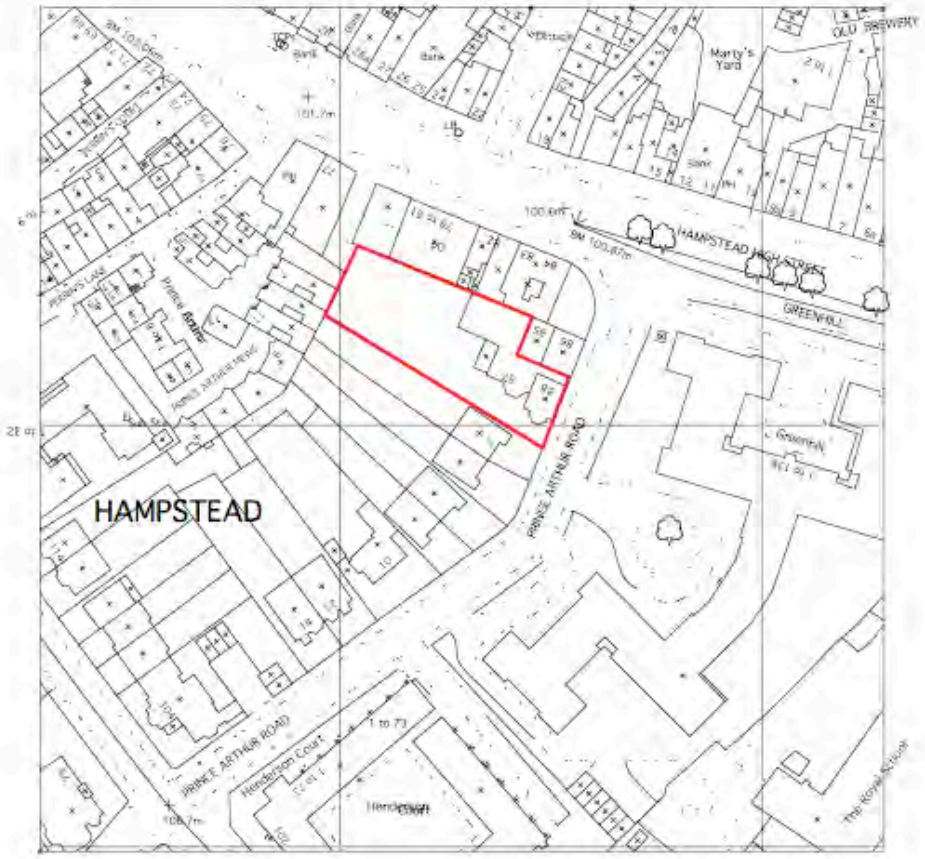
New house to rear of 2A Prince Arthur Road

Design and Access Statement

(02 application) rev01

Contents


HAMPSTEAD
HAMPSTEAD HIGH STREET
PRINCE ARTHUR ROAD
Marty's Yard
OLD BREWERY
GREENHILL
Greenhill
Henderson Court
1 to 73
The Royal School

The site is part of the large garden of 2A Prince Arthur Road.

The garden is enclosed by a high brick wall. The area proposed for development dips down in level.

There are a number of mature broad leaf indigenous trees including a row of Limes as well as a Yew within the garden.

Due to damage to surrounding buildings permission has been granted for the felling of a number of existing trees.

85, 86, 87 and 88 Hampstead High Street (2A Prince Arthur Road) have a Grade II Listing.

The site is partially overlooked at the rear by properties on Perrins Lane.

Post Office buildings back onto the east side of the site. To the west are the gardens of neighbouring houses in Prince Arthur Road.

A vehicle access drive runs down the side of 2A Prince Arthur Road (and 88 Hampstead High Street) and is currently solely used by 2A Prince Arthur Road.

View towards the site from 2A Prince Arthur Road

View from site towards the Post Office

View of 2 Prince Arthur Road from site

View from corner of site showing rear of 77 Hampstead High Street

Looking towards site with 86 Hampstead High Street in foreground

2A Prince Arthur Road

Vehicle entrance. 2 Prince Arthur Road (LH) and 88 Hampstead High St (RH)

Rear wall of site from Post Office yard.

2A Prince Arthur Road

The site

2 and 4 Prince Arthur Road

Entrance Drive

Houses in Perrins Lane

The site looking back towards 2A Prince Arthur Road

Entrance drive showing side of 2A Prince Arthur Road

Side boundary at entrance drive

The site

Summary of Proposal

The proposal is for the construction of a two storey plus basement, 3 bedroom house.

The owners of 2A Prince Arthur Road, who have lived in the house for twenty years, wish to build the new property to provide a more suitable environment for their post retirement years. The house will be smaller, well heated, more open plan with level floors to help mobility and will allow for the inclusion of elements such as a lift and electric windows.

The house has been designed to be as energy efficient as possible. The form and style of the house are a result of this leading energy efficiency criteria.

The house has been located to sit as far as possible from the existing house.

Planning Policy

This section assesses the proposal to construct a single family dwelling, against prevailing planning policies and other material planning considerations.

The adopted Replacement unitary Development Plan (RUDP) 2006 incorporates all the relevant London Plan Consolidated Alterations of February 2008, together with the relevant national policy advice, principally set out in PPS1, PPS3 and PPG15. the latter seek to create sustainable communities, taking the opportunities to improve the environment, maximising the use of previously developed land for housing in sustainable locations, with high quality energy-saving designs compatible with their surroundings, whilst preserving or enhancing the special character or appearance of the conservation area (Fitzjohns/Netherhall) and the setting of the listed building (2 Prince Arthur Road).

Since then a material consideration has arisen, officer opinion in the form of pre-application feedback by email, which has some weight. The officer stated that the 'principle of appropriate scaled development is considered acceptable'.

In further correspondence the planning officer confirmed the scale restraints put forward by the Conservation and Urban Design officer.

Although considered appropriate in location, style and material the pre - application designs exceeded the size constraints subsequently set by Camden Planning Department. The current application addresses this.

1. **The Setting of the Listed Building:**

The grounds of the Listed building are substantial. The proposed building has been located in the far corner of the garden to avoid impacting on the existing buildings. The new house offers a 'blind' brickwork to face the Listed building – this neutral façade ensures that there is no strong architectural detailing to complete and conflict with the existing building.

