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Solar thermal collectors, *New World Solar*
Summerfield community, *Family Housing Association*

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Housing in the Walton area of Liverpool, *Pollard Thomas Edwards Architects*

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Pensioner household, *Newark & Sherwood Energy Agency*
Building works, *Sandwell MBC*

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Tenant liaison, *Wates Living Space*

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Daneville Estate, *Liverpool Mutual Homes/Pollard Thomas Edwards Architects*
Summerfield 'eco-neighbourhood', *Family Housing Association*

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Stockethill estate in Aberdeen, *Michael King*
EMS award, *Accord Housing Group*

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Smart energy meter, *Family Housing Association*

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Appendix 1

Stakeholder workshop attendees

Paul Sutton CHAIR	South Shropshire Housing Association
Julie Alexander	PRP Architects
Ian Bailey	Ashfield Homes
John Barnham	Orbit Housing Association
Hannah Barter	Urban Vision North Staffs
Paul Bartlett	Birmingham City Council
John Bedford	Accord Housing Association
Manjit Bhogal	Waterloo Housing Association
Gerard Buckley	Stoke City Council
Chris Cartwright	Family Housing Association
Mark Clemson	New World Solar
Bob Crombie	Homes and Communities Agency
Tony Crompton	Government Office for the West Midlands
Paul Davies	Wates Living Space
Andy Dewberry	Newark and Sherwood Homes
Shaun Doolan	Sandwell Homes
Mark England	Accord Housing Association
Paul Griffiths	Dudley MBC
Paul Harvard	Tenants Services Authority
Kim Hitch	PRP Architects
John Horseman	Government Office for the West Midlands
Myk Kaszuba	Wolverhampton Homes
Emma Kiteley	West Midlands Leaders Board
Karl Linder	Servite Housing
George Marsh	Bullock Construction
Alison Mathias	Homes and Communities Agency
Steve Morgan	Wates Living Space
Neil Morton	Birmingham City Council
Trisha Myatt	Stoke City Council
Steve North	Wolverhampton City Council
Karen Parker	Birmingham City Council
John Shakeshaft	Kinetic IAU
Randip Singh Bahra	Homes and Communities Agency
Kevan Spink	Urban Living
David Stevenson	Sandwell MBC
Colin Strong	New World Solar
Tony Thompson	Sandwell Homes
Michael Thompson	West Midlands Centre for Constructing Excellence
Tony Wehby	Chartered Institute of Building
Paul Western	Tamworth Borough Council

Appendix 2

Case study archetype and construction types

Archetype	Construction type	Location	Partner	Major improvements	Indicative Cost
Pre-1945 terrace	Solid wall, masonry (19 th Century)	Perry Street, Darlaston	Accord Housing Association	<ul style="list-style-type: none"> Overcladding of rear walls; Replacement double glazing; Floor insulation; Door replacement; Communal biomass heating. 	£25,805.45
Pre-1945 semi-detached houses	Brick/block with render (inter-war)	Buckley Road, Wolverhampton	Wolverhampton Homes	<ul style="list-style-type: none"> Overcladding of external walls; Replacement triple glazed windows; Floor insulation; Door replacement Solar thermal collectors and oversized thermal store; 	£32,357.80
1945-1964 semi-detached houses	Brick/block, external brick with cavity	Kerry Green, Bishops Castle	South Shropshire Housing Association	<ul style="list-style-type: none"> Replacement double glazing; Floor insulation; Solar thermal collectors; Upgraded solid fuel boiler. 	£18,581.70
1965-74 houses (and 10. post 1945 low-rise flats)	'Macrad' timber frame system	Pinfold Lane, Wolverhampton	Wolverhampton Homes	<ul style="list-style-type: none"> Rebuild of timber external walls with integral triple glazing; Install wet space heating; Communal solar thermal collectors; 	£24,474.16
Semi-detached house (non traditional)	'Smiths' system construction	Cophall Street, West Bromwich	Sandwell Homes	<ul style="list-style-type: none"> Overcladding of external walls; Replacement triple glazed windows; Floor insulation; Door replacement; Solar thermal collectors and oversized thermal store; 	£32,236.58
Medium rise flats (estate and district energy opportunities)	Wimpey 'no-fines'	Okement Drive, Wolverhampton	Wolverhampton Homes	<ul style="list-style-type: none"> Overcladding of external walls; Replacement triple glazed windows; Communal solar thermal collectors; 	£23,131.64
	Concrete frame/floors with block in-fill, cavity walls	Parklands Road, Darlaston	Accord Housing Association	<ul style="list-style-type: none"> Overcladding of external and communal walls; Replacement double glazing; Communal biomass heating 	£21,483.36
High rise flats	Concrete frame/floor with block in-fill, cavity walls	Birchcroft, Sandwell	Sandwell Homes	<ul style="list-style-type: none"> Overcladding of external walls; Replacement clad triple glazed windows; Communal gas boilers, ventilation heat recovery and solar thermal collectors. 	£16,371.26

