10.0 Landscape Strategy

Enclosure and Materials

Walls
Any low walls which define the yard should be of brickwork (brick type, mortar and pointing style) to correspond with the adjacent homes. Wall copings should similarly match the existing , with brick-on-edge coping laid on a creasing tile course.

Fences and gates
Fences and gates should be functional and rural in character. Timber should be the predominant material for garden fences, Front garden gates may be timber picket-style gates, with black-finished metalwork fittings, or all metal, but rear fences should be close-boarded timber to match the adjacent fence where relevant.

Hedges
Perimeter enclosures are proposed as hedges throughout as they form a defensible boundary to the landscape and as identified in the landscape character assessment, and are used wherever possible in preference to fences. It is intended that the hedging be laid in double staked rows using native species well suited to the locality. The structural planting to the wider site boundary would be managed to provide a substantial stocked hedge using native species (such as hawthorn and buckthorn) with occasional specimen trees (such as field maple) which would replicate a traditional hedged boundary promoting biodiversity and achieving very effective screening.

Site furniture and fittings
Site furniture and other sundries, such as gates, will typically be in timber or black-finished metalwork, with timber slats used for seating and arm rests, which are to be provided to assist accessibility for people with limited movement.

Paved areas

LEGEND

- Light grey tarmac to roads
- Concrete paving between parking bays & road
- Concrete paving to private terraces
- Light grey tarmac to pavements

Enclosure

LEGEND

- Hedges
- Close boarded fencing/boundary walls

10.0 Landscape Strategy

Materials

Paving

Existing paving materials on site reflect the recent agricultural and commercial uses, generally in-situ (cement) concrete and unbound aggregates.

The redevelopment's sustainable drainage strategy is based on surface water storage and treatment trains. Although the site is not suitable for infiltration, permeable surfaces will facilitate the collection of surface water in the sub base, utilising systems that are effective at removing pollution from run-off, as well as controlling the flow of surface water runoff.

Roadways and parking bays will be surfaced with macadam, with areas of clay or concrete unit pavers to define various zones between parking bays, and to demarcate the road edges.

Pavers are proposed to be dark blue/black in colour, in preference to traditional clay stable-pavers.

Pavement edgings

Both macadam and unit pavers need restraining kerb edgings to support the permeable base and wearing course materials. Generally a minimal 50mm wide edging is proposed, laid flush with the surfacing.

In some locations, a wider kerb can be used to visually define the extent of vehicular movement, but in most cases edgings are minimal, with a clear preference in favour of informal and flush edgings and against standard raised kerbs which are alien to the informal rural character.

The development seeks to reduce the rate of run-off from the site to Greenfield runoff rates. the discharge rate to achieve greenfield run off rates. This will positively impact the surface water runoff conditions for the immediate surroundings.




Blue-black concrete permeable paving




Exemplars using macadam with block paver edgings

Blue-black concrete permeable paving

10.0 Landscape Strategy

Planting and Ecology

The number of trees on the site will be greatly increased with native species and fruit trees incorporated into the landscape planting scheme. The amount of green space will also be greatly increased to enhance the rural character and visual amenity, and substantially improve the extensive hard standings currently on the site.

Planting principles

Planting should be intended to repair and enhance the local ecology and in doing so 'fit' visually with the existing rural/ village fringe. Within the site priority is given to new trees, restoring field boundaries on the site's north and eastern perimeters, and establishing orchard, and species-rich ground flora.

Garden planting may be more ornamental and colourful in character, as would be typical for almost any well-kept rural garden. Garden plants will feature species and varieties drawn from the RHS Plants for Pollinators list, with the express intent of extending the nectar season into winter (of special benefit to wintering bee species). No invasive species should be specified.

Planting Palettes

A series of planting palettes has been drawn up, utilising locally endemic tree, hedgerow and grassland species, attractive ornamentals, and local fruit tree varieties.

Locally characteristic native tree species include small-leave lime, oak and field maple, while the hedgerow species mix includes a wide range of woody species to host a broad variety of moths and butterflies. Examples include the buckthorn and alder buckthorn for Brimstone butterflies, and sallow which can attract Purple Emperor, and under-sowing the hedgerow with native flora will significantly increase the range.

It is intended that the hedging be laid in double staked rows using native species well suited to the locality. The structural planting to the wider site boundary would be managed to provide a substantial stocked hedge using native species (such as hawthorn and buckthorn) with occasional specimen trees (such as field maple) which would replicate a traditional hedged boundary promoting biodiversity and achieving very effective screening.

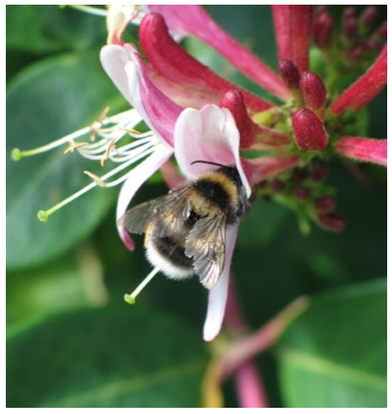
The range of grass and sedge species is similarly important and includes bents, fescues and meadow grasses for Gatekeeper, Ringlet and Meadow Brown butterfly (among others), while flowering species such as Bugle are a known nectar source for 18 butterfly species alone.

Fruit trees are included to provide important spring nectar and pollen sources for insects, and fruit for birds and other wildlife. Even the inclusion of a few fruit trees can still contribute to the seasonal range of food-sources for wildlife. Varieties in the palette include apple, pear and cherry cultivars.

Consideration can also be given to other appropriate edible plants, such as raspberry, gooseberry, wild-strawberry, medlar, damson or cobnuts which can be incorporated within hedges and garden plantings.

Landscape management

Landscape management is very important to achieving the biodiversity gains intended. Allowing grasses to grow longer will provide ideal habitat for a wide range of butterflies and other pollinators, amphibians, reptiles and birds. These include Hertfordshire Biodiversity Action Plan target species including the Song Thrush, and Great Crested Newt, as well as finches, buntings, voles, shrews and a range of invertebrates.



10.0 Landscape Strategy

Typical Planting Species/Specifications - Native Hedgerow Mix

Species	Common name	Overall height/spread (cm)	Root condition	Container size / Transplant spec	Habit	Same Species Group size	Planting Distance between adjacent stations (mm)
Acer campestre	Field maple	80-100	BR	1+1	Feathered	3-9	750
Carpinus betulus	Hornbeam	100-125	BR	1+2	Feathered	3-9	750
Cornus sanguinea	Dogwood	60-80	BR	1+1	Branched	1-3	750
Corylus avellana	Hazel	60-80	BR	1+1	Branched	1-3	750
Crataeus mongyna	Hawthorn	60-80	BR	1+1	Branched	2-5	750
Euonymus europaeus	Spindle	60-80	BR	1+1	Bushy	1-3	750
Frangula alnus	Alder buckthorn	60-80	BR	1+1	Branched	1-3	750
Ilex aquifolium	Holly	40-60	C	2L	Leader with laterals	1-3	750
Ligustrum vulgare	Wild privet	60-80	BR	1+1	Branched	1-3	750
Lonicera periclymenum	Honeysuckle	60-80	C	C1	Leader with laterals	1-3	750
Rhamnus cathartica	Buckthorn	60-80	BR	1+1	Branched	1-3	750
Rosa arvensis	Field Rose	40-60	BR	1+0	Bushy	1-3	750
Rosa canina	Dog Rose	40-60	BR	1+1	Bushy	1-3	750
Rosa rubiginosa	Sweet briar	60-80	BR	1+1	Branched	1-3	750
Taxus baccata	Yew	40-60	BR	2+2	Bushy	1-3	750
Viburnum opulus	Guelder rose	60-80	BR	1+1	Bushy	1-3	750

10.0 Landscape Strategy

Typical Planting Species/Specifications - Eco Species Rich Lawn

Species rich turf mix.

This biodiverse lawn is an alternative to standard monculture grass lawn, with improved biodiversity. It can be treated in the same way as a conventional lawn (regularly mown and fertilised) but the flowering species included in the mix are able to survive and thrive with this regime. This is not a colourful solution, but it is species rich.

Species	Common name	% of mix
Leontodon autumnalis	AUTUMN HAWKBIT	0.50%
Lotus corniculatus	BIRDSFOOT TREFOIL	0.50%
Medicago lupulina	BLACK MEDICK	1.00%
Agrostis capillaris	BROWNTOP BENT	5.00%
Pimpinella saxifraga	BURNETT SAXIFRAGE	0.20%
Hypochaeris radicata	CATS-EAR	0.20%
Festuca rubra commutata	CHEWINGS FESCUE	10.00%
Centaurea nigra	COMMON KNAPWEED	2.00%
Cerastium fontanum	COMMON MOUSE-EAR	0.20%
Primula veris	COWSLIP	0.10%
Agrostis stolonifera	CREEPING BENT	2.50%
Ranunculus repens	CREEPING BUTTERCUP	2.30%
Taraxacum officinale	DANDELION	0.30%
Linum usitatissimum	FLAX	1.20%
Galium verum	LADY'S BEDSTRAW	1.20%
Lolium perenne	LOLIUM PERENNE	2.50%
Silene dioica	RED CAMPION	2.00%
Trifolium pratense	RED CLOVER	2.00%
Plantago lanceolata	RIBWORT PLANTAIN	1.00%
Poa trivialis	ROUGH STALKED MEADOW GRASS	5.00%
Prunella vulgaris	SELF HEAL	0.90%
Festuca ovina	SHEEPS FESCUE	20.00%
Festuca rubra litoralis	SLENDER CREEPING RED FESCUE	12.50%
Scabiosa columbaria	SMALL SCABIOUS	0.20%
Poa pratensis	SMOOTH STALKED MEADOW GRASS	5.00%
Festuca rubra rubra	STRONG CREEPING RED FESCUE	15.00%
Phleum bertolonii	TIMOTHY (SMALL EARED)	2.50%
Trifolium repens	WHITE CLOVER	2.00%
Daucus carota	WILD CARROT	1.00%
Teucrium scorodonia	WOOD SAGE	0.50%
Achillea millefolium	YARROW	0.50%
Rhinanthus minor	YELLOW RATTLE	0.20%
		100.00%

10.0 Landscape Strategy

Typical Planting Species/Specifications

WFG8 Hedgerows and Shaded Areas Seed Mix

Species	Common name	% of mix
Stachys officinalis	BETONY	0.20%
Hyacinthoides non scripta	BLUEBELL	2.00%
Ajuga reptans	BUGLE	0.10%
Chrysanthemum segetum	CORN MARIGOLD	1.30%
Agrostemma githago	CORNCOCKLE	2.00%
Cynosurus Cristatus	CRESTED DOGSTAIL	15.00%
Digitalis purpurea	FOXGLOVE	0.10%
Alliara petiolata	GARLIC MUSTARD	0.60%
Stellaria holostea	GREATER STITCH	0.10%
Galium mollugo	HEDGE BEDSTRAW	2.00%
Torillis japonica	HEDGE PARSLEY	0.50%
Filipendula ulmaria	MEADOW SWEET	0.50%
Lychnis flos cuculi	RAGGED ROBIN	0.30%
Allium ursinum	RAMSONS	0.50%
Silene dioica	RED CAMPION	3.40%
Festuca rubra litoralis	SLENDER CREEPING RED FESCUE	25.00%
Festuca rubra rubra	STRONG CREEPI	10.00%
Festuca arundinacea	TALL FESCUE	25.00%
Silene alba	WHITE CAMPION	2.40%
Daucus carota	WILD CARROT	1.10%
Geum urbanum	WOOD AVENS	1.00%
Poa nemoralis	WOOD MEADOW GRASS	5.00%
Teucrium scorodonia	WOOD SAGE	0.30%
Iris pseudacorus	YELLOW FLAG	1.60%
		100.00%

