

Oxford City Council (Housing Company): exploration of *Healthy Housing New Build Standard*

Aims – build on excellent SHAP work to:

- Understand potential build stage/ whole life costs
- Evaluate against key benefits for Council:
 - ❑ £ savings for tenants (fuel poverty reduction)
 - ❑ Carbon savings to meet carbon targets
- Check for appropriate archetypes for our homes
- Enable Housing Company to understand costs of committing to a certain standard
- Offer options with costs we are confident about

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'High tech model' (direct from CAR's work)

UK



LEVEL 1: FABRIC IMPROVEMENTS AND MVHR, NO RENEWABLES

Item	Specification
Wall U-value	0.15
Roof U-value	0.11
Floor U-value	0.11
Glazing U-value	0.8 (triple-glazed)
Thermal bridging y-value	0.07
Airtightness	3m ³ /h@50 Pa
Ventilation system	MVHR
Heating system	Gas boiler, 90% efficiency

LEVEL 2: FABRIC IMPROVEMENTS AND MVHR, ASHP AND PV

Item	Specification
Wall U-value	0.15
Roof U-value	0.11
Floor U-value	0.11
Glazing U-value	0.8 (triple-glazed)
Thermal bridging y-value	0.07
Airtightness	1m ³ /h@50 Pa
Ventilation system	MVHR
Heating system	Air source heat pump
Renewables	2.5kWp PV

LEVEL 3: FABRIC IMPROVEMENTS AND MVHR, ASHP AND LARGE PV

Item	Specification
Wall U-value	0.15
Roof U-value	0.11
Floor U-value	0.11
Glazing U-value	0.8 (triple-glazed)
Thermal bridging y-value	0.07
Airtightness	1m ³ /h@50 Pa
Ventilation system	MVHR
Heating system	Air source heat pump
Renewables	5kWp PV

1. Amendments to existing current 3 bed semi model (above)

- Decrease air tightness to 2
- Lower thermal bridging slightly
- Energy £ savings to tenants for gas and electricity

2. Model as above but for 2 bed flat

- Roof space availability for PV as part of the picture
- Additional planning requirements removed from costs



Simple version

- Bioregional – SAP modelling to give best options (mix and match from options below)
- As before, Building Regulations is baseline
- Workshops with internal staff –happy with
- More detailed modelling following this to give costs etc

Archetype	Heating type	Water heating type	Insulation levels	Air tightness (AT)	Ventilation	Renewables/ other to consider
3 bed End of terrace	Gas boiler	Gas boiler	As per CAR's initial measurements	5m ³ /h@ 50Pa	Humidistat/ other fan	Solar PV – costs for integrated?
2 bed top floor flat	Storage heater (high effic)	Immersion	Super insulation level		Natural ventilation	BEPIT - performance gap reduction service
	High effic panel heaters	Power shower			Is MVHR necessary at this AT level? If so MVHR or MEV	Difference between OSM and wetbuild? Tenant usability
		PV to water immersion (Immersion)				

