 °C)	%	2	≤		10		yes
	Frequency excessively high humidity (> 12 g/kg)	%	0	≤		20		yes
Airtightness	Pressurization test result n_{50}	1/h	0.6	≤		0.6		yes
Non-renewable Primary Energy (PE)	PE demand	kWh/(m²a)	90	≤		120		yes
Primary Energy Renewable (PER)	PER demand	kWh/(m²a)	39	≤		-	-	-
	Generation of renewable energy	kWh/(m²a)		≥				

[2] Empty field: Data missing; '-': No requirement

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Certification of the built project

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Co-heating test results. All 33 houses were supposedly energy efficient, but the average heat loss for the Passive Houses (the last six houses) was only about a quarter of the average heat loss of the other houses; the gap between measured and predicted performance is also markedly narrower with the Passive Houses (Figure: Johnston D. Personal communication. 2016, Leeds Beckett University, Leeds, UK).
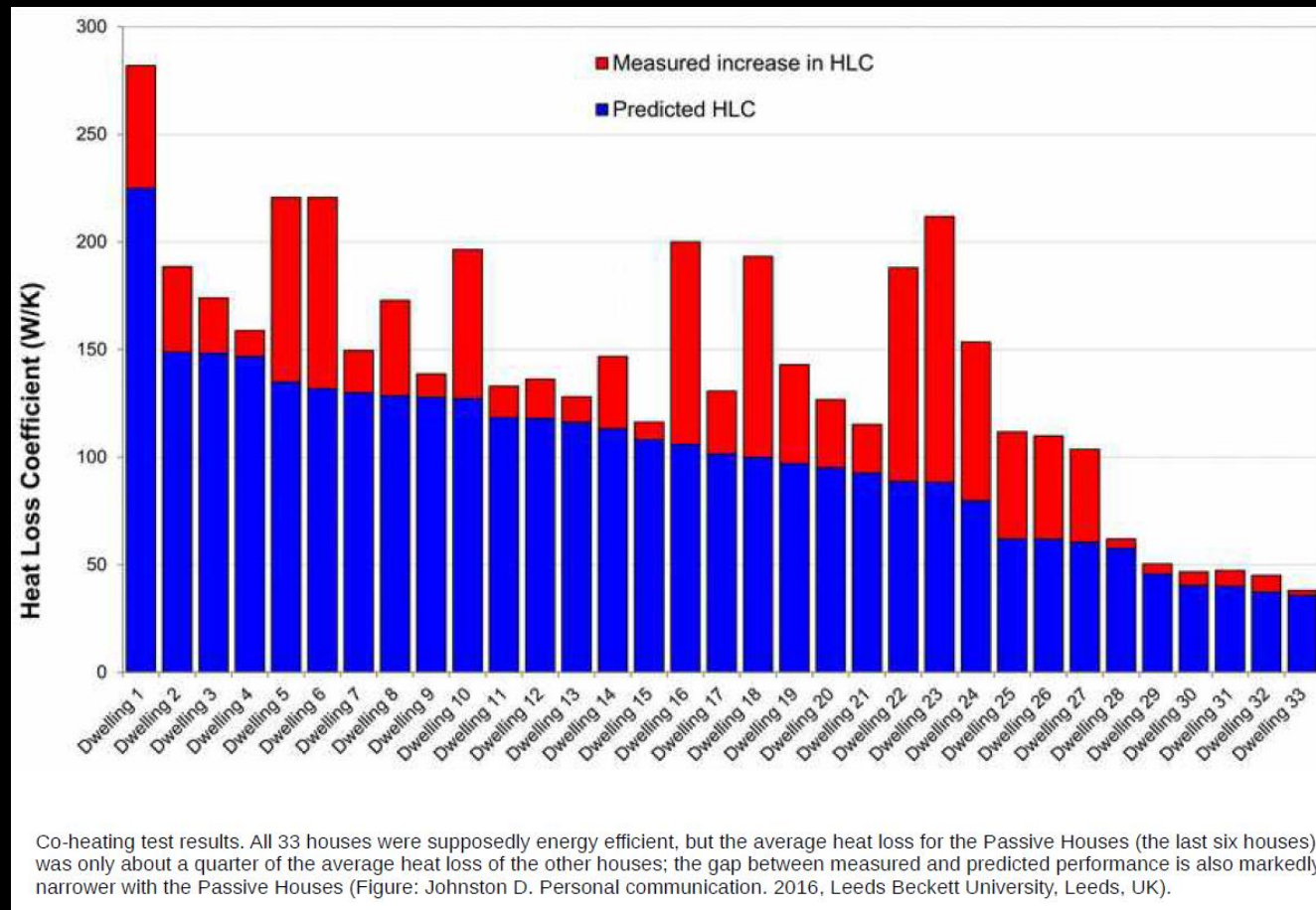
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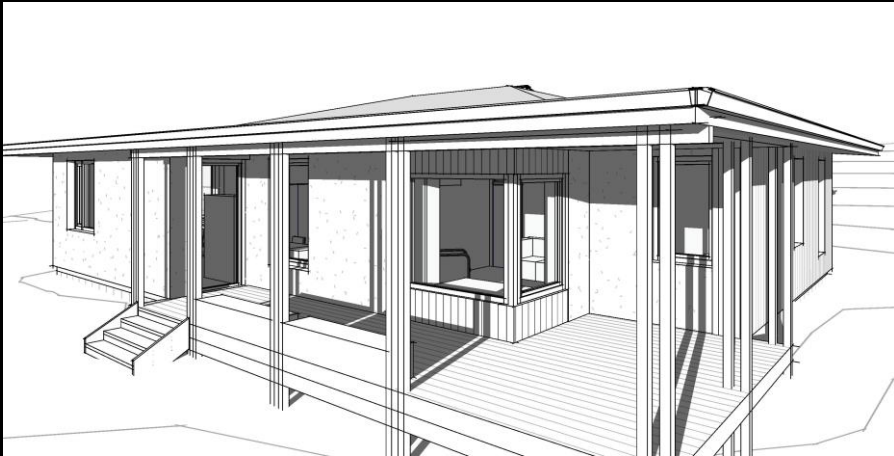
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Any building type or scale

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