Wildflower Plugs to WFG8 Seeded Areas

Species	Common name	Planting Distances (mm)	plants/m2
Endymion non--scripta	Bluebell	1000	1
Fragaria vesca	Wild Strawberry	1000	1
Gallium verum	Lady's Bedtraw	1000	1
Primula veris	Cowslip	2000	0.5
Silene dioica	Red Campion	2000	0.5
			4

10.0 Landscape Strategy

Typical Planting Species/Specifications

RE1 Traditional Hay Meadow (MG5 Grassland)

Species	Common name	% of mix
Agrimonia eupatorium	AGRIMONY	0.50%
Leontodon autumnalis	AUTUMN HAWKBIT	0.20%
Lotus corniculatus	BIRDSFOOT TREFOIL	0.50%
Agrostis capillaris	BROWNTOP BENT	2.50%
Ranunculus bulbosus	BULBOUS BUTTERCUP	2.00%
Centaurea nigra	COMMON KNAPWEED	2.50%
Cynosurus Cristatus	CRESTED DOGSTAIL	25.00%
Trisetum flavescens	GOLDEN OAT GRASS	5.00%
Galium verum	LADY'S BEDSTRAW	1.60%
Festuca pratensis	MEADOW FESCUE	5.00%
Filipendula ulmaria	MEADOW SWEET	1.00%
Leucanthemum vulgare	OXEYE DAISY	1.00%
Trifolium pratense	RED CLOVER	2.00%
Plantago lanceolata	RIBWORT PLANTAIN	3.10%
Leontodon hispidus	ROUGH HAWKSBIT	0.10%
Sanguisorba minor	SALAD BURNET	1.00%
Prunella vulgaris	SELF HEAL	1.00%
Festuca ovina	SHEEPS FESCUE	6.50%
Festuca rubra litoralis	SLENDER CREEPING RED FESCUE	30.00%
Anthoxanthum odoratum	SWEET VERNAL GRASS	1.00%
Phleum bertolonii	TENO	5.00%
Trifolium repens	WHITE CLOVER	2.00%
Achillea millefolium	YARROW	1.00%
Rhinanthus minor	YELLOW RATTLE	0.50%
		100.00%

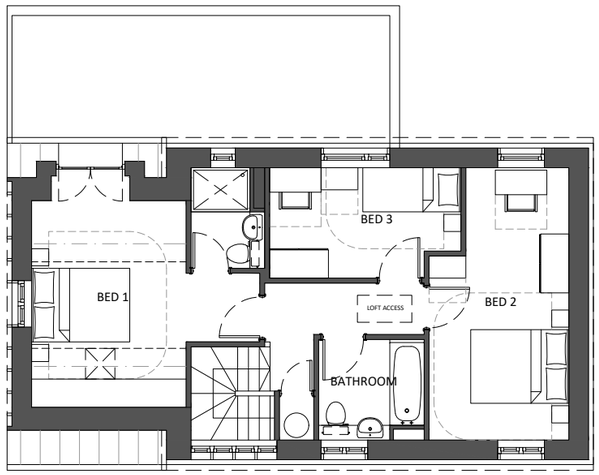
11.0 House Types

H01 & H05 - Plans and Sections

(H05 similar but mirrored)

KEY FEATURES

- Combination of horizontal and vertical black timber cladding with metal standing seam roof materials;
- Horizontal timbers at staircase provides privacy from street views;
- Vertical projecting fins close up openings from long oblique views creating monolithic appearance;
- Broad footprint for extra-wide gardens and frontage;
- Separate utility room;
- Integrated bin store;
- Fully compliant with Nationally Described Space Standards and Approved Document M4(2) with space in downstairs WC for future level access shower;
- Loft access for additional storage;
- Electric vehicle charge point wall mounted in the garage;
- Photovoltaic array with hot water diverter;
- Reception windows overlooking the roadway for surveillance;
- Large windows to the rear to enjoy views to the countryside.



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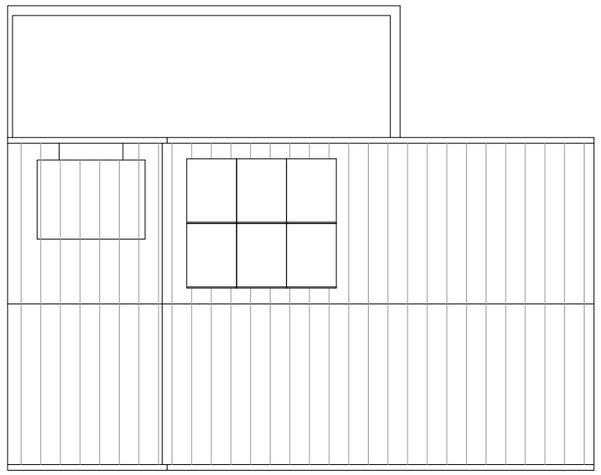
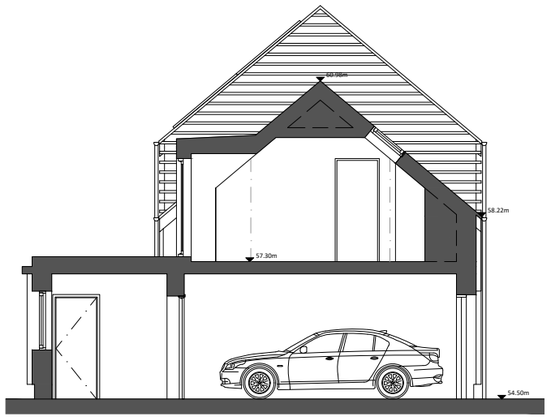
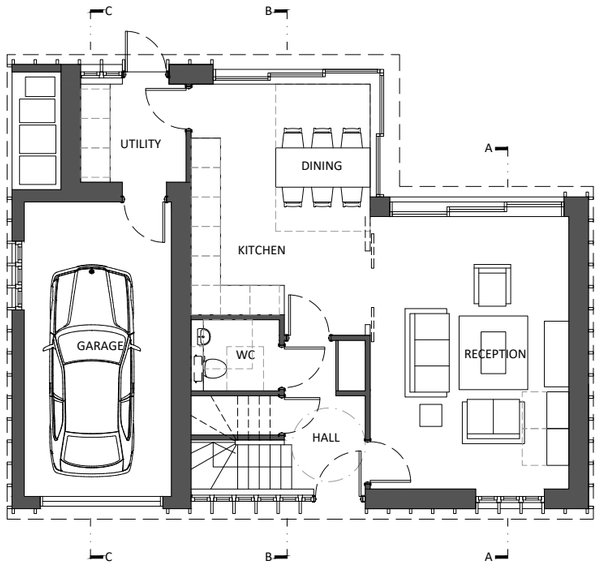


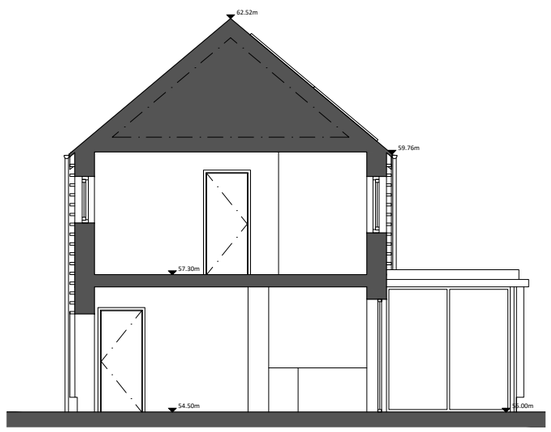
ROOF PLAN



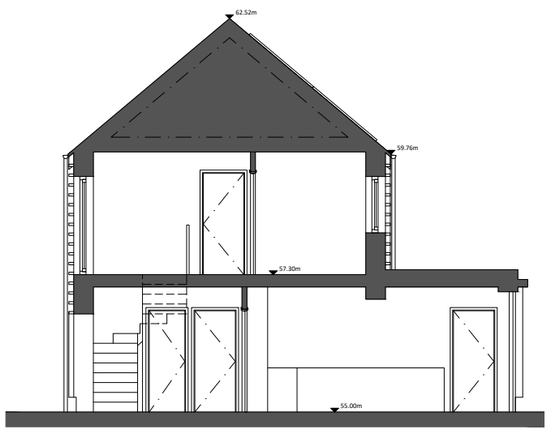
SECTION C - C



GROUND FLOOR



SECTION A - A



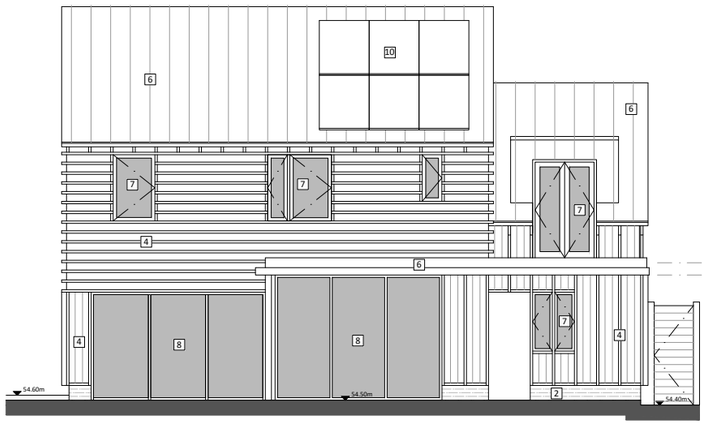
SECTION B - B

11.0 House Types

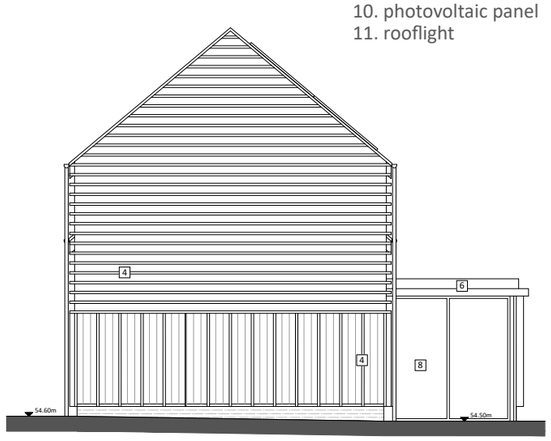
H01 & H05 - Elevations

(H05 similar but mirrored)

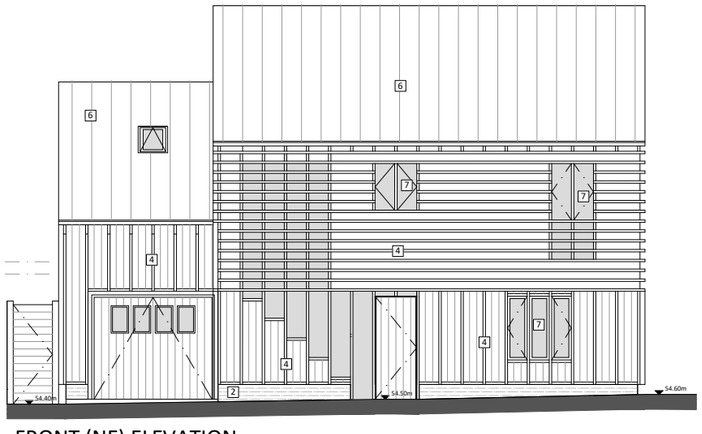
1. brickwork - white painted
2. brickwork - red/brown
3. timber panel - natural finish
4. timber - painted black
5. roof slate - grey
6. metal roof sheet - grey
7. flush casement window - grey
8. sliding door - grey
9. metal balustrade - grey
10. photovoltaic panel
11. rooflight