2. **Demolition:**

No demolition is necessary to enable the construction of proposed house.

3. **The Height of the New Building:**

The new building has a proposed roof height equal to the eaves level of the extension of the existing building (2A Prince Arthur Road) as set out by the planning officers in their size constraints in the pre-application feedback.

4. **The Footprint of the New Building:**

The footprint of the new building complies with the size constraints set by the planning officers in the pre-application feedback. The proposal is no wider than the rear extension of the existing house. The depth of the pre-application proposal was considered acceptable – this has been adopted for this application.

5. **The Massing of the New Building:**

The nature of the site with its recessed ground level on the north corner means that the massing of the proposed house is perceived as relatively low compared to surrounding buildings.

6. **The Character and Appearance of the Conservation Area:**

The site is secluded and is overlooked by very few other properties. The site is concealed from the public realm. Due to the proximity of the Listed building a simple design using traditional brickwork has been adopted. This simple approach will create a new building that sits in an understated manner within the Conservation Area.

7. **The Replacement Unitary Development Plan Policies:**

Policy SD1 is satisfied as the proposal **A** – adds to the sustainability of the local community, **B**- ensures accessibility for all occupiers, disabled or otherwise, and **C** – specifically addresses personal security and safety in the design details.

Policy SD2 will be adhered to for “car free housing” , in accordance with pre-application officer advice.

Policy SD4 concerning the density of development is satisfied, both in terms of the creation of one dwelling and with regard to the scale and character of the built form, the open spaces proposed around it and the garden area.

Policy SD5 is satisfied with Hampstead High Street and Fitzjohn’s Avenue being readily accessible to bus routes. Hampstead Underground is five minutes walk.

Policy SD6 is satisfied in terms of the amenity of occupiers and neighbours, regarding privacy, natural and artificial light impacts, noise waste facilities and microclimate.

Policy SD9 is satisfied regarding air quality, water and energy resources by the detailed design studies and design solutions proposed with this scheme,

Policy H1 is supported by this new addition to the housing stock.

Policy H7 is wholly satisfied by full compliance with prevailing “Lifetime Homes” standards.

Policy H8 is supported by the contribution of this unique dwelling to the prevailing range of housing mix found locally.

Policy B1 is wholly satisfied, specifically:

- **a)** by respecting the siting and setting of built forms in relation to neighbouring dwellings,
- **b)** by a safe and accessible design, with
- **c)** improved spaces around the dwelling, whilst
- **d)** promoting sustainable energy efficiently and efficient use of resources, together with

e)-g) a robust and adaptable design with well integrated high quality landscaping, boundary treatment and an interesting and attractive appearance, which promotes this century’s determination and need to create sustainable communities.

Policy B2 is satisfied with the proposed layout providing appropriate space around the new dwelling and positioning it in the land at the rear of the garden area, whilst retaining an appropriately sized formal main garden setting for the main house.

Policy B6 is thereby similarly satisfied not only by providing an appropriate garden setting for the listed building, but also by pulling away the new building from the listed building, and by keeping the height restricted.

Policy B9 is satisfied because the views of the main house from the public realm are preserved

Policy N5 is supported by these proposals which will preserve the contribution to biodiversity afforded by the existing trees

Policy N8C is likewise satisfied by the retention of the trees on site.

Policy T1 is supported through the design and the Section 106 Planning Obligation which together promote sustainable transport solutions for this development.

Policy T7 is similarly satisfied, with provision for off-street parking limited to 1 car.

Policy T8 is secured for this car-free housing by the Section 106 Obligation, which consequently also satisfies **Policy T9** as there is no impact on on-street parking and off-street parking provision is affected only minimally.

8. The Conclusions:

The revised proposals continue to embrace the principles of sustainable development and the preservation and enhancement of the conservation areas.

The reduced and relocated dwelling would preserve the setting of the listed buildings and would not impact on views of them from either the public realm or from neighbouring premises.

The new dwelling has a simple appearance in traditional brickwork and will appear as subordinate to the existing Listed building.

The rear garden to the main house is given the more formal shape and a size appropriate to its relationship to the listed building.

The formal landscape setting of the boundary trees are better safeguarded by moving the proposed new dwelling further away from them.

The criteria set out by the Officer with regard to the pre-application have all been addressed.

Furthermore the development plan policies are properly satisfied by this scheme, which in our assessment thereby also benefits from the positive presumption of Section 38(6).

Design

The house has been sited to sit low on the site and in the north-east corner to minimise impact on the existing house.

The height and width of the house result from pre-application design exercises and consequent feedback from Camden Planning Department.

The house is orientated towards the south. This ensures that all glazing catches the sun. It also prevents mutual overlooking to and from the neighbouring properties (2A Prince Arthur Road and Perrins Lane).

All glazing has been arranged to face south. A large double height window has been positioned to make the most of sunlight as an energy source.

The rear elevation and two side elevations are simple and mainly un-fenestrated.

Brick is the primary material used for the external envelope. This ensures that the new house is sympathetic with the existing house and generally blends with the surroundings.

The east face has been designed as a simple un-fenestrated façade of brickwork. This will give the impression of a blank garden wall. The bricks are to be reclaimed second hand and laid in a manner that gives a texture and sense of ageing. The treatment of this façade will ensure that it does not compete with the architecture of the existing house – either in parody or as a strongly conflicting style. The lack of windows will retain privacy between the two houses.

Much of the roof is to be clad with brick paviours. As the building sits low within it's surroundings this will improve the view from nearby buildings that look down into the site than would be the case if conventional roof finishes were used. The use of brick will reinforce the feel of the site as a brick walled garden.

A new boundary wall to one side (between the new and existing houses) is of brick and the type and detail will reinforce the sense of walled garden.

In general the house has been designed to be a simple in both form and material in order not to compete with the neighbouring Listed Building.

Other projects by **WEBB** ARCHITECTS LIMITED

Hampstead has an historic reputation for encouraging and supporting good quality modern architecture.

There are numerous examples of modern private houses in the area.

WEBB ARCHITECTS have designed and built several houses in the last few years in the immediate area.

Three examples are:

Well Road NW3


21

Redington Road NW3

Keats Grove NW3

Trees

Before undertaking any design for the new house the opinions of an Arboricultural Specialist were sought.

