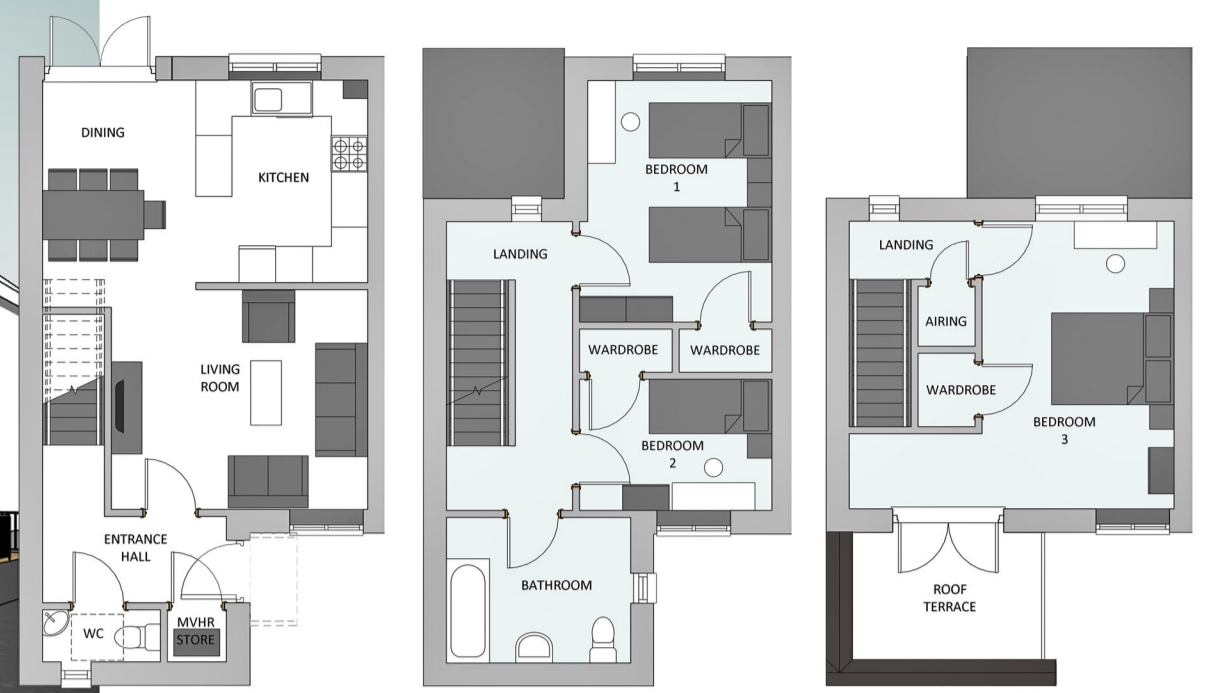


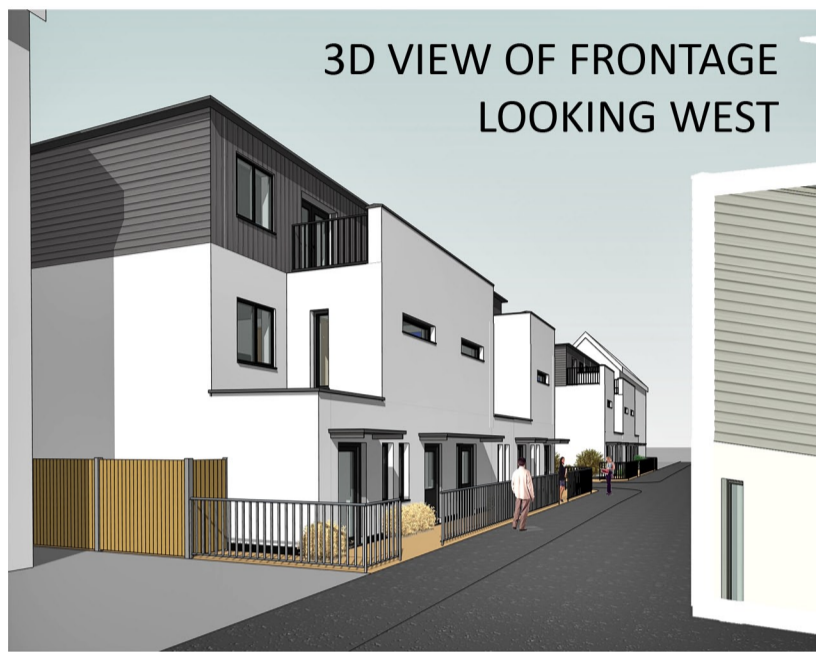
EASIHAUS A PASSIVHAUS//SELF-BUILD DEVELOPMENT



3D VIEW LOOKING INTO SITE



HOUSE FLOOR PLANS 3B5P HOUSE - PLOTS 11-12 & 20-21 - 107m2 GIFA



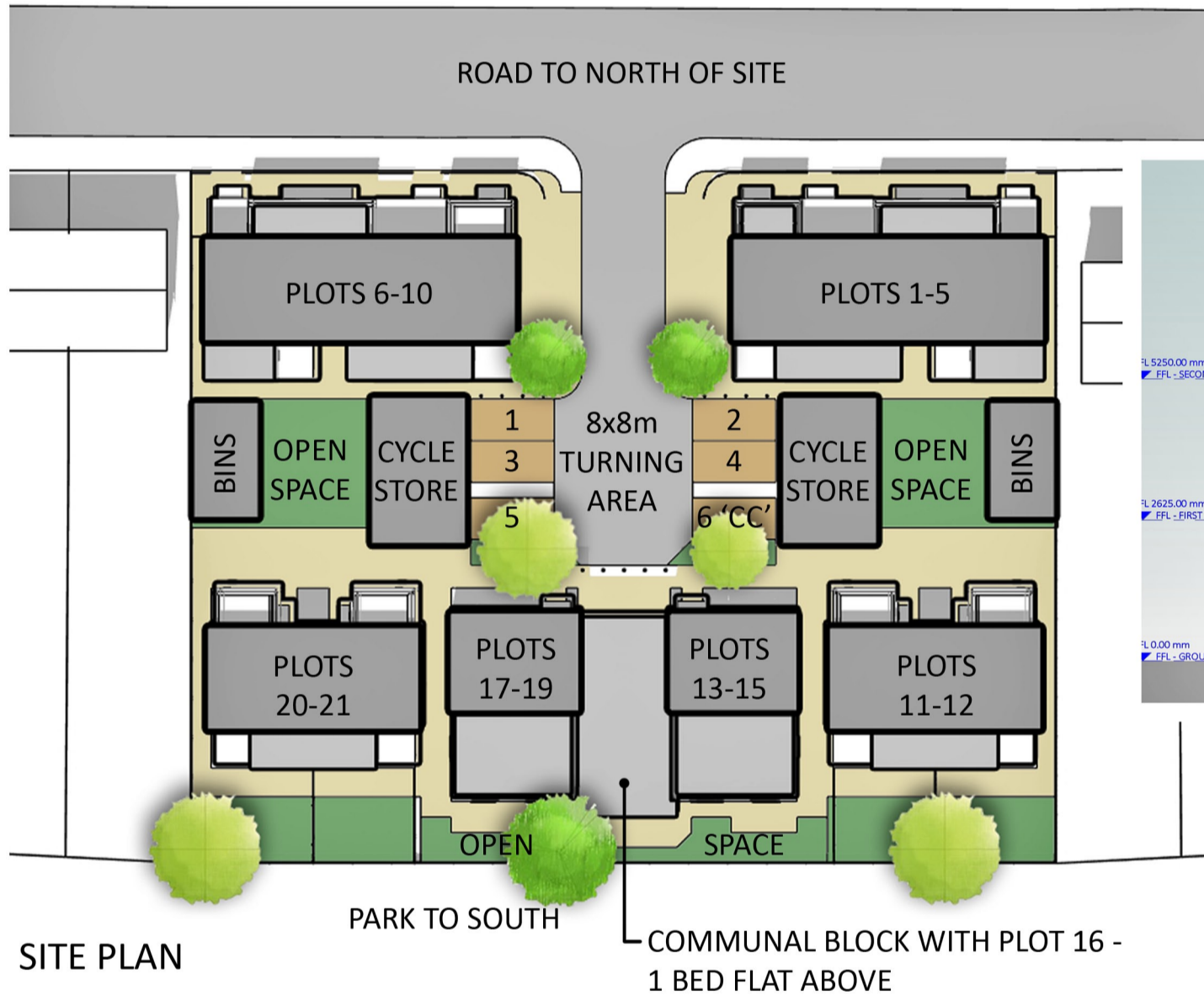
3D VIEW OF FRONTAGE LOOKING WEST



3D SECTION



3D VIEW FROM TURNING AREA LOOKING SOUTH



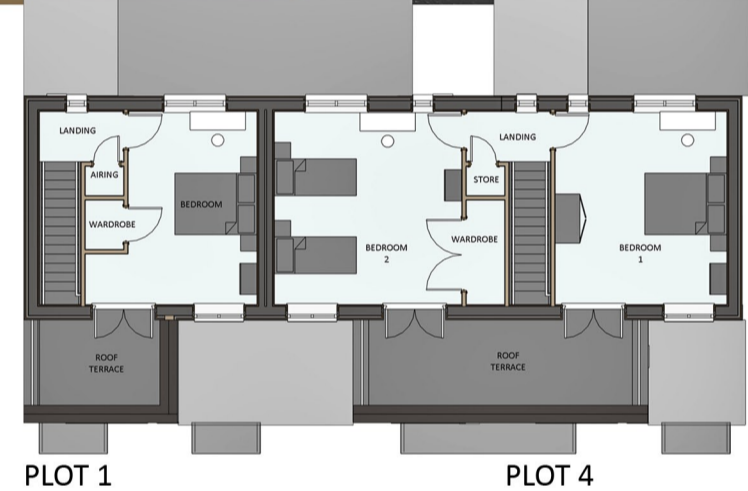
SITE PLAN

PARK TO SOUTH

COMMUNAL BLOCK WITH PLOT 16 - 1 BED FLAT ABOVE

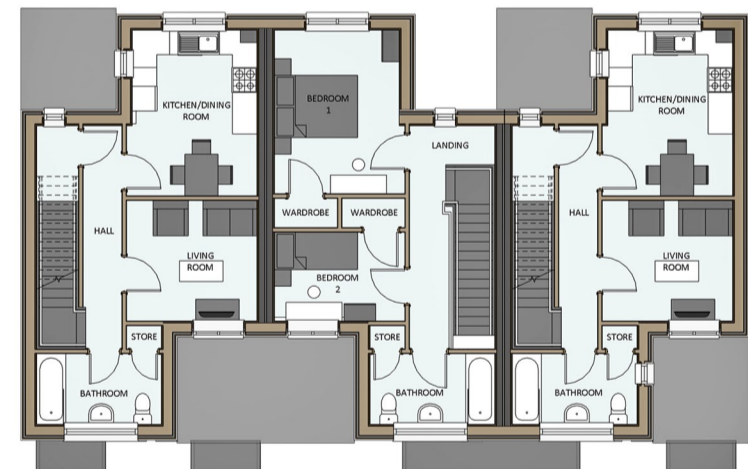


TYPICAL SECTION



PLOT 1

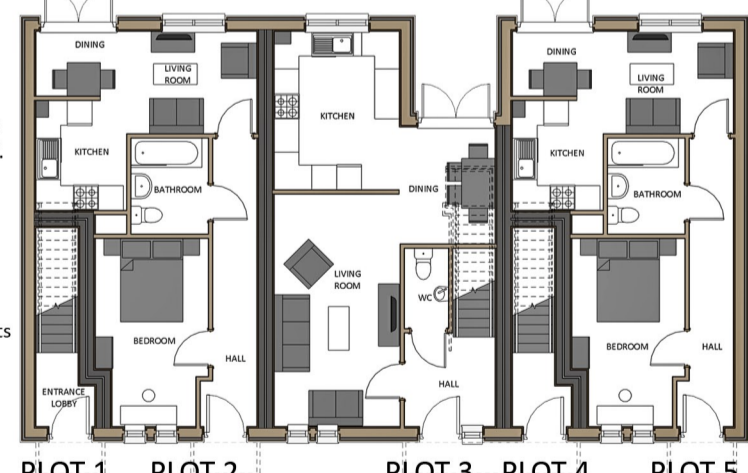
PLOT 4



PLOT 1

PLOT 3

PLOT 4



PLOT 1

PLOT 2

PLOT 3

PLOT 4

PLOT 5

APARTMENT FLOOR PLANS PLOTS 6-10 ARE HANDED LAYOUTS OF PLOTS 1-5

Design & SelfBuild Brief