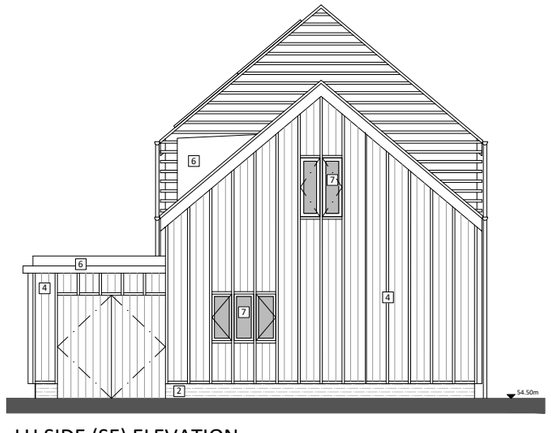
REAR (SW) ELEVATION



RH SIDE (NW) ELEVATION



FRONT (NE) ELEVATION



LH SIDE (SE) ELEVATION

Artists impression of front elevation H01

Artists impression of rear elevation of H01

Artists impression of front view of H05

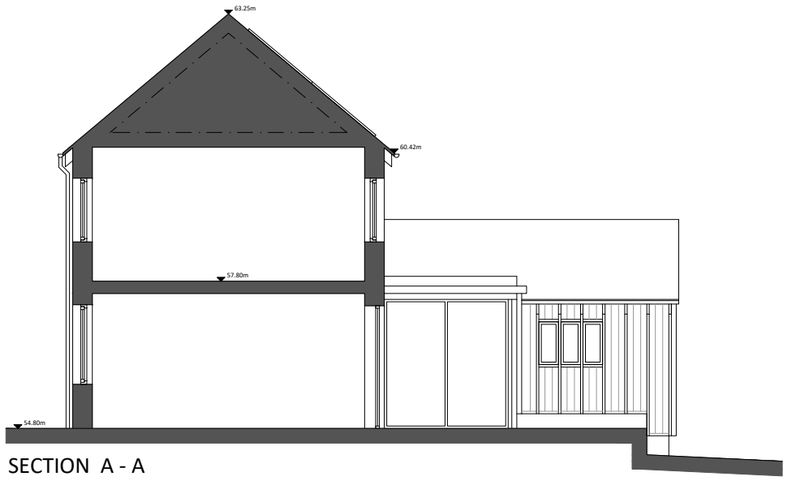
11.0 House Types

H02, H03 & H13 - Plans and Sections

(H03 mirrored with minor variations, H13 minor variations)

KEY FEATURES

- White panted brick with red brick base and black vertical timber cladding to single storey garage;
- Tiled roof to main building and metal roof to garage;
- Vertical projecting fins close up garage openings from long oblique views creating monolithic appearance;
- Broad footprint for extra-wide gardens and frontage;
- Utility room integrated in garage to free up space in the kitchen
- Fully compliant with Nationally Described Space Standards and Approved Document M4(2) with space in downstairs WC for future level access shower;
- Loft access for additional storage;
- Separate study to facilitate working from home;
- Electric vehicle charge point wall mounted in the carport;
- Photovoltaic array with hot water diverter;
- Louvre screening to carport for privacy from street/ adjoining properties;



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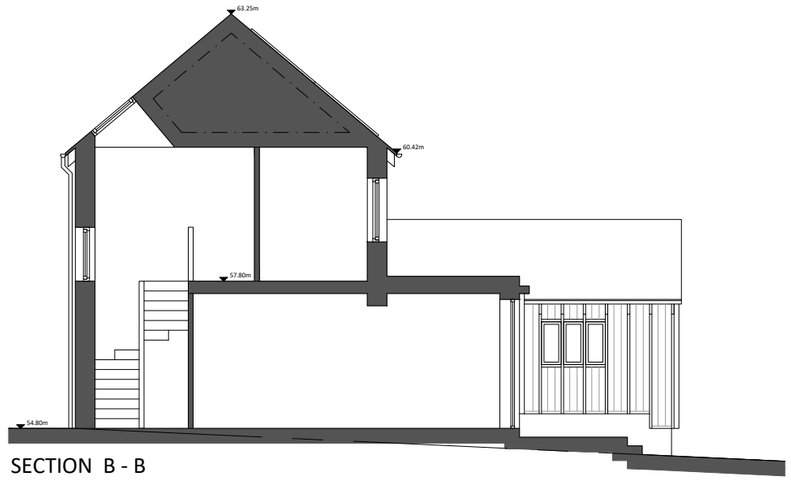
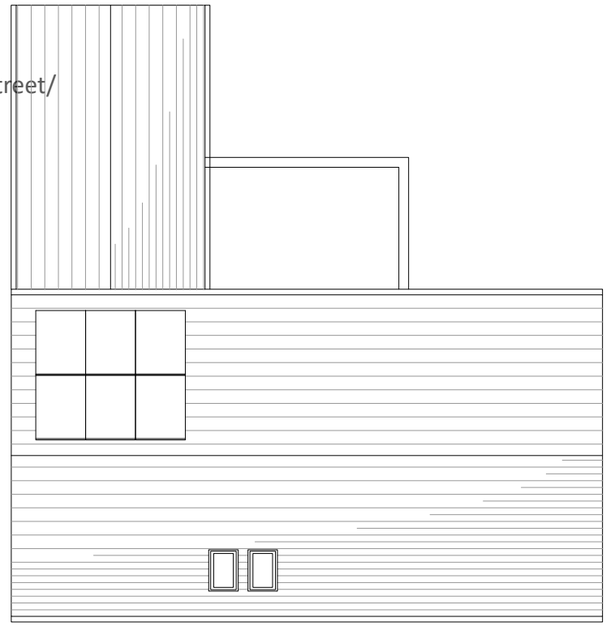
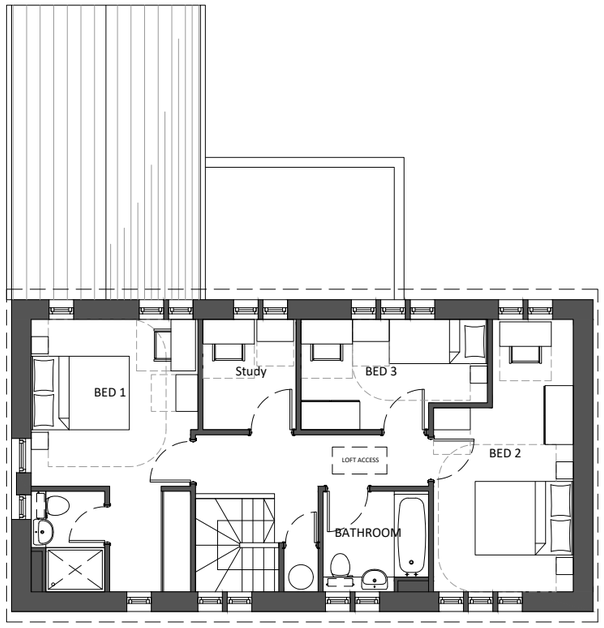


SECTION B - B



ROOF PLAN



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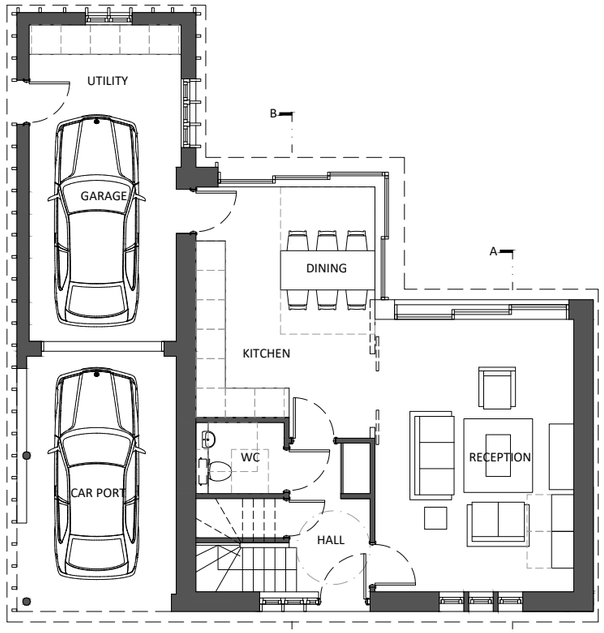
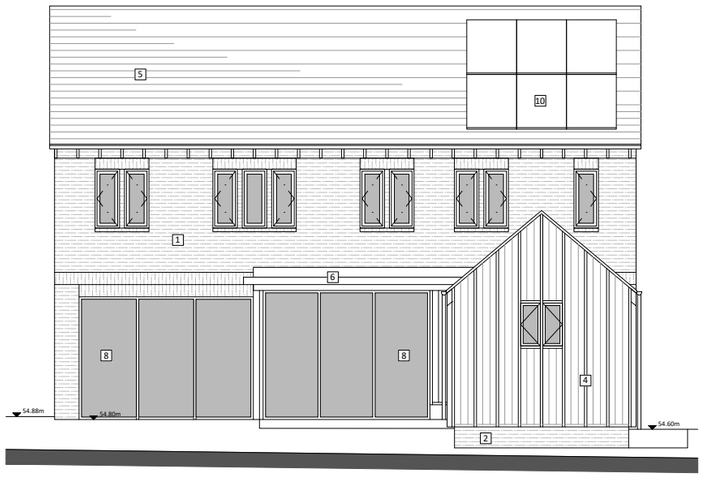


GROUND FLOOR

11.0 House Types

H02, H03 & H13 - Elevations

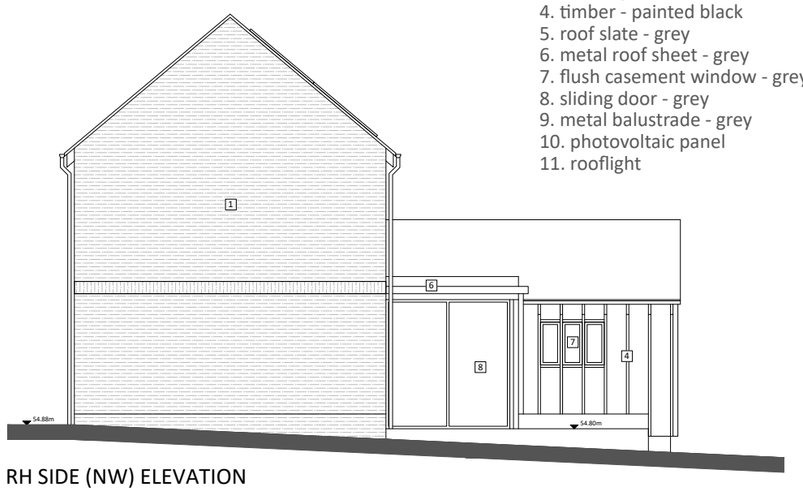
(H03 mirrored with minor variations, H13 minor variations)



REAR (SW) ELEVATION

LH SIDE (SE) ELEVATION

FRONT (NE) ELEVATION



RH SIDE (NW) ELEVATION

1. brickwork - white painted
2. brickwork - red/brown
3. timber panel - natural finish
4. timber - painted black
5. roof slate - grey
6. metal roof sheet - grey
7. flush casement window - grey
8. sliding door - grey
9. metal balustrade - grey
10. photovoltaic panel
11. rooflight

Artists impression of front elevation H01

Artists impression of rear elevation of H01

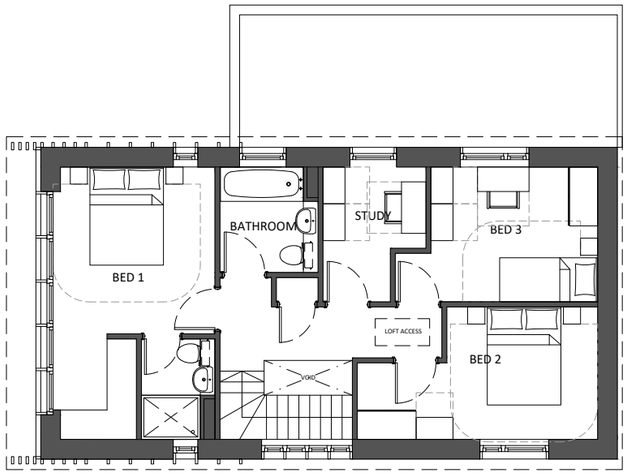
Artists impression of front view of H05

11.0 House Types

H04 - Plans and Sections

KEY FEATURES

- Combination of horizontal and vertical black timber cladding with metal standing seam roof materials;
- Horizontal timbers at staircase provides privacy from street views;
- Vertical projecting fins close up openings from long oblique views creating monolithic appearance;
- Broad footprint for extra-wide gardens and frontage;
- Separate utility room;
- Integrated bin store;
- Fully compliant with Nationally Described Space Standards and Approved Document M4(2) with space in downstairs WC for future level access shower;
- Loft access for additional storage;
- Separate study to facilitate working from home;
- Electric vehicle charge point wall mounted in the garage;
- Photovoltaic array with hot water diverter;
- Reception windows overlooking the roadway for surveillance;
- Large windows to the gable end elevations to enjoy views to the countryside, with horizontal louvres providing shading to reduce solar gain.