A number of existing trees that were causing damage to buildings are to be felled. Permission has been granted.

Trees of value are to remain. The new development is outside the root protection zone as defined by British Standard 5837.

New trees will be planted. See plans and Arboricultural Report for details.

Conifer trees are to be planted within a root barrier system to the North-west boundary to enhance privacy between the proposed house and 7 and 9 Perrins Lane.

See Appendix A – Arboricultural Report

Overlooking

Windows have been positioned to avoid overlooking. The house has been sited so that it faces over the gardens rather than buidings of neighbouring properties.

The north, east and west elevations are mainly un-fenestrated. The few windows in these facades are either small, high level or of obscure glass to retain privacy.

Amenity Spaces

The existing house and the new house will both have generous gardens.

Vehicle Access

The existing vehicle access will be shared by the current 2A Prince Arthur Road and the new property.

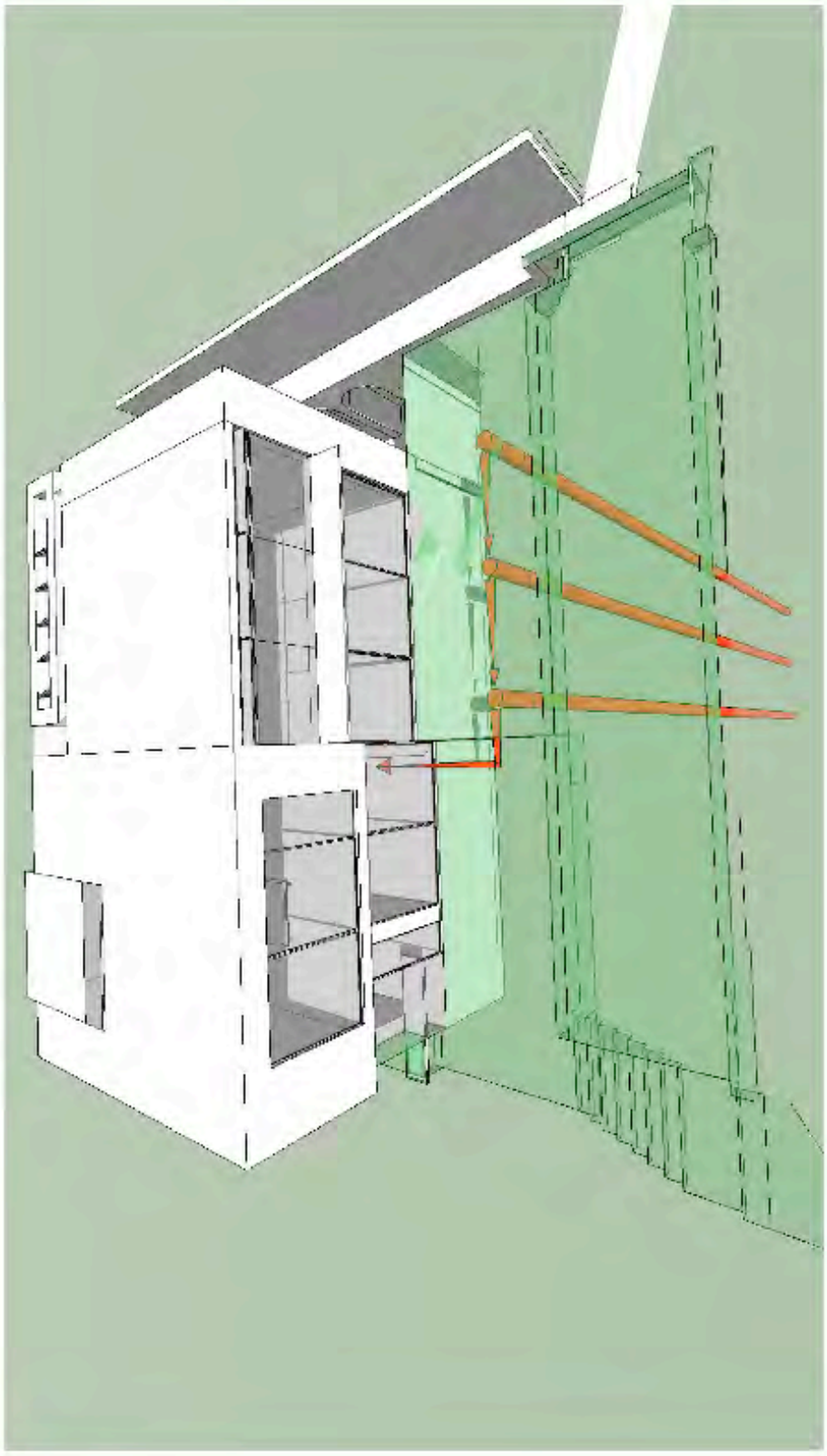
Within the site two separate entrance gates and parking areas for one car for each property will be created.

The capacity for car-parking will not be increased from the current situation.

