Design Statement (Planning Application)

5 Downside Crescent
London
NW3 2AN

Rear Dormer Window
and
Side Dormer Window
and
Rear extension
and
New openings in side wall

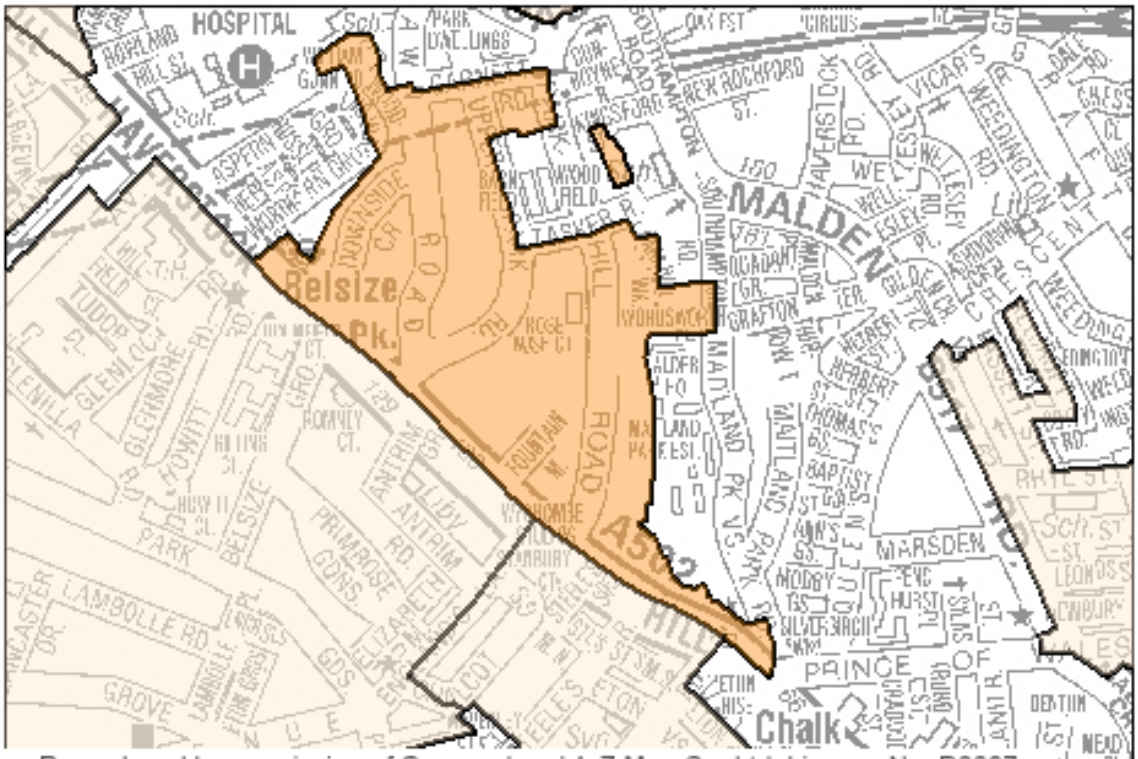
Contents

Location Plan

Existing Property

The existing property is a single private dwelling. The house is semi detached and probably built at the end of the nineteenth century.

The property is situated in the Parkhill Conservation Area.



Existing Photos

Existing Front Elevation

Existing Rear Elevation

Existing Rear Elevation

Existing Rear Elevation

Existing Side Elevation

Design Statement - Planning Permission

The application is for:
rear dormer window
side dormer window
alteration of main roof form
roof-lights (Velux) to the front roof pitch.
rear extension

The dormer windows have been designed to ensure that they do not dominate the existing main roof. They have been sited 300mm down from the ridge, 500mm up from the eaves. The rear dormer extends for half the main roof width (at eaves level). The side dormer extends for less than half the side roof width (at eaves level).

The dormer windows will be traditional in form and material. The windows will be proportioned to be sympathetic with the glazing of the existing house.

In order to accommodate habitable space within the roof void the central valley in the main roof is to be removed and replaced with flat roof. This part of the roof cannot be seen from outside.

The rear extension has been designed as a modern interpretation of the existing rear extension. The extension will occupy the same footprint as the current rear single storey part of the building.

The side walls of the proposed extension have been limited to 3m high to ensure that overshadowing is not an issue.

The main glazed area is of a form and height to allow the existing brickwork bay of the main rear elevation to be enclosed within the extension. The existing conservatory cuts across this bay in a manner that is detrimental to the architecture of the house.

The extension is articulated with levels of masonry and glass to break up it's massing.

The large glazed section next to the brickwork 'block' suggest the rhythm of the solid and void pattern of the original house layouts.

Landscaping and Trees

The existing garden arrangement is to be retained. The existing plants are to be maintained. Additional planting is to be carried out.

No extensive areas of hard surfacing are proposed.

No trees will be lost as a result of this development.