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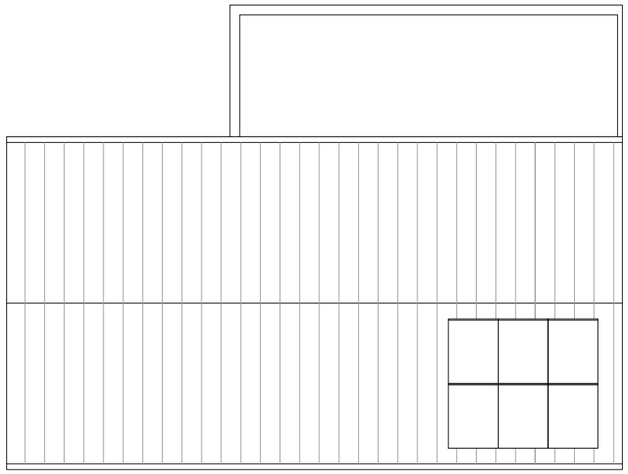
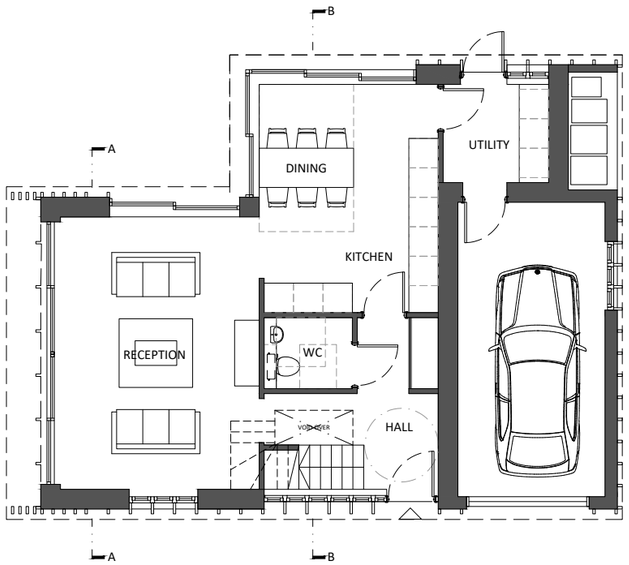
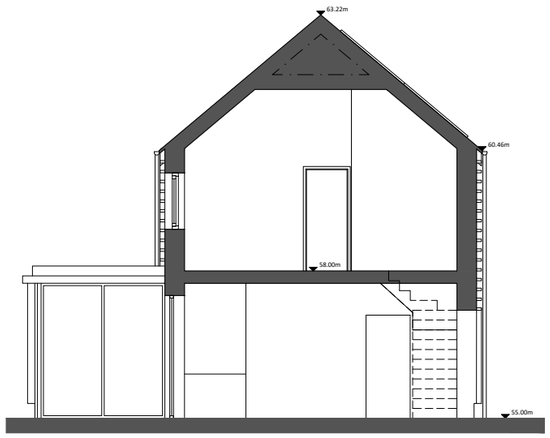


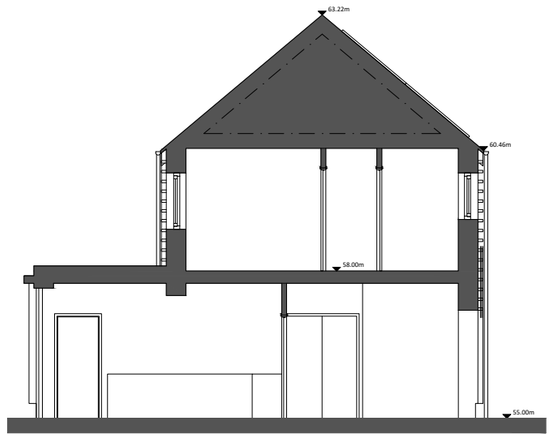
ROOF PLAN



GROUND FLOOR



SECTION A - A



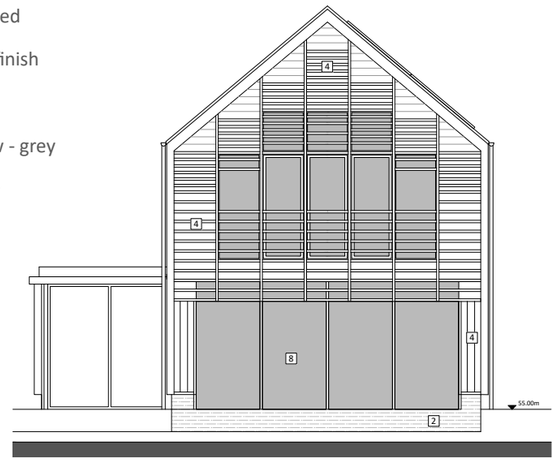
SECTION B - B

11.0 House Types

H04 - Elevations

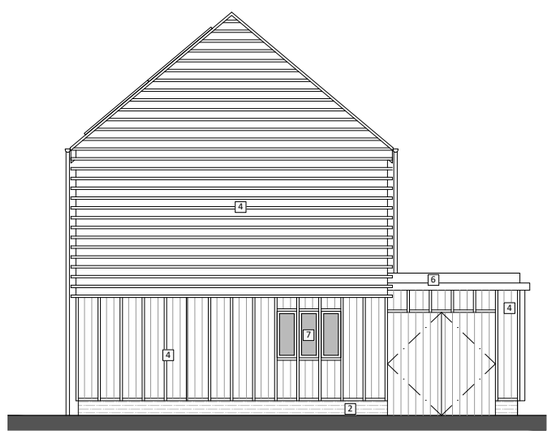
REAR (NW) ELEVATION

1. brickwork - white painted
2. brickwork - red/brown
3. timber panel - natural finish
4. timber - painted black
5. roof slate - grey
6. metal roof sheet - grey
7. flush casement window - grey
8. sliding door - grey
9. metal balustrade - grey
10. photovoltaic panel
11. rooflight



LH SIDE (SW) ELEVATION

FRONT (SE) ELEVATION



RH SIDE (NE) ELEVATION

Artists impression of front elevation H04

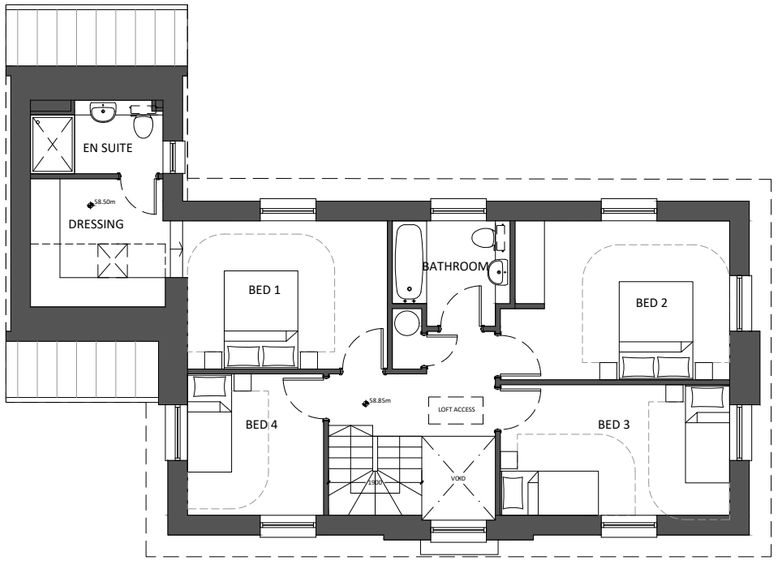
Artists impression of rear elevation of H04

11.0 House Types

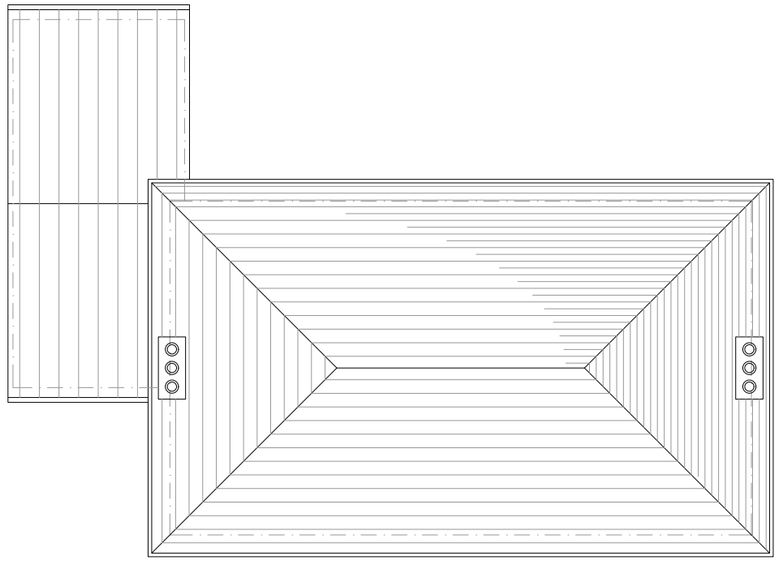
H06 - Plans and Sections

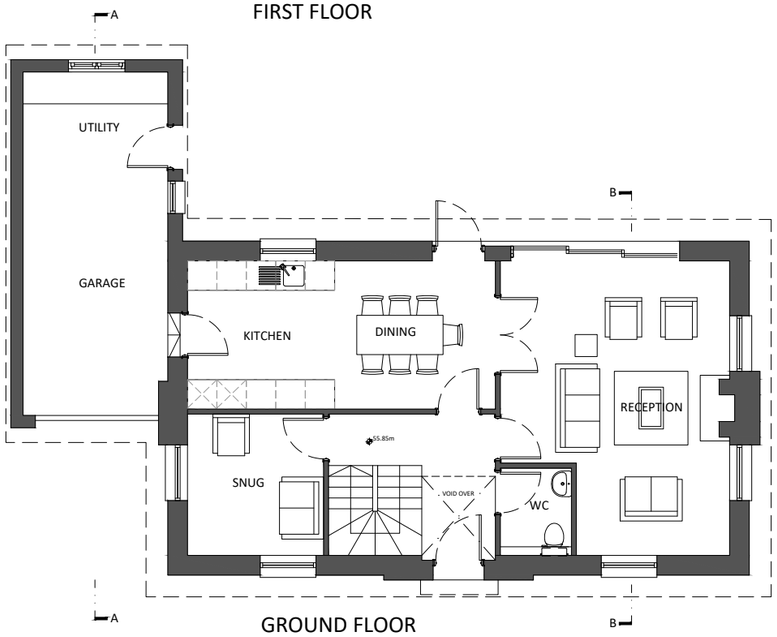
KEY FEATURES

- White painted brick with red brick base and chimneys, and black vertical timber cladding to single storey garage;
- Tiled hipped roof to main building with prominent chimneys to give stature and prominence to the main building and contrast with the lower subservient form of the garage which has a metal roof;
- Broad footprint for extra-wide garden and frontage;
- Utility room integrated in garage to free up space in the kitchen;
- Fully compliant with Nationally Described Space Standards and Approved Document M4(2) with space in downstairs WC for future level access shower;
- Loft access for additional storage;
- Separate snug/study to facilitate working from home;
- Electric vehicle charge point wall mounted in the garage;
- Windows overlooking the shared yard for community surveillance.