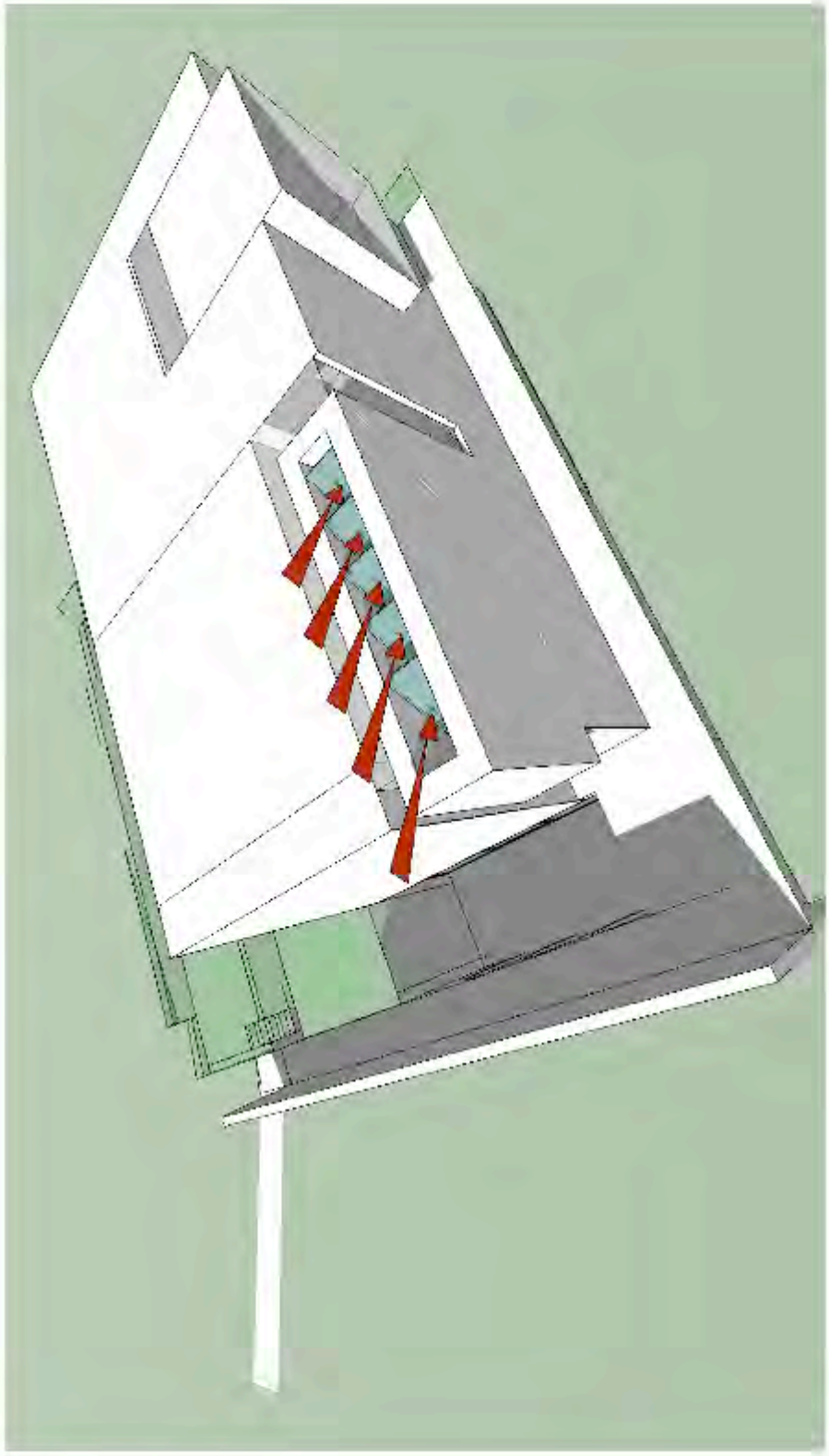
Energy Efficiency

It is intended to include the following elements to achieve a building that has energy efficiency properties considerably better than required through the regulations:

