

passivhaus on a shoestring - in the city

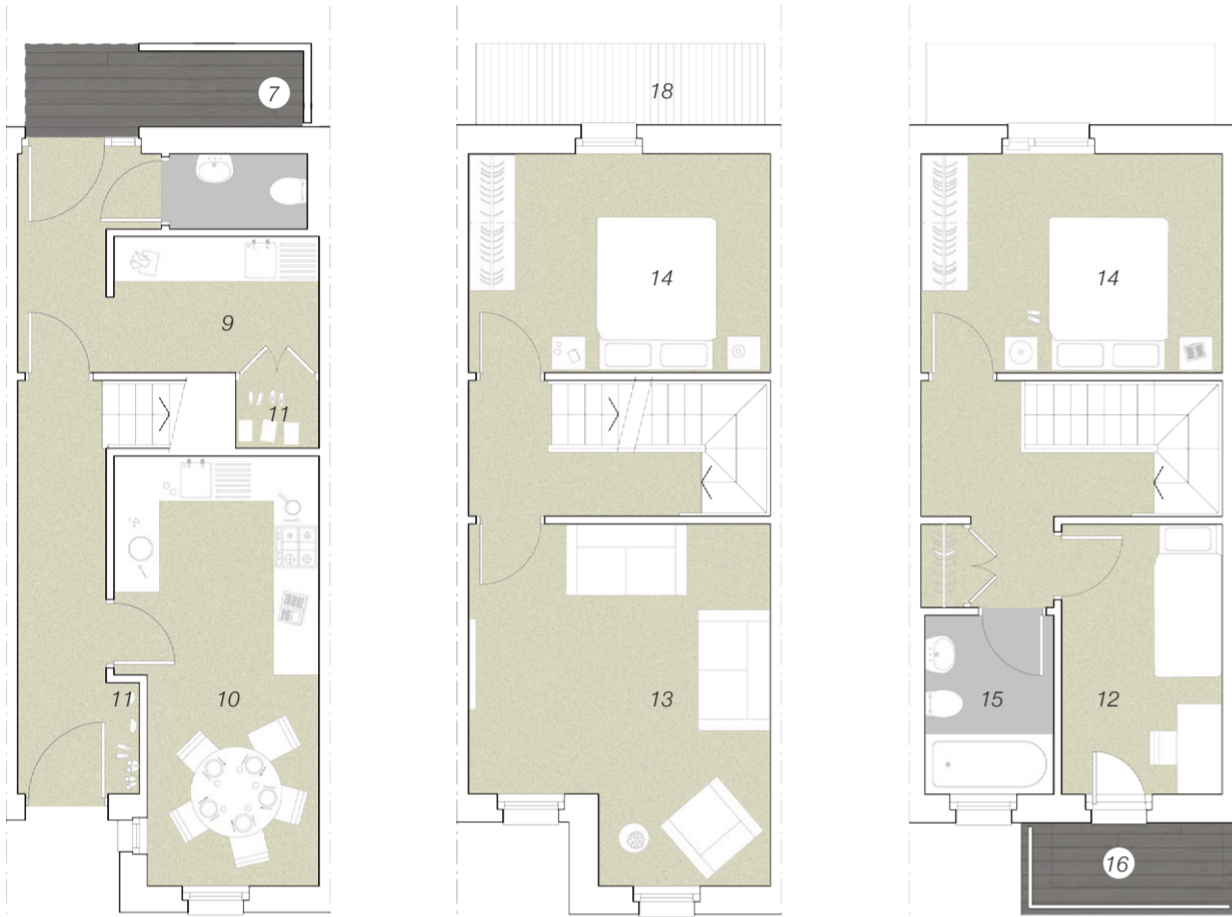


an urban scale street & a lively shared courtyard



This "in the city" proposal builds on the *Passivhaus on a Shoestring* design to create a series of three bedroom Passivhaus terraced houses which can be built for under £75,000 each including the landscape. The narrow width of the houses makes the most of the available site, whilst carefully considered openings & balconies control solar gain and bring life to courtyard and park frontages.

The simple approach taken to construction means the house could be easily built with basic joinery skills either on or off-site. It also makes it easy to adapt to the individual self-builder's needs or the regional context it sits within. The design has been modelled to meet the most stringent of energy standards. However, renewable technology could be easily retrofitted or additional insulation added if required.