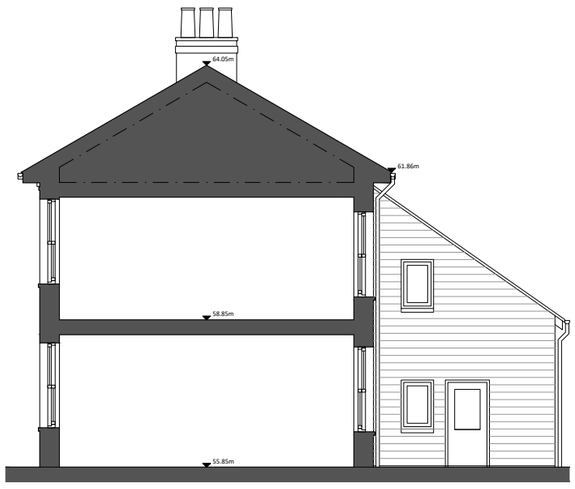
FIRST FLOOR





GROUND FLOOR

SECTION A - A



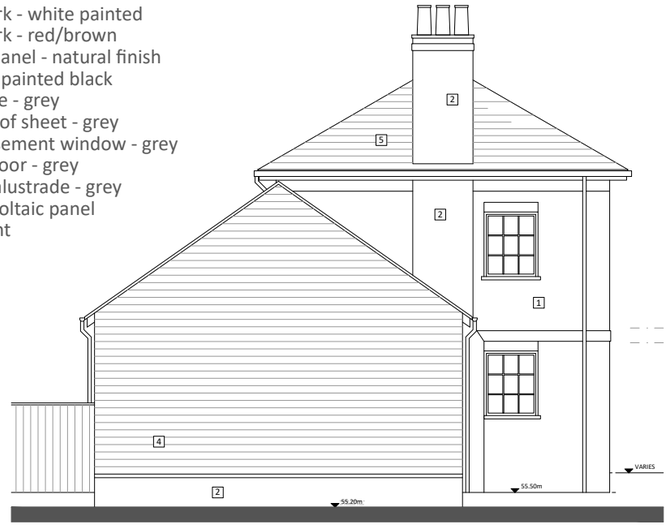
SECTION B - B

11.0 House Types

H06 - Elevations

REAR (NW) ELEVATION

1. brickwork - white painted
2. brickwork - red/brown
3. timber panel - natural finish
4. timber - painted black
5. roof slate - grey
6. metal roof sheet - grey
7. flush casement window - grey
8. sliding door - grey
9. metal balustrade - grey
10. photovoltaic panel
11. rooflight



LH SIDE (SW) ELEVATION

FRONT (SE) ELEVATION

RH SIDE (NE) ELEVATION

Artists impression of front elevation H06

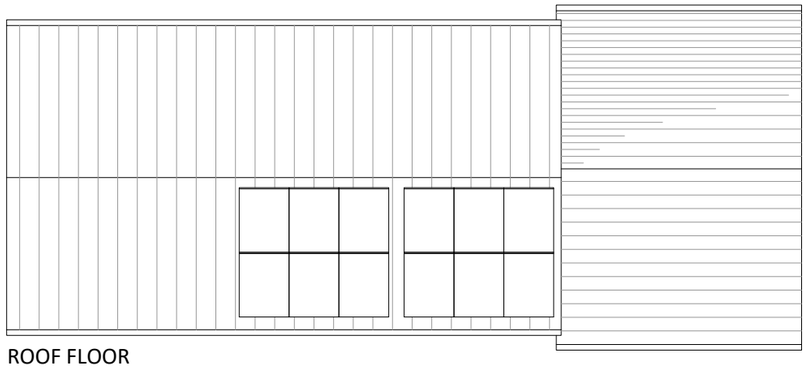
Artists impression of rear elevation of H06

11.0 House Types

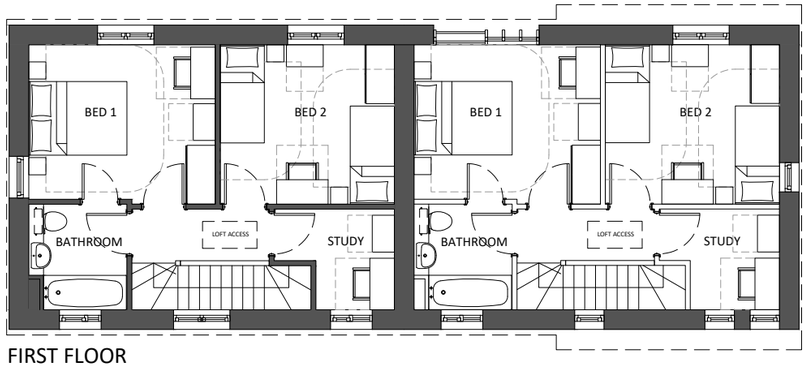
H07-H08 - Plans and Sections

KEY FEATURES

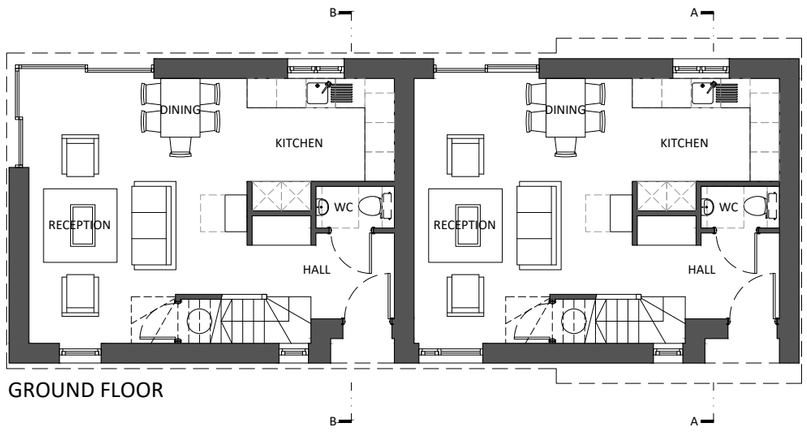
- Combination of white panted brick with red brick base and black horizontal cladding with natural timber feature elements;
- Tiled roof to brick section and metal roof to timber cladded section;
- Vertical projecting fins on rear help close up openings from long oblique views creating monolithic appearance;
- Broad footprint for extra-wide gardens and frontage;
- Open plan living and kitchen space with open stairs promote barn like character;
- Fully compliant with Nationally Described Space Standards and Approved Document M4(2);
- Loft access for additional storage;
- Separate study to facilitate working from home;
- Electric vehicle charge point pole mounted at street parking spaces;
- Photovoltaic array with hot water diverter;
- Corner glazing and juliette balcony to rear to enjoy views of the countryside;



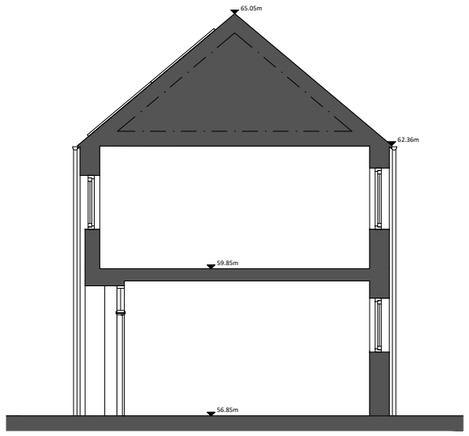
ROOF FLOOR



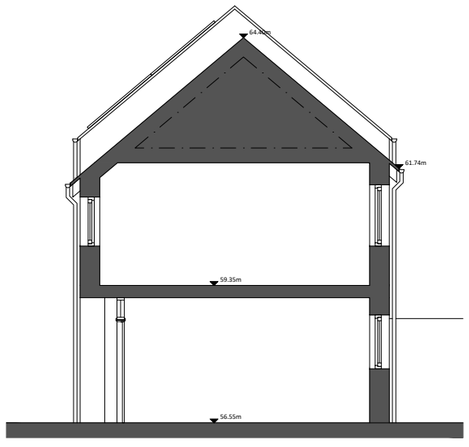
FIRST FLOOR



GROUND FLOOR



SECTION B - B



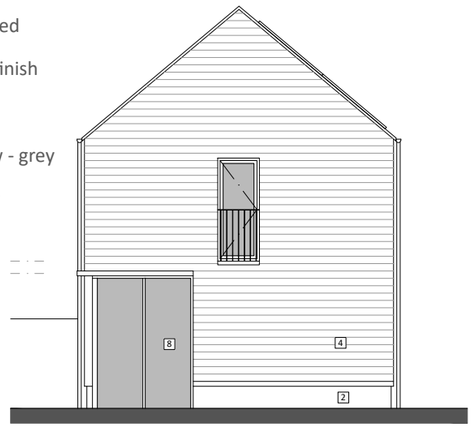
SECTION A - A

11.0 House Types

H07-H08 - Elevations

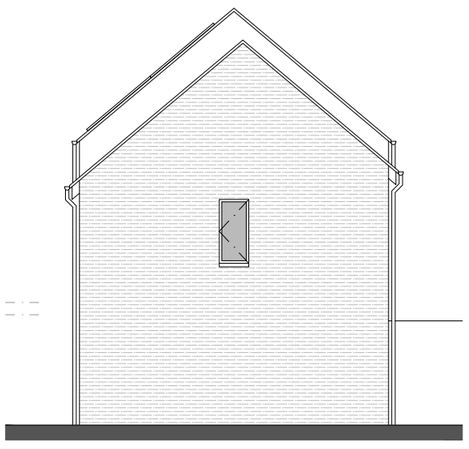
REAR (NE) ELEVATION

1. brickwork - white painted
2. brickwork - red/brown
3. timber panel - natural finish
4. timber - painted black
5. roof slate - grey
6. metal roof sheet - grey
7. flush casement window - grey
8. sliding door - grey
9. metal balustrade - grey
10. photovoltaic panel
11. rooflight



LH SIDE (NW) ELEVATION

FRONT (SW) ELEVATION



RH SIDE (SE) ELEVATION

Artists impression of front elevation H07 and H08

Artists impression of rear elevation of H07 and H08

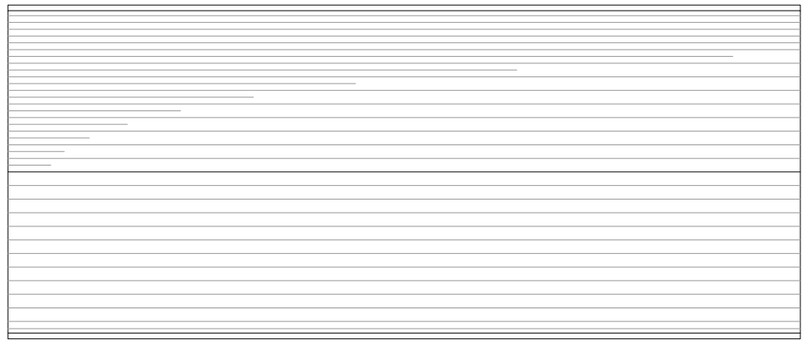
Artists impression of corner of H07

11.0 House Types

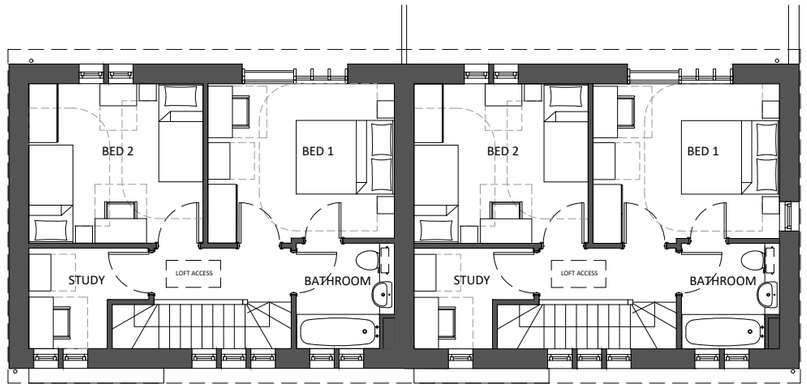
H09-H10 - Plans and Sections

KEY FEATURES

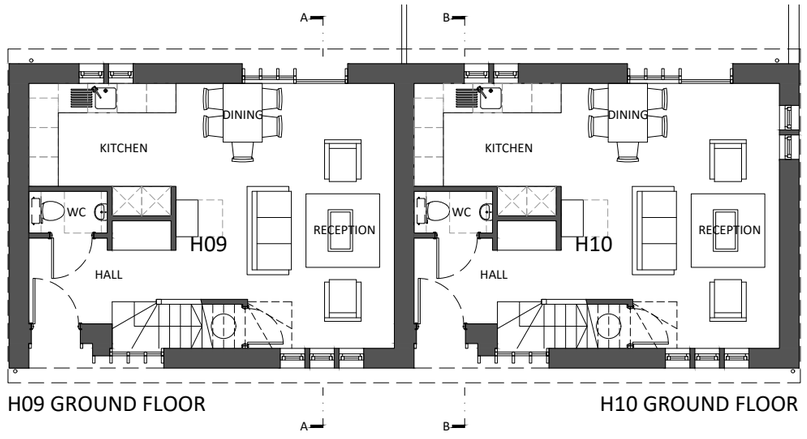
- White panted brick with red brick base with natural timber feature elements and tiled roof;
- Vertical projecting fins on rear help close up openings from long oblique views creating monolithic appearance;
- Broad footprint for extra-wide gardens and frontage;
- Open plan living and kitchen space with open stairs promote barn like character;
- Fully compliant with Nationally Described Space Standards and Approved Document M4(2);
- Loft access for additional storage;
- Separate study to facilitate working from home;
- Electric vehicle charge point pole mounted at street parking spaces;
- Juliette balconies to rear elevation to enjoy views of the countryside;