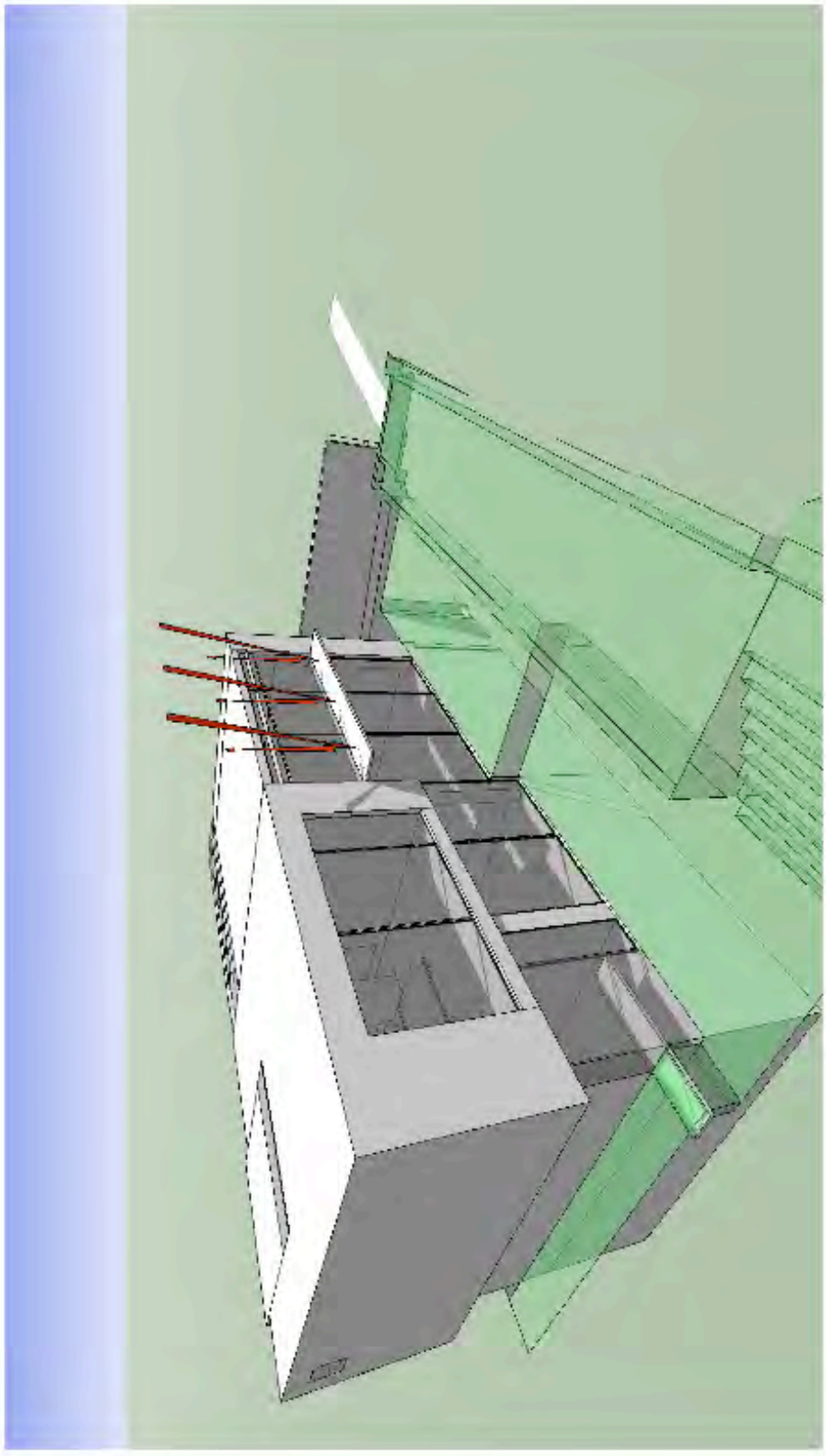
ground source energy



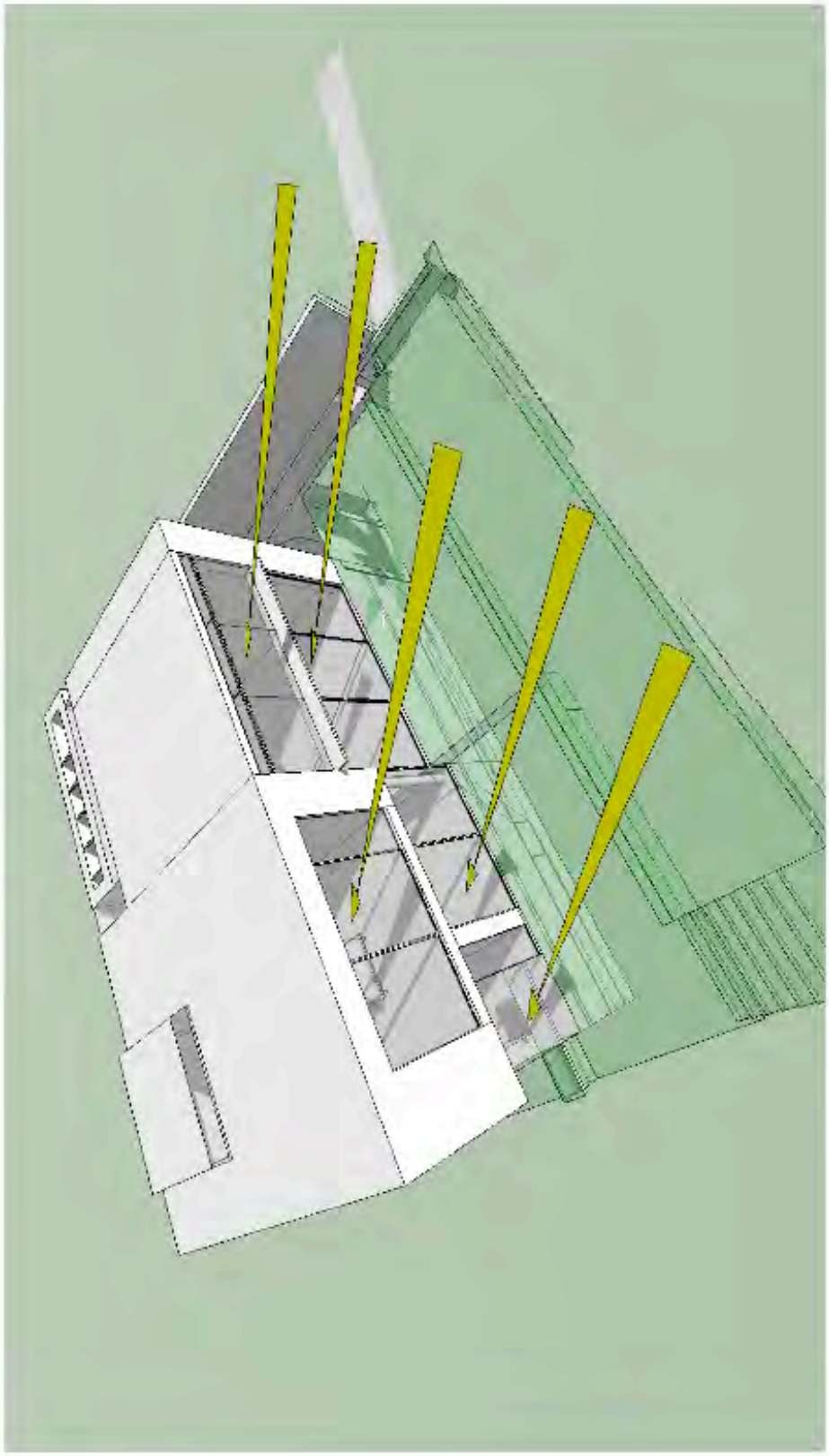
solar heaters



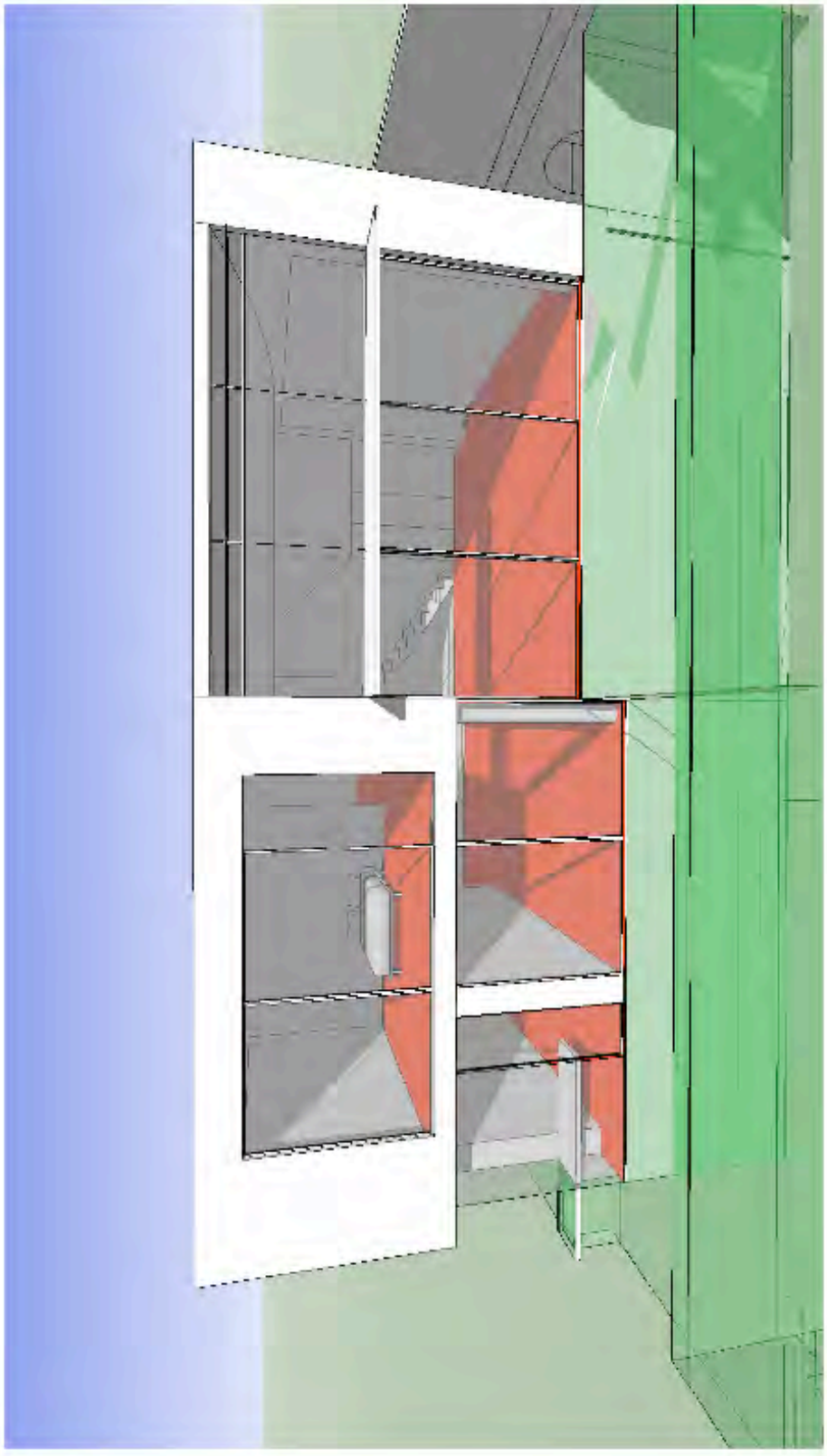
shading against summer sun



oriented for winter sun

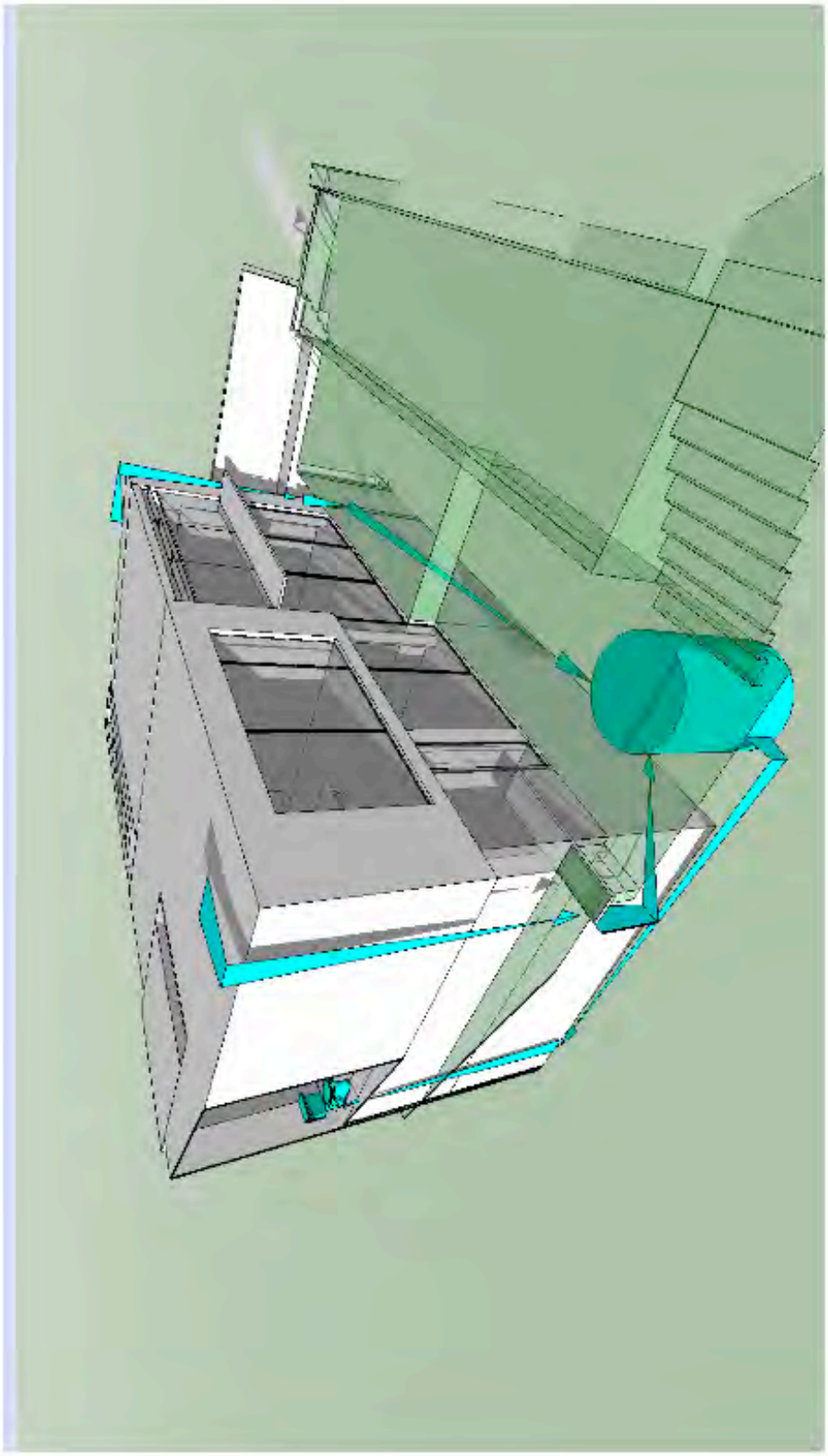


underfloor heating



ventilation stack

water management



Insulation

Insulation will be used in excess of recommended standards for all building elements and the use of argon gas double glazing with low emissivity glass will be used to reduce heat loss.

Condensing Boilers

A condensing boiler is a high efficiency modern boiler that incorporates an extra heat exchanger so that the hot exhaust gases lose much of their energy to pre-heat the water in the boiler system. When working at peak efficiency, the water vapour produced in the combustion process condenses back into liquid form releasing the latent heat of vaporisation.

It is proposed that boilers of the highest efficiency, such as the Keston Celcius 25, will be installed.