The scheme has taken into account the key points of the design brief and delivers this by providing 21 dwellings with potential to meet Passivhaus certification. The mix consists of the following dwelling occupancy:

- 4 No. 1 Bedroom - 1 Person Studio Apartments - Plots 2, 5, 6 & 9 - GIFA: 42m² Target GIFA: 35m²
- 4 No. 1 Bedroom - 2 Person Apartments - 2 No. Internal layouts designed and 2 No. Internal layouts open for design by self-builder - Plots 1 & 10 - GIFA: 64m² - Plots 13 & 17 GIFA: 50m² - Plot 16 - GIFA: 51m² - Target GIFA: 50m²
- 4 No. 2 Bedroom - 3 Person Apartments - 2 No. Internal layouts designed and 2 No. Internal layouts open for design by self-builder - Plots 3 & 8 - GIFA: 84m² - Plots 14 & 18 GIFA: 61m² - Target GIFA: 60m²
- 4 No. 2 Bedroom - 4 Person Apartments - Plots 3 & 8 - GIFA: 84m² - Plots 15 & 19 GIFA: 91m² - Target GIFA: 80m²
- 4 No. 3 Bedroom - 5 Person Houses - Plots 11, 12, 20 & 21 - GIFA: 107m² Target GIFA: 100m²

The design has minimal amounts of hard standing to allow for as much accommodation and open space as possible. Upon entering the site is a small parking area surrounding an 8x8m turning area. 6 parking spaces are provided with one dedicated to the communal 'car club'. To the East and West of the parking area are cycle stores, which are capable of containing 10 cycles. The spaces provided here would be allocated to the apartments only, as the houses will have individual cycle stores allocated. Behind the cycle stores are communal bin and recycling stores, capable of handling 'euro' type waste containers both within close proximity to the flats.

A communal area has been designated on the site which will contain facilities for those flats within the central block to use. Facilities such as cooking, washing and growing vegetables will be provided and encouraged. Space will also be provided for an upcycling area where unwanted products and items can be converted into something more useful to the owner.

The façade materials used throughout have been incorporated into the design to allow ease of construction as well as high quality aesthetics. There is minimal reliance on wet trades and utilises materials that can be bought and sourced easily, locally, sustainably and cost effectively. The façade materials are open to change, with optional timber cladding or rainscreen cladding boards applied to the wall substrate.

The components of the buildings are designed to be easily dismantled. This is undoubtedly the most effective way of recycling building materials. Any structural connections are mechanical therefore they can be dismantled and removed easily. Plots can be easily adapted to suit future needs and requirements.