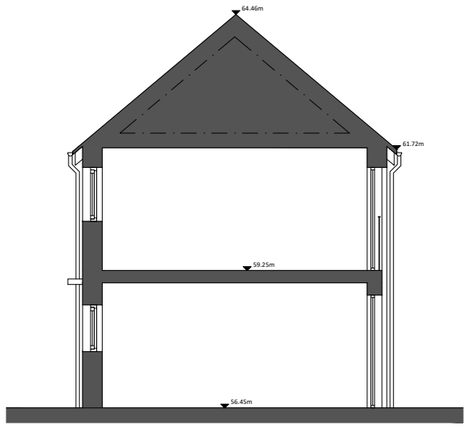
ROOF PLAN



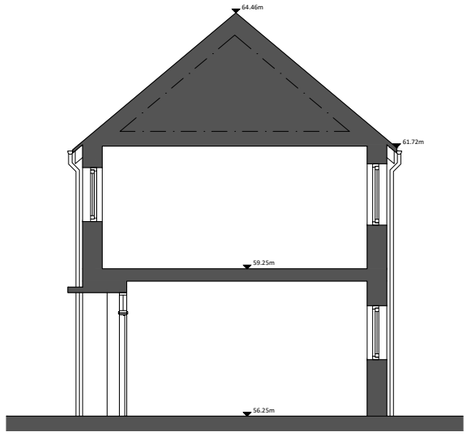
H09 FIRST FLOOR H10 FIRST FLOOR



H09 GROUND FLOOR H10 GROUND FLOOR



SECTION A - A



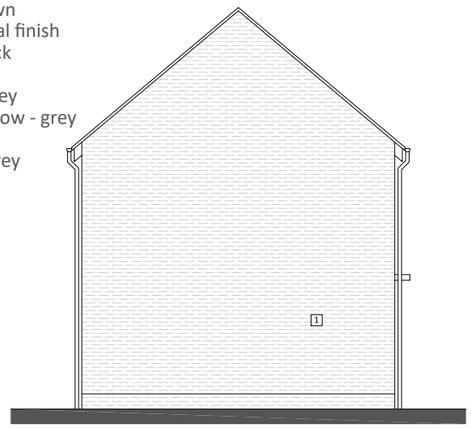
SECTION B - B

11.0 House Types

H09-H10 - Elevations

1. brickwork - white painted
2. brickwork - red/brown
3. timber panel - natural finish
4. timber - painted black
5. roof slate - grey
6. metal roof sheet - grey
7. flush casement window - grey
8. sliding door - grey
9. metal balustrade - grey
10. photovoltaic panel
11. rooflight

REAR (NE) ELEVATION



LH SIDE (NW) ELEVATION

Artists impression of front elevation H09 and H10

FRONT (SW) ELEVATION

RH SIDE (SE) ELEVATION

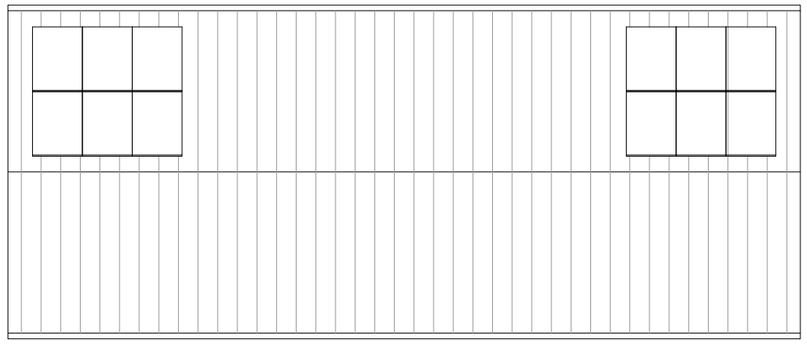
Artists impression of rear elevation of H09 and H10

11.0 House Types

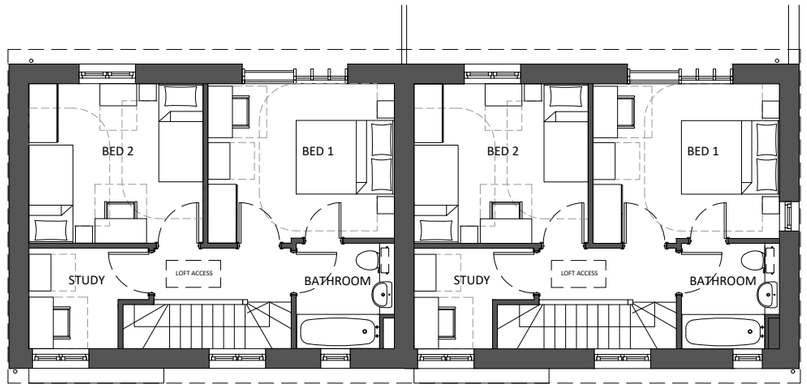
H11-H12 - Plans and Sections

KEY FEATURES

- Horizontal black timber cladding with red brick base, natural timber feature elements and metal roof;
- Vertical projecting fins on rear openings help close up openings from long oblique views creating monolithic appearance;
- Broad footprint for extra-wide gardens and frontage;
- Open plan living and kitchen space with open stairs promote barn like character;
- Fully compliant with Nationally Described Space Standards and Approved Document M4(2);
- Loft access for additional storage;
- Separate study to facilitate working from home;
- Electric vehicle charge point pole mounted at street parking spaces;
- Photovoltaic array with hot water diverter;
- Juliette balconies to rear elevation to enjoy views of the countryside;

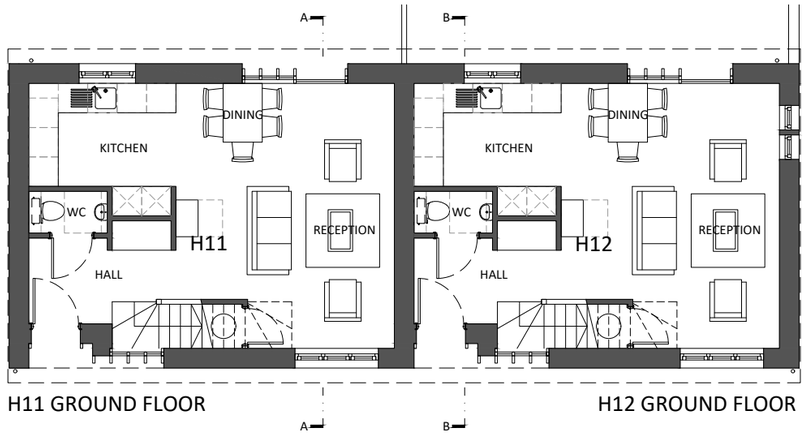


ROOF PLAN



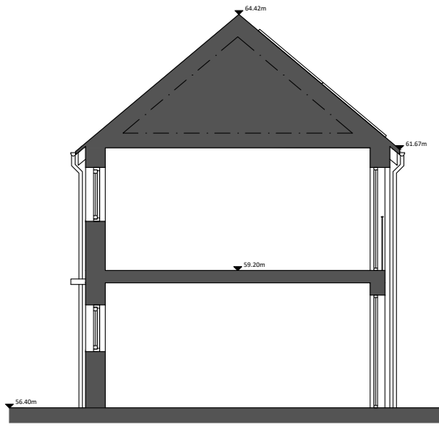
H11 FIRST FLOOR

H12 FIRST FLOOR

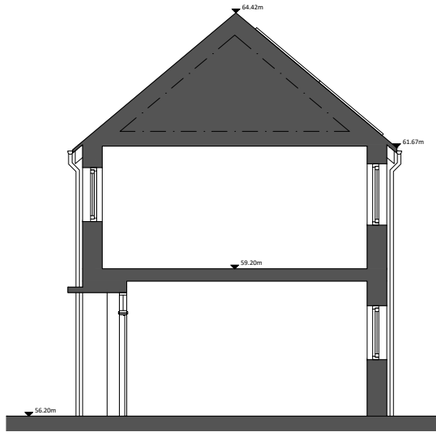


H11 GROUND FLOOR

H12 GROUND FLOOR



SECTION A - A



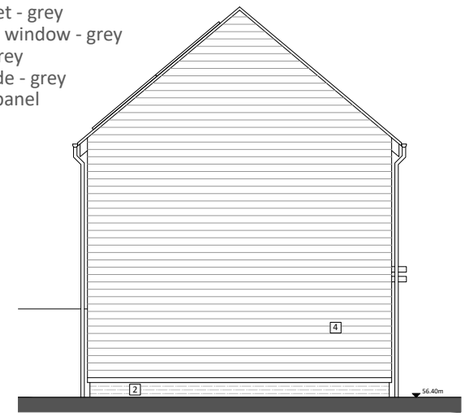
SECTION B - B

11.0 House Types

H11-H12 - Elevations

1. brickwork - white painted
2. brickwork - red/brown
3. timber panel - natural finish
4. timber - painted black
5. roof slate - grey
6. metal roof sheet - grey
7. flush casement window - grey
8. sliding door - grey
9. metal balustrade - grey
10. photovoltaic panel
11. rooflight