Celsius 25 boasts high performance and energy-efficiency with a SEDBUK ‘A’ rating of 90.4% and a peak efficiency of 97% when in full condensing mode. NOx emission levels have earned a Class 5 rating, the highest achievement under European Standards, meaning minimal atmospheric pollutant emission. Heat output is automatically adjusted to suit installation heating requirements from 7kW (23,900 Btu/h) to 25.2kW (86,000 Btu/u), making the unit ideal for most domestic applications. Optimum modulation maintains combustion efficiency at all heating output levels. The appliance automatically sets the heating output required for each individual installation up to 25.2 kW (86,000 Btu/h), by constantly monitoring the boiler temperature as required by the thermostat.

For additional efficiency, the unit monitors the water flow-rate and controls the integral standard domestic pump to match the pump speed to the boiler output.

Energy piles

As it is very probable that structural piles will be required for the new house and the possibility of using geothermal energy is being considered.

Geothermal energy can be harnessed with the use of energy piles, which are particularly practical in areas of soft ground where the stability of building foundations must anyway be enhanced using piles driven deep into the earth. Tubing is attached to the pile reinforcing rods, and fluid pumped through it carries the absorbed subsurface heat to the heat pump. The cycle is reversed when the building needs to be cooled.

Ventilation

Avoidance of trickle vents (which cause heat loss) and a high level of air-tightness for the envelope.

Whole house ventilation with heat recovery incorporating night purge cycles to reduce summer overheating.

The design of the house has allowed for passive stack ventilation within the building with a ventilation stack proposed for the open plan main bedroom which can be opended to the floor below.

There will be a high level of cross ventilation in the house due to the open plan floor design, and the positioning of doors and windows.

Solar Collectors

Much of the hot water in the new house will be preheated via solar panels (with evacuated tubes) that are coloured to blend into the roof finish and have low reflective properties.

The panels would be located horizontally flat on the top roof. Here they will be open to the sun in the south which will maximize their performance. They will be recessed into the green roof build-up and concealed by the parapets.

Solar Control

Summer overheating reduced by solar control coatings to glazing.
Rooflights provided with dual action ‘active’ glazing with self cleaning coating and solar control.
Solar control provided by louvers to the large glazed wall at ground floor and first floor on the front (south) façade.

Solar control with the use of natural planting to provide summer shade and winter sun when leaves fall.

Increased thermal mass through the use of concrete floor slabs and concrete block partitions to provide passive cooling to control summer overheating.

Solar control glass

In addition to admitting light glass also allows the heat from the sun to enter a building.

During the winter this can be considered a benefit – offsetting heating costs by providing ‘free’ heat on sunny days during the heating season.
During the summer months, however, unless some form of solar control is considered, this heat from the sun could be regarded as a disadvantage, necessitating the use of expensive air conditioning to avoid uncomfortably hot conditions.
Various techniques are available to control the amount of solar heat gain (solar heat) coming through glazing, including the use of external and internal shading (either fixed or adjustable), and solar control glasses.

Glass performance in temperate climates has to balance the need to provide solar control and reduce summertime overheating against the need to provide high levels of natural illumination and the benefits of passive solar heating. The required total solar transmission and light transmission will not be as low as those demanded in hot climates. To allow for passive solar design, the performance range could be:

Pilkington Suncool High Performance is a range of off-line coated, energy management glass combining high light transmission with solar control performance. It is used as part of an insulating glass unit where it’s coating also provides the highest level of thermal insulation.

Underfloor Heating

Because wet underfloor heating (UFH) runs at lower flow temperatures than radiator systems, fuel can be used more efficiently, and it is also possible to make more effective use of renewable energy sources. The maximum temperature for underfloor heating is typically 50ºC — and sometimes as low as 35º. The flow temperature is largely dependent on the floor construction, pipe spacing, water flow rate, heat output required and type of floor finish.

Condensing boilers and alternative heat sources such as geothermal heat pumps, both work better at lower water-flow temperatures and are therefore suitable for use in with UFH. The low flow temperature of UFH (about 35ºC) can allow a boiler to operate at 98% efficiency, compared to only 88% with systems requiring a higher flow temperature, such as radiators.

Water

Rainwater storage system for plant irrigation. The reservoir will be sunk under the garden.

The treatment of sewage to allow for reuse of the water content is also being considered. This water would be used for non drinking purposes, such as the flushing of toilets and irrigation.

There will be water conservation systems within the dwelling. These will include the use of dual-flush or low flush toilet systems, aerating taps, low flow shower heads, dishwashers and washing machines that use reduced volumes of water (and energy) and in the garden by the selective use of drought tolerant plants and landscaping to ensure water does not flow off the land and is wasted.

Rainwater – soakaway and harvesting

It is proposed that the rainwater from the roof and hard surfaces at the new house will be released back into the surrounding ground or harvested for irrigation of plants.

Traditional drainage practice is designed to move rainwater as rapidly as possible to a watercourse or river via gravity pipelines or culverts. However, this approach is now increasingly being called into question. Emphasis is now placed on dealing with stormwater run-off at source in a more sustainable manner, thus reducing flood risks downstream and replenishing ground water levels.

Permeable Hard-surfacing

Much of the hard-surfacing will be permeable. This will allow rainwater to soak back into the ground. This is will be especially so where there is hard-surfacing near trees.

Sustainability

Construction Materials

The intention is to use the environmentally preferred alternative products outlined below:

Foundations	Concrete with reclaimed aggregate
DPM	Polyethylene
Thermal insultation	Expanded Polystyrene
Intermediate floors	FSC timber
Acoustic Insulation	Coconut Fibre board
Balustrades	Glass
Floor Screeds	Flue gas gypsum anhydrate
Tiling	Ceramic tiles
Paving	Recycled aggregate concrete tiles
Sewers	Vitrified Clay
Gutters	Polyester coated
Drainpipes	Polyethylene
External Wall	Brickwork
Internal walls	FSC timber elements
Cavity Wall insulation	Cellulose or mineral wool
External wall finish	FSC timber
Plasterwork	Flue-gas gypsum
Studwork	FSC Softwood
Linings	Karlite medium bard
Doors and Windows	Aluminium
External Cills	FSC timber
Internal window frames	FSC timber
Internal Doors	Honeycomb with hardboard skins
Glazing	Argon filled low emissivity with dry installation
Roof shape	Varies
Roof structure	FSC timber
Roof insulation	Cellulose
Roof covering	Brickwork on PVC membrane and lead
Flashings	Polyethylene membrane
Water supply piping	Polyethylene
Internal waste pipes	Polyethylene
Hot water system	Correctly sized condensing boilers
Hot water system	Solar water heaters and heat pumps
Decs – internal joinery	Water borne acrylic gloss
Decs – external joinery	Natural paint
Des – internal walls	Linseed oil emulsion
Decs - metalwork	Natural paint

Brick within the building

Much of the façade of the development will be brickwork.