Specific building demands with reference to the treated floor area		Requirements	#fulfilled?
Space heating	Treated floor area	14 kWh/(m ² a)	10 100%
	Heating demand	10 W/m ²	yes
Space cooling	Overall space cooling demand	4.4 kWh/(m ² a)	-
	Cooling load	4.4 %	-
Primary energy	Frequency of overheating (> 25 °C)	112 kWh/(m ² a)	120 kWh/(m ² a)
	Heating demand	52 kWh/(m ² a)	yes
	CO ₂ space heating and auxiliary electricity	0.6 kWh/(m ² a)	yes
	Specific primary energy reduction through site electricity	0.6 kWh/(m ² a)	yes
	Airtightness	0.6 1/h	0.6 1/h
	Pressurisation test result n ₅₀	0.6 1/h	no requirement
	Passive House?	yes	yes

PHPP EXTRACT

PHOTOS FROM SITE AND WORKSHOP



Description of construction

- The simplicity of the system allows for fast on-site erection. Beattie Passive is designed to be locally manufactured at any location using readily available materials and therefore does not have an extended lead-in time for procurement experienced in a typical factory manufactured system
- The use of our bespoke 3D modelling and BIM allows all materials to be measured to within 1mm, which greatly reduces onsite waste, as well as controlling the over ordering of materials.
- Our method of construction offers an easy to assemble frame-link build system. Working from assembly drawings, each member is coded, allowing just semi-skilled labour to be employed in manufacture and erection. Beattie Passive's unique spacing template eradicates all on-site measurement errors.



3D VIEW FROM PARK-LOOKING NORTH

ID	Construction Stage	Description	Cost
Construction Stage 1	Substructure	Foundations - earthworks, concrete, back fill and cart away. Ground Pads. DPM Radon . Internal Drains and Service Ducts. Concrete Foundation Beams . Beam and Block floor and Ply and Ecoslab	£123,621
Construction Stage 2	Superstructure	Frame/walls and ceiling. Versapanel. Floor Vents	£98,924
Construction Stage 3	Upper floors	First floor timber joisting and chipboard	£42,013
Construction Stage 4	Roof	Trusses and other roof timbers. Fascias, barge boards and eaves. Rainwater Goods, Roof coverings and Canopies	£34,350
Construction Stage 5	Stairs	Timber Stair Case	£30,340
Construction Stage 6	External walls	Ecobead cavity walls, floor and ceiling fill. External Walls/ceiling roof overclad insulations and nilvent. Cladding	£160,007
Construction Stage 7	Windows and Doors	Windows, windows and door air tightness. Window boards	£97,228
Construction Stage 8	Internal walls and partitions	Air Tightness Layer. Internal Versapanel. Stud Partitions	£54,162
Construction Stage 9	Joiner 1st & 2nd fix	Partition Walls and Boxings. Doors and Frames. Skirtings, Architraves, curtain Battens. Framing and Bath Panelling, Shelving	£29,475
Construction Stage 10	Joiner 2nd fix	Doors and Frames. Skirtings, Architraves, curtain Battens. Framing and Bath Panelling, Shelving	£38,154
Construction Stage 11	Wall Finishes	Timber batten and plasterboarding (to walls and boxings). Wall tiling, Decorating paining internally mastic pointing to doors and windows.	£73,397
Construction Stage 12	Floor finishes	Floor covering vinyl in kitchen and bathroom. Lino elsewhere	£15,443
Construction Stage 13	Ceiling finishes	Ceiling takes the wall finishes too	£33,226
Construction Stage 14	Kitchen fittings	White goods	£27,189
Construction Stage 15	Sanitaryware and plumbing services	Sanitary ware, Plumbing and Hot water pipe. Soil Vent Pipes.	£63,399
Construction Stage 16	MVHR	Mechanical Ventilation Heat Recovery	£65,753
Construction Stage 17	Electrical	Complete Works	£51,056
	Sub Total		£1,038,943
Construction Stage 18	Site Clearance	Assume clean site, no allowance made	£21,000
Construction Stage 19	External Works	Demolition and site clearance, Boundary walls and fencing. Parking, Roads and Footpaths	£126,000
Construction Stage 20	Drainage	Drainage	£63,000
Construction Stage 20	Landscaping	patios/gardens/play area and allotment	£52,500
Construction Stage 21	Preliminaries and project management 10%		£103,889
Construction Stage 22	Beattie Passive Fee		£129,920
TOTAL			
Construction Stage 23	Total		£1,535,252