Type 1 ground floor 1:100

Type 1 first floor 1:100

Type 1 second floor 1:100

Type 1 is a compact 3 storey terrace placed on the north edge of the site to minimise overshadowing & give a street frontage with an appropriate urban scale



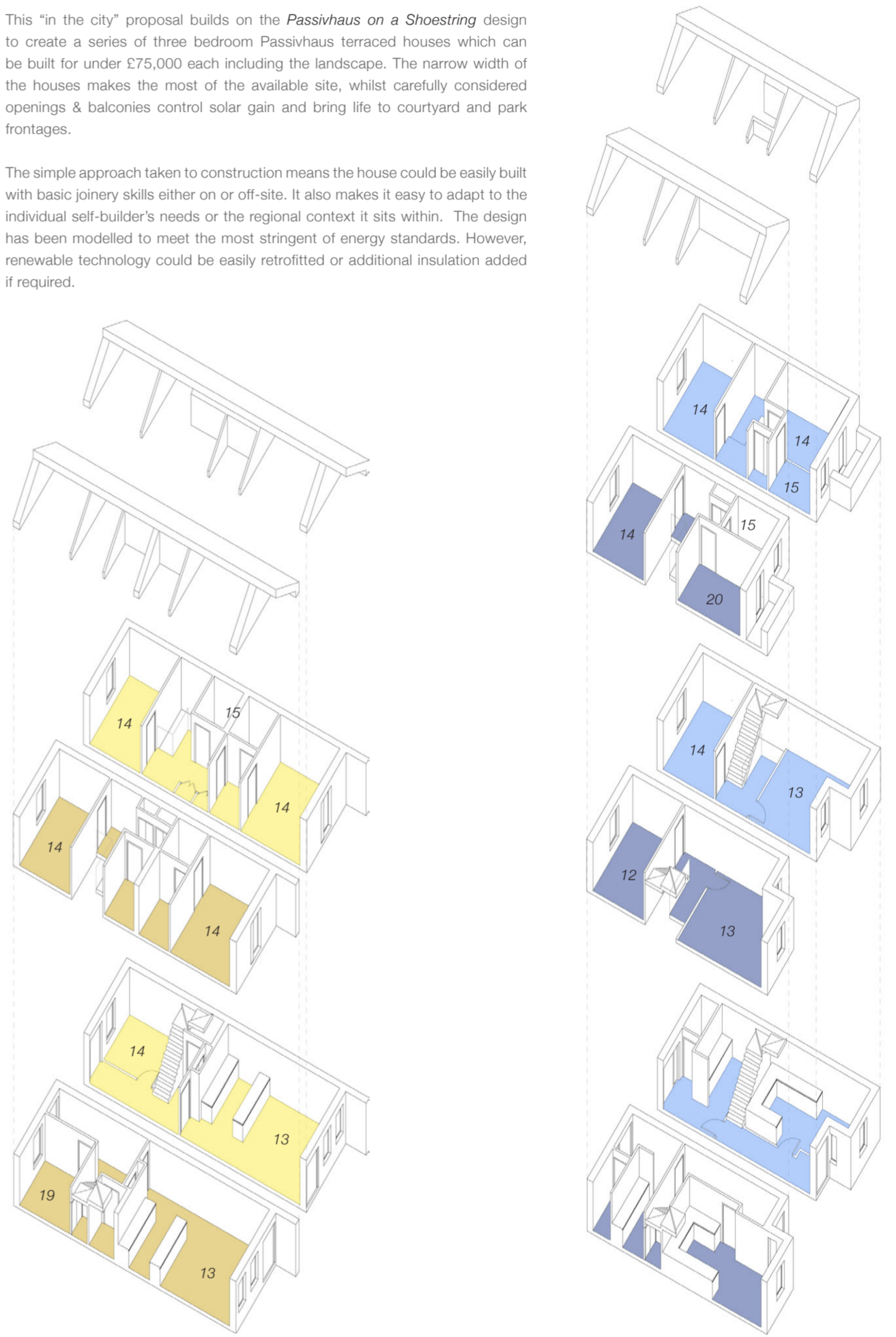
Type 2 ground floor 1:100

Type 2 first floor 1:100

Type 2 is a compact 2 storey terrace placed on the south edge of the site that gives good solar access to the shared external space & reduces the site scale towards the park.