Access for All

Within the constraints of an existing building the works to the house have been designed to allow ease of accessibility and use. The design complies as follows with the 16 Lifetime Homes Standards:

01 Car Parking
Cars will be able to stop outside the front of the house as the current arrangement.
02 Access from car parking
Access from car to front door is existing and is direct and short.
03 Approach
Access from car to front door is direct and short.
04 External Entrances
The entrance is illuminated by overhead lights. The entrance is existing and has steps.
05 Communal Stairs
The building is a single private dwelling – there are no communal stairs.
06 Doorways and Hallways
Any new internal doors will have a 900mm clear opening width.
07 Wheelchair accessibility
The new proposed living and dining space is more open plan than the current layout giving adequate circulation and turning space for wheelchairs.
08 Living Room
The living room is on the principle / entrance floor.
09 Bed space at ground floor
If required a bedroom could be incorporated in the newly formed dining area which would still leave adequate living space.
10 WC at ground floor
It is proposed to have a WC at entrance level.
11 Bathroom and WC walls
There are masonry walls in the WC and bathroom that would be capable of supporting adaptations such as handrails.
12 Lift
The inclusion of a future lift is not possible.
13 Main Bedroom
The main bedroom and bathroom are all on one level.
14 Bathroom Layout
The bathroom is to be enlarged and will therefore improve access for all.
15 Window Specification
New windows / French doors will be openable with long lever handles which allow easy operation.
16 Fixtures and Fittings
New switches, sockets, ventilation and service controls will be located at a height that is between 450mm and 1200mm from the floor.

Transport

The development will not alter demands on car parking in the immediate or neighbouring streets.

Energy Efficiency

The house is a single-family house built in the mid 19th century constructed from load-bearing masonry with single glazed timber windows and a clay tile roof and has been altered during its history to include an un-insulated rear extension. In its present state there is very significant heat loss through the main fabric of the building and the heating system is inefficient, resulting in excessive fuel usage. The house is generally in a poor state of repair and requires maintenance work to the existing fabric, as well improvements to suit the owners' needs.

Rainwater collection for watering the garden

A collection container is to be positioned at the rear of the property.

Grey water recycling system to supply the downstairs toilet.

The toilet will either be supplied by a rainwater collection system or via a grey water re-cycling system such as 'Ecoplay' that recycles bath water.

Rainwater – soakaway

It is proposed that the rainwater from the roof and hard surfaces at the new house (which is not required for above grey water uses) will be released back into the surrounding ground.

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.

Installation of new efficient gas condensing boiler and heating system

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.

Possible installation of solar panels for hot water provision.
If considered visually acceptable by the Planners we would like to propose the use of solar panels.

Energy piles

The use of piles to make use of 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.

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.

As part of the renovation of the existing house, additional insulation will be installed where possible. Existing windows to be retained will be overhauled and where appropriate additional draught seals fitted. New windows will be timber

framed and will, as a minimum, perform to the requirements of the building regulations.

Underfloor heating

Underfloor heating will be fitted in the new extension, which is efficient because of its lower temperature requirement (35 degrees rather than typically 75 degrees for conventional radiators.)

The construction of the extension will perform as a minimum to the U-value requirements of the Building Regulations, however, where feasible we aim to exceed these performance indicators to improve the energy rating of the house as a whole.

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.

Sustainability

Construction Materials

The use of brick as external cladding material is to respond to the specific character of the existing house and of the conservation area. As bricks have a high embodied energy performance, wherever possible elsewhere materials are used which have lower embodied energy, for example the ground floor and roof structure are timber and windows will be timber framed both on the new extension and where windows in existing locations are replaced.

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

Foundations	Concrete with reclaimed aggregate
DPM	Polyethylene
Thermal insulation	Expanded Polystyrene
Intermediate floors	As existing
Acoustic Insulation	Coconut Fibre board
Balustrades	Glass
Floor Screeds	Flue gas gypsum anhydrite
Tiling	Ceramic tiles
Paving	Recycled aggregate concrete or natural stone
Sewers	Vitrified Clay
Gutters	Polyester coated
Drainpipes	Polyethylene
External Wall	Timber cladding from sustainable source
Internal walls	FSC timber elements
Cavity Wall insulation	Cellulose or mineral wool
External wall finish	Brick
Plasterwork	Flue-gas gypsum
Studwork	FSC Softwood
Linings	Karlite medium bard
Doors and Windows	FSC durable timber
External Cills	FSC timber
Internal window frames	FSC timber
Internal Doors	As existing or FSC timber panelled
Glazing	Argon filled low emissivity with dry installation
Roof shape	Flat to out-building
Roof structure	FSC timber
Roof insulation	n/a
Roof covering	Clay tiles (re-used where possible)
Flashings	Lead
Water supply piping	Polyethylene
Internal waste pipes	Polyethylene
Hot water system	Correctly sized condensing boilers
Decs – internal joinery	Water borne acrylic gloss

Decs – external joinery	Natural paint
Des – internal walls	Linseed oil emulsion
Decs - metalwork	Natural paint