Brick is everywhere. Made of the most abundant materials on the planet, clay and shale, it is 'of the earth' in the most basic way. Manufacturing is normally located near the natural materials, so as to minimize energy consumption in transporting them. The clay is harvested from the earth's surface by a process that has minimal long-term environmental effect on the land. The harvested materials are blended with little or no refinement and then extruded or cast into desired shapes. They are then conveyed through a kiln at about 2000 degreesF which transforms the raw material into permanent modular units.

Sometimes recycled and industrial waste aggregates such as incinerator ash and waste glass are mixed with the clay.

In all cases the high temperatures used in the manufacturing process render the bricks environmentally safe and user friendly. Throughout this process there is virtually no waste – nearly all of the mined clay is used in the manufacturing process.

Brick has an amazing lifecycle, conservatively estimated at 100 years.

The actual 'embodied energy' of brick (the energy required to mine, manufacture and transport it), is approximately 4000 BTU's per pound. This is less than concrete, glass, steel, aluminium and even wood.

Bricks are often re-used (salvaged) for new buildings or they can be crushed and re-used as road sub-bases. Or if they are returned to the earth they require no special handling - they are inert, simply earth.

Timber within the building

The frame and of the house will be timber obtained from a sustainable source.

The benefits of using timber over other materials such as steel or concrete are summarised below:

5. Analysis of Results

For all building types that have been assessed as part of this study, GHG emissions associated with the embodied energy of construction materials are lower if the timber content is increased. This study has demonstrated that, indicatively, it is possible to achieve up to an 86% reduction in GHG emissions by increasing the amount of timber specified in buildings.

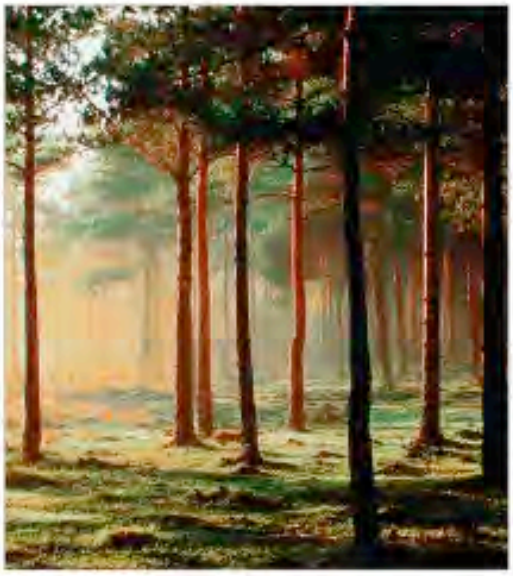


Figure 4. As trees grow, they sequester carbon from the atmosphere giving them a negative carbon intensity.

These emissions reductions are achieved as timber is used to replace building materials that have high carbon intensity such as concrete and steel. These materials have high GHG emissions associated with extraction, refining, processing and manufacture.

Wood has a negative carbon intensity because while a tree is growing, carbon is sequestered and stored, meaning that CO_2 is taken from the atmosphere, rather than being emitted into it during production of the material. It should be noted that emissions reductions resulting from the use of timber in construction will only be achieved if the timber is taken from a sustainably managed source.

This study has shown that it is possible to reduce GHG emissions associated with construction materials by incorporating wood in to buildings wherever possible. To further reduce emissions, it should also be considered where the timber is sourced from. This study has shown that timber that is sourced locally has the lowest associated GHG emissions.

Figure 5. Timber transported by lorry

Access

The house has been designed to allow ease of accessibility and use. The design complies with all 16 of the Lifetime Homes Standards:

01 Car Parking

Cars will not be able to stop directly outside the house but a private drive enables access to the front gates of the property.

02 Access from car parking

The route from the car parking space to the front door will be a shallow gradient ramp.

03 Approach

The approach to the front door from the street is a gentle slope.

04 External Entrances

The entrance will be illuminated by overhead lights. The entrance will have level access over the threshold. The main entrance is covered by the cantilevered first floor over which will offer protection from the rain.

05 Communal Stairs

The building is a single private dwelling – there are no communal stairs.

06 Doorways and Hallways

All internal doors will have a 900mm clear opening width. The doors on entrance level have a 300mm nib on the side of the leading edge.

07 Wheelchair accessibility

All living and dining spaces are open plan giving adequate circulation and turning space for wheelchairs. Corridors are 1.1m wide.

08 Living Room

The living room is at ground floor entrance level.

09 Bed space at ground floor

The configuration of the ground floor will allow a bedroom to be introduced into the area currently proposed as a study.

10 WC at ground floor

The entrance level WC meets the standards required for wheelchair access. WC and shower room are also situated at the ground floor entrance level.

11 Bathroom and WC walls

The walls of the WC and bathroom will be blockwork and would be capable of supporting adaptations such as handrails.

12 Lift

A lift is to be built into the house.

13 Main Bedroom

The width of the corridors allows a hoist to be used between bedroom and bathroom at first floor.

14 Bathroom Layout

The detailed bathroom layout will allow for easy access between appliances.

15 Window Specification

The living room windows will be openable with long lever handles which allow easy operation.

16 Fixtures and Fittings

Switches, sockets, ventilation and service controls will be located at a height that is between 450mm and 1200mm from the floor.

Summary

The proposal responds to a need for further housing. The new house is a simple contemporary building of modest size that has been sited in a concealed location. The simplicity of the architecture using traditional brick ensures that the building does not compete with nearby Listed buildings and reinforces the appearance of the brick walled garden. The basic design of the house and proposed detailing allow for the efficient use of energy.

Appendix A

Arboricultural Report