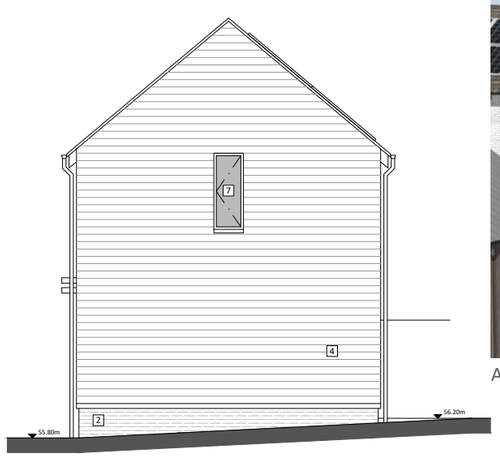
REAR (SE) ELEVATION



LH SIDE (NE) ELEVATION

Artists impression of front elevation H11 and H12

FRONT (NW) ELEVATION



RH SIDE (SW) ELEVATION

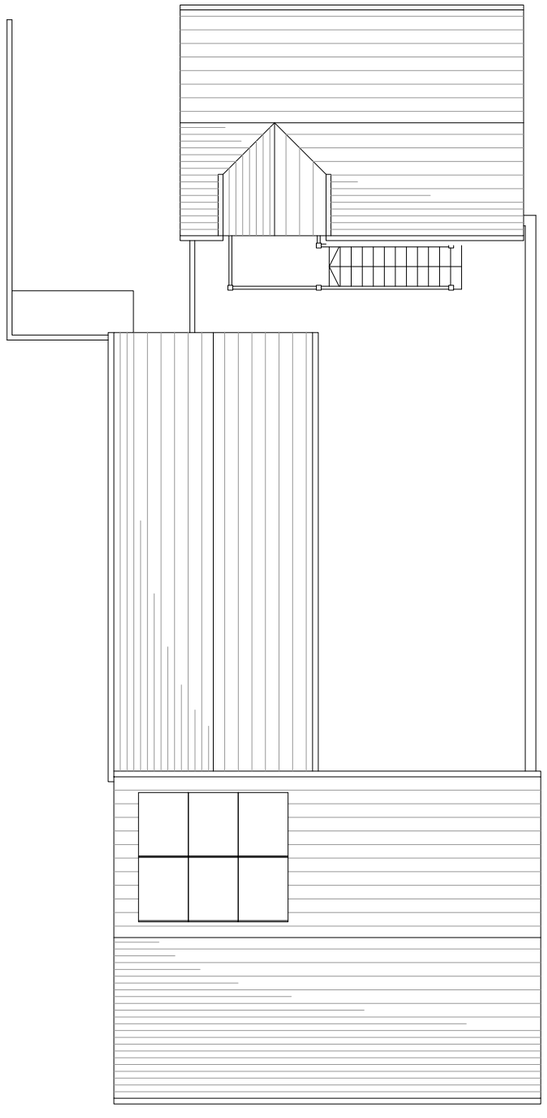
Artists impression of rear elevation of H11 and H12

11.0 House Types

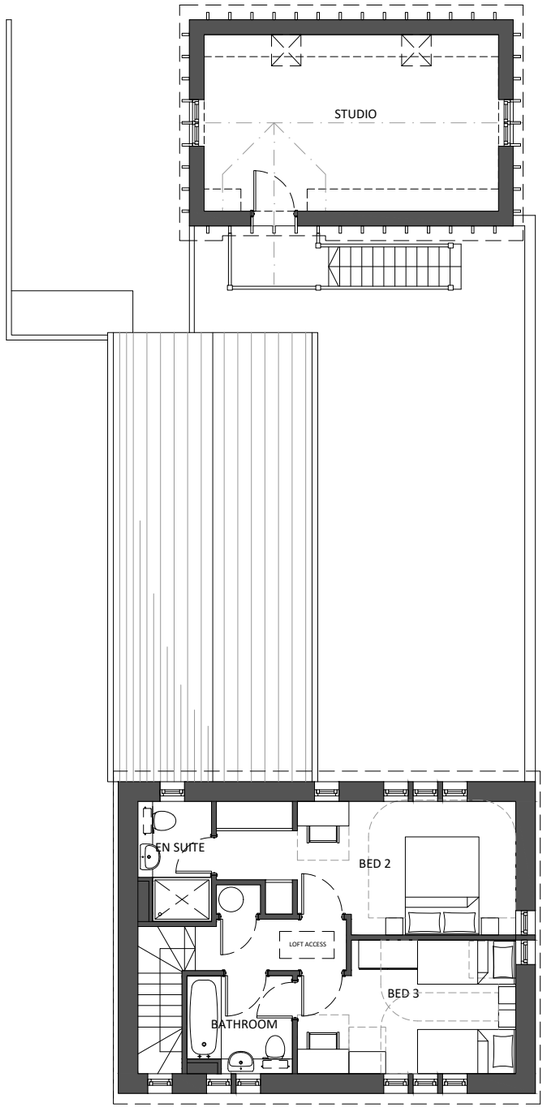
H14 and Garage Studio - Plans

KEY FEATURES

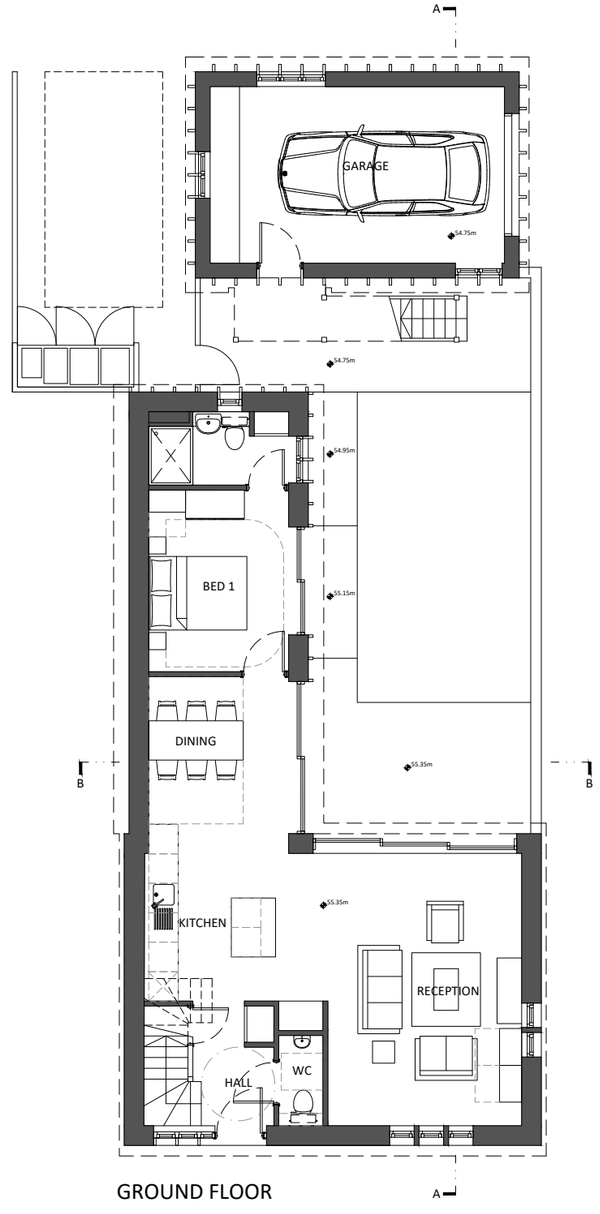
- White painted brick with red brick base and tiled roof to main building;
- Black vertical timber cladding to single storey element and garage studio which have metal roofs;
- Garden wall to street edge provides enclosure and privacy to the walled garden, which steps down to follow the ground levels and connect with the garage;
- Utility room integrated in garage to free up space in the kitchen;
- Fully compliant with Nationally Described Space Standards and Approved Document M4(2) with installed level access shower at ground level;
- Loft access for additional storage;
- Separate study/studio with externally accessed stair to facilitate working from home;
- Electric vehicle charge point wall mounted in the garage;
- Photovoltaic array with hot water diverter;



ROOF PLAN



FIRST FLOOR



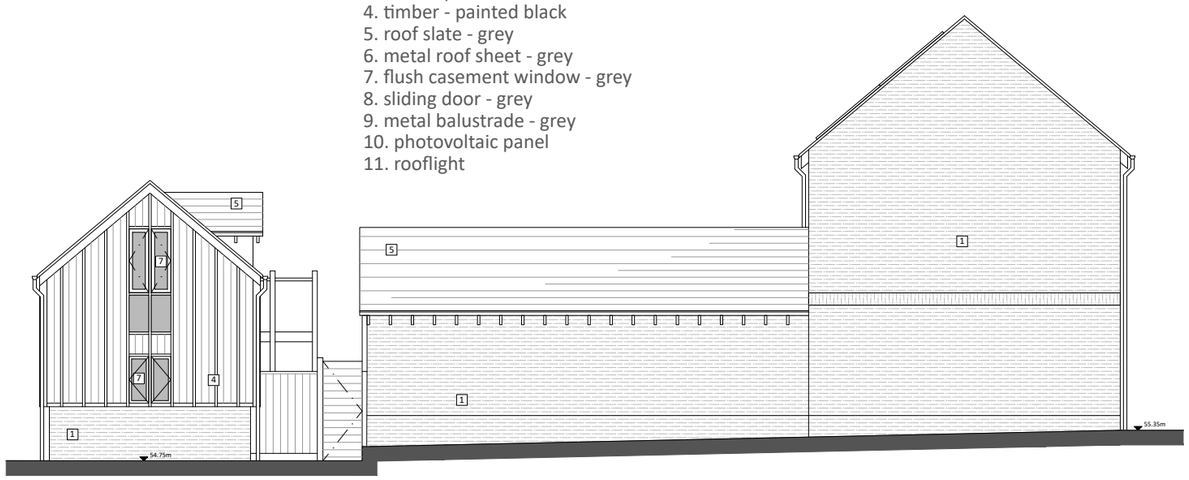
GROUND FLOOR

11.0 House Types

H14 and Garage Studio - Elevations

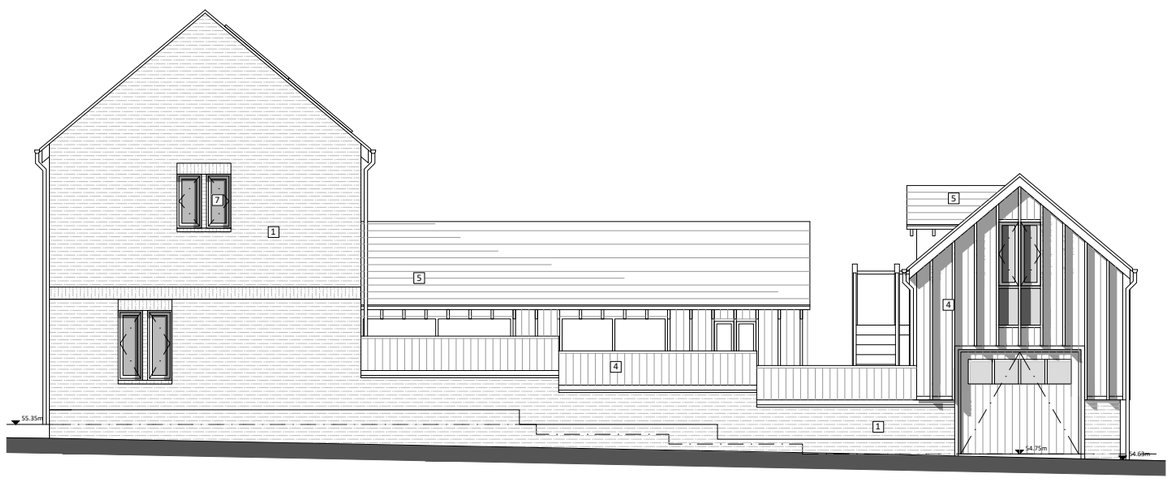
1. brickwork - white painted
2. brickwork - red/brown
3. timber panel - natural finish
4. timber - painted black
5. roof slate - grey
6. metal roof sheet - grey
7. flush casement window - grey
8. sliding door - grey
9. metal balustrade - grey
10. photovoltaic panel
11. rooflight

