Building Element	Construction Types			Approximate Embodied Carbon (kgCO2/unit)			Area used on	Approximate Embodied Carbon	
	Industry Standard Proposed Baseline (subject to agreement with BioRegional)	Proposed Construction for Bicester	Unit	Industry Standard	Proposed Option for Bicester	Saving of CO2 (per unit)	site (unit)	Saving for NW Exemplar Site (kgCO2)	Comments
External Wall	 15mm plasterboard, 3mm skim 100mm Blockwork Cavity with Insulation 102mm Brickwork 	 15mm plasterboard, 3mm skim Timber frame with insulation Cavity 102mm Brickwork 	m2	60.73	21.1	39.63	5,700	225,891	Area of external walls with brickwork has been decreased.
External Wall	 15mm plasterboard, 3mm skim 100mm Blockwork Cavity with Insulation 102mm Brickwork 	 15mm plasterboard, 3mm skim Timber frame with insulation Cavity 75mm Blockwork Render 	m2	60.73	3.0	57.73	33,461	1,931,704	
External Wall	 15mm plasterboard, 3mm skim 100mm Blockwork Cavity with Insulation 102mm Brickwork 	 15mm plasterboard, 3mm skim Timber frame with insulation Cavity 100mm Stone Cladding 	m2	60.73	14.4	46.33	12,783	592,236	
External Wall	 15mm plasterboard, 3mm skim 100mm Blockwork Cavity with Insulation 102mm Brickwork 	15mm plasterboard, 3mm skim Timber frame with insulation Cavity 75mm Blockwork Battens 18mm Wood Cladding	m2	60.73	2.3	58.43	1,256	73,388	Area of external walls with timber cladding has been increased.
	Assumed mix of 50% clay tiles and 50% concrete tiles	Redland Cambrian, 60% recycled content slate tile	m2	24.5	1.2	23.30	29,086	677,704	
Roof Tiles	Assumed mix of 50% clay tiles and 50% concrete tiles	Beckstone Roof Tiles	m2	24.5	10.9	13.60	4,983	67,769	
tiles/panels	Assumed mix of 50% clay tiles and 50% concrete tiles	The integrated PV tiles/panels avoid the need for roof tiles	m2	24.5	0	24.50	2,505	61,373	Area is for phase 1 only. Area for phases 2-4 to be confirmed.
	Hot Rolled Asphalt	Low Temperature Asphalt	m2	32.8	28.2	4.60	13,786	63,416	
Timber Fence	Concrete post	Timber Post	per post	6.44	1.55	4.89	3,200 TOTAL	15,648 3,709,128	

Bicester Eco Town Planning Condition 58 - Embodied Carbon

Updated 120925