

This report details the calculations and results for Ene 1, 2 and 7 of the Code For Sustainable Homes.

This Design Assessment has been carried out by an On-Construction Domestic Energy Assessor. It has been prepared from plans and specifications and may not reflect the property as constructed. Code calculations are from the Technical Guide (2014 combined addendum).

Assessor name	Mrs Maureen Reynolds (OCDEA)	Assessor number	3582
Client		Last modified	24/08/2016
Address	Detached House Land off 2 Harewood Avenue, Simonstone, Burnley, BB12 7JB		

Building regulation assessment - criterion 1

	kg/m ² /yr
DER	15.83
TER	17.71

Assessment of zero carbon home and low or zero carbon technologies

		Credits	Level
Dwelling emission rate (Ene 1)	CO ₂ reduction = 10.6%	1.8	No level
Fabric Energy Efficiency	FEE = 57.7	3.5	
Low or zero carbon technologies (Ene 7)	CO ₂ reduction = 11%	1	

Ene 1 - dwelling emission rate

	%	kWh/m ²	kgCO ₂ /m ² /yr
Assessment of Ene 1 (level 1-5)			
DER from SAP 2012 DER worksheet			15.83
Additional allowable generation		0.00	
CO ₂ emissions offset from generation			0.00
CO ₂ emissions offset from community biofuel CHP systems			0.00
Total CO ₂ emissions offset from SAP section 16 allowances			0.00
DER accounting for SAP section 16 allowances			15.83
CO ₂ reduction compared to TER			1.88
CO ₂ reduction as % of TER	10.6		

Assessment of Ene 1 (level 6)

DER from SAP 2012 DER worksheet		15.83	(ZC1)
CO ₂ emissions from appliances (equation L14)		14.18	(ZC2)
CO ₂ emissions from cooking (equation L16)		1.59	(ZC3)
Total CO ₂ emissions		31.60	(ZC4)
Additional allowable generation and its CO ₂ emissions offset		0.00	(ZC6)
CO ₂ emissions offset from additional allowable generation		0.00	(ZC7)
CO ₂ emissions offset from community biofuel CHP systems		0.00	(ZC5)
Net CO ₂ emissions		31.60	(ZC8)

Ene 1 - dwelling emission rate - level 6

There is no Zero Carbon Home definition in the current technical guide

	Criterion	Value	Pass/Fail
FEE	<= 46	57.7	Fail
Net CO ₂ emissions	<= 0	31.60	Fail
Result: Not level 6			
Number of credits for Ene 1			1.8

Ene 2 - fabric energy efficiency

FEE			57.7
Number of credits for Ene 2			3.5

Ene 7 - low or zero carbon technologies

	Emissions kgCO ₂ /yr	Reduction kgCO ₂ /yr
Standard case		
Space and water heating (265)	2303.39	
Mechanical cooling (266)	0.00	
Pumps and fans (267)	38.92	
Lighting (268)	238.10	
Appliances and cooking	1863.70	
Total CO ₂	4444.11	
Actual case		
Space and water heating (265) or (376)	1997.34	
Space and water heating from LZCT considered in SAP 2012		306.05
Pumps and fans (267) or (378)	38.93	
Pumps and fans		0.00
Electricity generated by LZCT (269) + (380))		212.51
Additional allowable electricity generation considered in SAP 2012 section 16		0.00
Offset from biofuel CHP [-1 x [(363)..(366) + (368)..(372)]]		0.00
LZCT electricity generation		212.51
LZCT thermal generation		306.05
Total from specified LZCT		518.55
Reduction in CO₂ Emissions		
Standard case CO ₂	37.60	
Actual case CO ₂	33.22	
Reduction in CO ₂ (%)	11	
Number of credits for Ene 7	1	