REAR (SE) ELEVATION



LH SIDE (NE) ELEVATION

FRONT (NW) ELEVATION



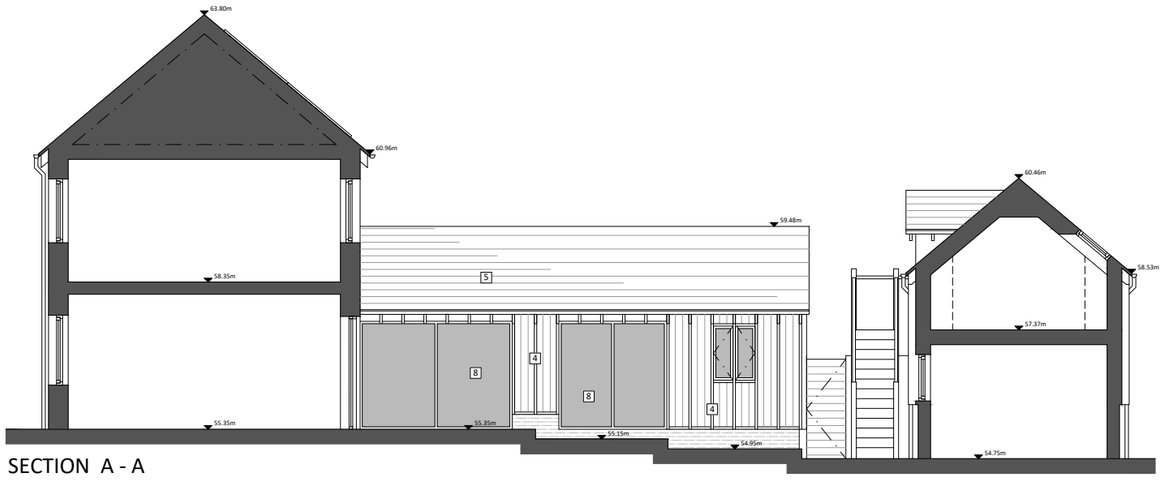
RH SIDE (SW) ELEVATION

Artists impression of front and side of H14

Artists impression of garage studio of H14

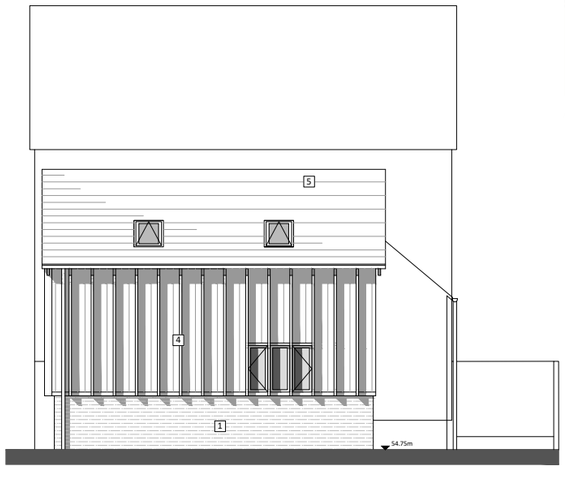
11.0 House Types

H14 and Garage Studio - Sections and Elevations



SECTION A - A

SECTION B - B



RH SIDE (SE) ELEVATION

LH SIDE (NW) ELEVATION

Artists impression of courtyard garden

1. brickwork - white painted
2. brickwork - red/brown
3. timber panel - natural finish
4. timber - painted black
5. roof slate - grey
6. metal roof sheet - grey
7. flush casement window - grey
8. sliding door - grey
9. metal balustrade - grey
10. photovoltaic panel
11. rooflight

12.0 Acesss

Access issues have been considered rigorously during the design evolution process by the design team to create an accessible and inclusive environment for the proposed development, and the design team's approach is described here.

Designing the development in an inclusive manner such that it generates acceptance and understanding amongst the people it serves in the local area is essential. Ease of use by all potential users, including disabled and less able people, parents and toddlers, older people, and young people, is considered to be an essential element in creating an environment that is welcoming and inviting.

Principles of inclusive design, good practice guidance and Building Regulations access requirements are incorporated into the design to facilitate access and ease of use. The buildings are suitable for use by all age groups and genders and seek to accommodate the needs of any potential future occupant or user.

Design Principles

All the houses are designed to satisfy the requirement of Part M Category 2 (accessible and adaptable dwellings) as a minimum.

Approach and access to each home's front door and the associated car parking, is provided with accessible thresholds throughout. The site levels have been carefully considered to provide level access to front doors and to avoid gradients steeper than 1:20 across the site. Front entrance doors in all instances provide a minimum clear opening width of 850mm and are provided with a level covered space in front of each entrance that complies with Part M4(2).

All buildings are a maximum of 2 storeys, with upper storeys accessed by a domestic staircase that meets the requirements of Building Regulations Approved Documents Part M and K.

Where a ground floor shower is not provided, the three and four bedroom homes are provided with adequately sized WCs at ground floor level to provide space for the future installation of a level access shower.

Vehicular and pedestrian access

The existing retained access off Northaw Road East is used to access the site, which benefits from connections to the existing footpath network , that is proposed to be cleared to remove current areas of verge creep to improve the usable width and thereby assit pedestrian connectivity.

Pedestrian movement is central to the scheme, and the shared surface promotes non car modes and gives priority to pedestrians over vehicles. Street furniture within the site is also kept to a minimum to facilitate ease of movement and the shared surface minimises the need for kerb upstands to further facilitate movement through the site.

Vehicular and Cycle Parking

The proposals have been developed to ensure excellent accessibility to all dwellings whether approached by car or on foot. The access roads are gently sloped to match the contours of the site and all areas of the site can be access without the use of steps or steep level changes.

A total of 32 parking spaces is provided, of which two are allocated as visitor bays at the entrance to the site. There are 8 No. garages, 3 carports, 3 off street parking bays and the remaining 18 spaces are on-street parking bays.

Each dwelling will also benefit from the appropriate level of space to accommodate cycle parking and storage in the rear gardens.

LEGEND

- 1 No. Electric Vehicle Charge Point (wall mounted)
- 2 No. Electric Vehicle Charge Points (post mounted)
- Bin store

12.0 Access

Refuse
Each home is provided with a dedicated external refuse storage areas with step free access to refuse collection points in close proximity to each house. 'Drag distances' have been reviewed and are addressed in detail in the Transport Statement accompanying this submission.

Security
Security and safety is an important factor in creating a community that feels like a desirable place to live. The design has been considered to ensure that security issues are designed out as far as possible.

Secured By Design Principles have informed the design of the proposal with natural surveillance of the shared yard being a key factor in the design, without compromising privacy of the individual units. Logical and legible routes and definition of public and semi public space aids natural surveillance and creates a sense of a safe and welcoming environment.

Consultation with the Crime Prevention Officer will be undertaken during detailed design and the requirements of Approved Document Part Q of the Building Regulations will be complied with for detailing and specification at the detailed design and construction stages.

Lighting
External lighting will be developed during detailed design to ensure good visibility to all access routes and will be treated as an integral part of the landscape strategy. Entrances will be adequately lit as part of the lighting strategy and all entrances to dwellings are clearly legible.

13.0 Sustainability

Energy Strategy
The proposed development has been assessed in line with the energy hierarchy, with a view of identifying the most appropriate method of achieving a significant reduction in carbon dioxide emissions from Part L 2013 as required to meet local and regional planning policies. The purpose of the strategy is to reduce the overall energy demand as far as possible, by increasing energy efficiency and introducing low carbon and renewable technologies.

A summary of target fabric specs and the heating system proposed is detailed below.

- Space and water heating to be provided by an air to water heat pump
- Ventilation provided by decentralised mechanical extract fans
- Photovoltaic array with hot water diverter to maximise onsite utilisation
- High-performance fabric targeting U-value in line with the proposed Future Homes Standard where possible
- SAP 2012 Carbon Reduction expected to be 40-55% above current building regulations
- SAP 10.1 (Part L 2021) Carbon reduction expected to be 65-75% above the expected future building regulations

Water Consumption
As water consumption and energy usage is intrinsically linked, with 20% of a typical home's heating bill arising from heating water for showers, baths and taps, water efficiency measures will be employed to meet a minimum water efficiency standard of 110 litres/person/day though the controlled specification of appliances and flow limitation devices, which is an improvement on the Building Regulations baseline standard of 125 litres/person/day. This will reduce the immediate energy demand of residents, offering wider economic and carbon reduction benefits.

Incorporation of rain water harvesting will also be considered during detailed design to reduce the volume of water used externally.

Electric Vehicle Charge Points
Each dwelling unit is provided with an Electric Vehicle Charge Point which will be either wall mounted or on a post. If appropriate 2 charge points may be provided in one location.

Sustainable Materials
The proposed development will aim to minimise the impact of materials and source materials locally and responsibly.
Specification and sourcing of materials will:
• Manage existing resources;
• Specify materials using the Building Research Establishment's Green Guide to Specification;
• Ensure that materials are responsibly sourced;
• Source materials from local sources;
• Minimise the harmful effects of some materials on human health; and
• Ensure that specified materials are robust and sensitive to the building type and age.

To maximise the (re)use of existing resources and materials and minimise the waste generated during the demolition and construction process through the implementation of the waste hierarchy:
1. Reduce;
2. Reuse (prioritise on-site reuse of demolition materials, followed by off-site reuse);
3. Recycle (prioritise on-site recycling, then off-site recycling);
4. Resource recovery (for energy generation processes – fuels, heat and power); and
5. Disposal.

A full energy strategy prepared by Sadler Energy accompanies the application.

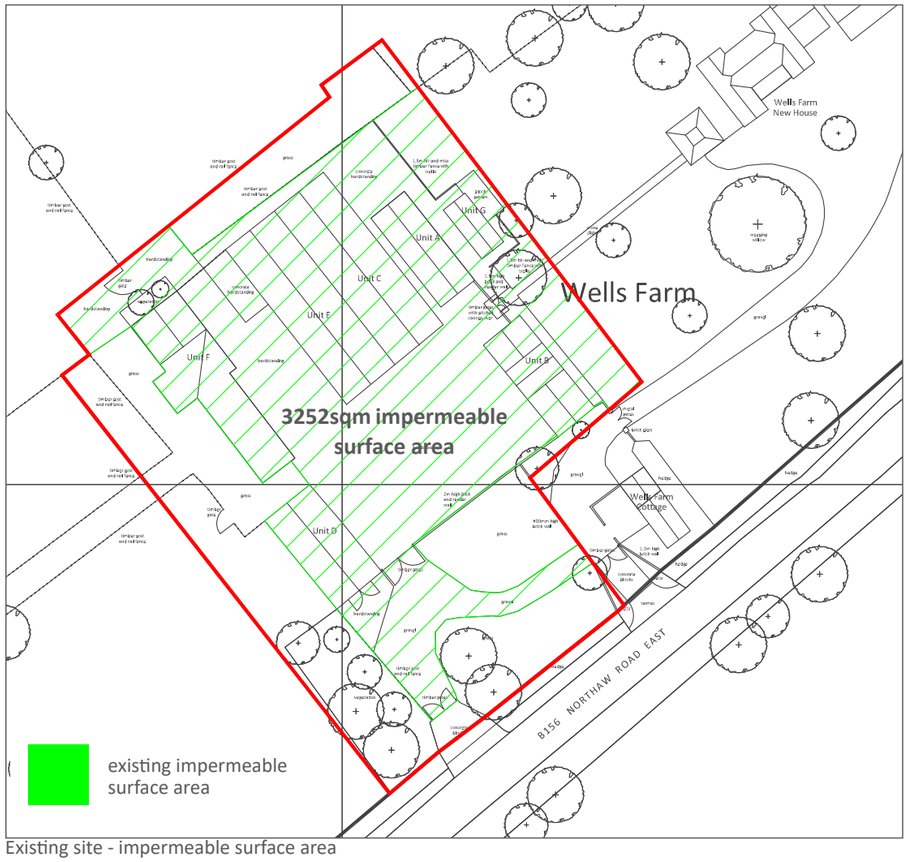
13.0 Sustainability

Reduction of hard surfaces for SuDS and biodiversity

The area of non permeable surfaces on the existing site is reduced by approximately 15% and this decrease in the built up area will result in a decrease in the surface water discharge from the post developed site.

The development seeks to reduce the rate of run-off from the site to Greenfield runoff rates. In addition, although the site is not suitable for infiltration, permeable surfaces will facilitate the collection of surface water in the sub base, utilising systems that are effective at removing pollution from run-off, as well as controlling the flow of the discharge rate to achieve greenfield run off rates. This will positively impact the surface water runoff conditions for the immediate surroundings.

The use of an attenuation basin and swales that provide further flow control and pollutant control, also provides opportunity for biodiversity gains will can be achieved by a landscape management system which will allow grasses to grow longer for example, to provide ideal habitat for a wide range of butterflies and other pollinators, amphibians, reptiles and birds. There are further ecological and net biodiversity gains achieved with the increase in soft planting generally the substantial increase in tree planting and hedgerow densification to the site boundaries.



Existing site - impermeable surface area

Proposed drained areas

Example of a planted swale