Drawing key

- 1 Pedestrian access
- 2 Vehicular access
- 3 Parking
- 4 Shared space
- 5 Pergola
- 6 Cycle + tool storage
- 7 Bin storage
- 8 WC
- 9 Utility
- 10 Kitchen + dining
- 11 Store
- 12 Study + bedroom
- 13 Living room
- 14 Bedroom
- 15 Bathroom
- 16 Balcony
- 17 Deck
- 18 Entrance Canopy
- 19 Hobby Room
- 20 Dressing Room
- 21 Street
- 22 Park



Type 2 axonometric NTS

Type 1 axonometric NTS



Retired couple
Two bedrooms
Hobby room



Average family
Three bedrooms
Adaptable bathroom



Professional couple
Master suite with dressing room
Home office



Larger family
Three bedrooms
Expanded living space



cars are restricted to one end of the site but pedestrian permeability is maintained

Site plan NTS



an active frontage to the park behind

Works Package	Construction Element	Materials	Labour	Total
<i>For Works Packages 1-18 please provide figures for the total construction cost of just the 20 homes provided in your design</i>				
Works Package 1	Set up, Clearance, Demolitions....	£ -	£ -	£ -
Works Package 2	Foundations (up to DPC)	£ 40,310.81	£ -	£ 40,310.81
Works Package 3	Ground Floor Slab or Suspended Floor (including insulation)	£ 40,285.16	£ -	£ 40,285.16
Works Package 4	Drainage & Service Trenchwork	£ 15,260.00	£ -	£ 15,260.00
Works Package 5	Specialist Building System (eg timber frame, SIPs, etc if applicable)	£ 144,174.32	£ -	£ 144,174.32
Works Package 6	External & Internal Walls (including insulation)	£ 153,908.22	£ -	£ 153,908.22
Works Package 7	Intermediate Floor Zone (if applicable)	£ 37,897.80	£ -	£ 37,897.80
Works Package 8	Fireplace & Chimney (if applicable)	£ -	£ -	£ -
Works Package 9	Roof Structure, Insulation & Covering	£ 66,209.48	£ -	£ 66,209.48
Works Package 10	Joinery (Windows, doors, stairs, skirtings...)	£ 288,869.18	£ -	£ 288,869.18
Works Package 11	Specialist Products (eg: Eco products...)	£ 107,000.00	£ 10,000.00	£ 117,000.00
Works Package 12	Electrical Installation	£ 22,200.00	£ 3,000.00	£ 25,200.00
Works Package 13	Plumbing Installation	£ 43,950.00	£ -	£ 43,950.00
Works Package 14	Heating Installation	£ 27,000.00	£ 16,000.00	£ 43,000.00
Works Package 15	Plastering (or dry-lining)	£ 15,426.25	£ -	£ 15,426.25
Works Package 16	Kitchen and Utility Units (+ appliances)	£ 83,000.00	£ -	£ 83,000.00
Works Package 17	Decorations & Wall Ceramics	£ 4,870.00	£ -	£ 4,870.00
Works Package 18	Floor Finishes	£ 17,300.00	£ -	£ 17,300.00
TOTAL		£ 1,107,661.22	£ 29,000.00	£ 1,136,661.22

For Works Packages 19 and 20 provide figures for the additional communal facilities required to support the 20 homes

Works Package 19	Road connection, parking, paths, cycle facilities, street lighting, bin areas, landscaping	£ 119,400.00	£ -	£ 119,400.00
Works Package 20	Communal areas/access to homes - eg stairways, halls, lobbies, lifts (if required), storage	£ -	£ -	£ -
TOTAL		£ 119,400.00	£ -	£ 119,400.00

GRAND TOTALS	£ 1,227,061.22	£ 29,000.00	£ 1,256,061.22
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Average cost/home £ 62,803.06

paul testa architecture

the above costings show the standard house configurations only. The proposed cost approach has an allowance for end user customisation and for contingency within the budget



	type 2		type 1	
	2 storey mid	2 storey end	3 storey mid	3 storey end
Project totals	Project totals			
unit total	£56,227.27	£64,513.16	£60,377.97	£67,093.55
Total GIFA (m2)	96	96	106	106
Total cost/m2	£585.70	£672.01	£569.60	£632.96
10% extra over for customisation (additional windows / wood-burning stoves etc)	£5,622.73	£6,451.32	£6,037.80	£6,709.35
total cost	£61,850.00	£70,964.48	£66,415.77	£73,802.90
no. of unit type	4	6	4	6
Total cost for unit type	£247,399.98	£425,786.86	£265,663.07	£442,817.41
Total cost plus 5% contingency	£1,381,667.32		Average cost per dwelling including contingency	
	£1,450,750.69		£69,083.37	
			£72,537.53	