Retrofit for the Future Final Phase Report ZA522P Appendix 2 Construction photographs

Pre-retrofit property













 $150 mm\ of\ mineral\ wool\ insulation\ fitted\ between\ floor\ joists$



Continuous airtight layer between parge coat to walls and airtight layer in attic



High performance PUR fitted between rafter to provide a continuous insulated envelope over the top of the external walls.



High performance PUR fitted between rafter to provide a continuous insulated envelope over the top of the external walls.



 $Solar\,thermal\,array\,in stalled$



 $Solar\,thermal\,cylinder\,in stalled\,in\,under-stair\,cupboard$



Installing triple glazed passivhaus windows with timber surround





 $Timber\, frame\, construction\, of\, bay\, window\, area$

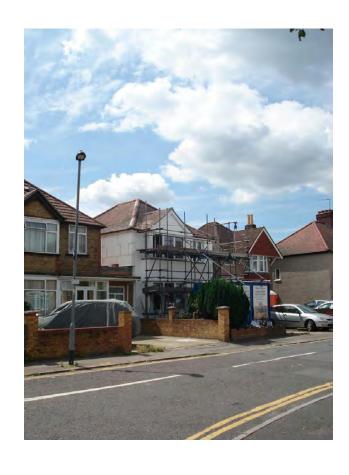




Internal bay windows



External insulation

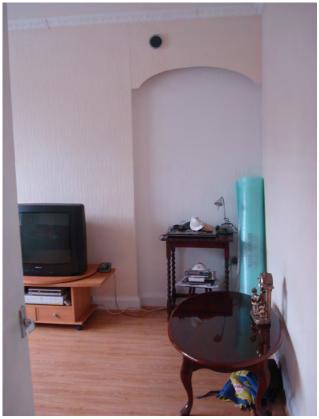




Paul Novus 300 heat recovery ventilation unit (HRVU) to attic



Door fan to front door during airtest . Airtightness tapes and membranes continuous are from door and windows to parge coat.



 $Internal \, wood \, fibre \, insulation \, to \, party \, wall \, either \, side \, of \, chimney \, breast \,$



Supply air diffuser from HRVU



 $Low\,energy\,light\,bulbs\,throughout$

Post-retrofit property





