



Design, Access & Energy Statement

Client: Mr and Mrs M Wilkinson

LOCATION:

Holme Farm
Rakesdale
Alton
Staffordshire
ST10 4BT

PROJECT:

Proposed extension and internal alterations.

Description of Application

The proposal is for the removal of the existing UPVC porch and conservatory and the construction of two separate extensions along with internal re ordering of the existing accommodation in order to provide a well insulated and energy efficient, family home.

The existing property is a small, traditionally built dwelling that has been considerably altered from its original form and which has had all of its original windows, doors, fascia's and barge boards, soffits etc. replaced with oak coloured UPVC.

A steep hillside to the rear of the property restricts any possibility of a rear extension.

The proposal comprises the removal of the existing UPVC front elevation porch, the construction of a single storey, side extension to replace the existing UPVC conservatory, which will accommodate the proposed kitchen and a two storey, side/front extension that will provide two bedrooms, a family bathroom, a new sitting room and an entrance lobby.

The proposal includes for the use of high quality materials and finishes, compatible with the rural location and a design/layout that makes the most of the location and outlook.

Physical Context

The existing property is a detached, traditional dwelling situated in an isolated location.

The building is built partly in facing bricks and partly in stone with a Staffordshire Blue tiled roof.

The property is accessed by a private access road that serves one other property.

Approximately two thirds of the front elevation is built with stone with the remaining third built with red facing brickwork giving the suggestion of historic alterations.

The main body of the dwelling is a low, two storey structure, utilizing dormer windows, as the first floor bedrooms are partly within the roof structure. The building runs southwest to northeast with the front elevation facing southeast.

The rear roof pitch is at a much shallower pitch than that of the front, suggesting that there may have originally been a single storey lean-to along the rear elevation which was extended vertically to provide the existing rear bedroom and bathroom, with the original high level, rear elevation roof slope, being replaced with one at a lower pitch in order to cover over the extension.

The property sits to the rear of a large domestic curtilage.

Social Context

The area is rural.

The immediate surroundings are woodland and countryside with isolated dwellings and farms.

There are no other properties that can be seen from existing house or that can see the house.

Design Principles and Concepts

Amount

The property stands within a large domestic curtilage of 3385m².

The existing property has an internal floor area of 107.50m².

The proposal would add an additional 122.80m² to the footprint.

Layout

The orientation and location of the proposal is determined by the existing house location, layout and design.

A steep hillside to the rear of the property restricts any possibility of a rear extension.

The proposal is to replace the existing oak, UPVC conservatory on the north eastern end of the building with a stone built structure with a tiled roof that will accommodate the kitchen

The second proposed extension will be at the south western end of the building and will wrap around to provide a new entrance into the building on the front, south eastern elevation.

The orientation of the property and the manner in which the site is accessed and utilized externally is retained as existing, this maintains the straight forward and clear access to the main entrance of the property.

Scale

The existing property is basically a low eaves, traditional cottage structure, resulting in the bedrooms extending into the roof structure.

The roof, ridge and eaves levels of the proposed extension have been kept at the same height as the existing thereby not presenting themselves as being dominant over the existing dwelling.

Landscaping

The general site layout is to remain unaltered.

The proposed extension will be partially cut into the adjacent bank on the western corner of the building. The external walls of the extension shall be constructed so as to be able to retain the ground level thereby reducing the visual impact of the building from the western perspective.

The existing drive and access will remain unaltered.

Appearance

The proposal is to construct the extensions in local, natural stone to match the existing. It is proposed to incorporate stone heads and cills to openings to match existing.

Dormer windows where detailed will replicate existing details.

The roof will be covered with reclaimed Staffordshire Blue tiles to match the existing.

The glazed structure forming the double storey entrance area and the front of the side elevation kitchen, will be constructed with natural oak framing infilled with clear glazing.

The glazed front of the two storey side extension, fronting the sitting room and master bedroom will be constructed with a PPC aluminium frame infilled with clear glazing.

The existing chimneys have been retained.

The principle behind the design of the extension has been to achieve the required improvement in the accommodation provided by the property in a manner that enhances the style and characteristics of the existing dwelling.

The proposal has been developed having regard to the following considerations:-

- The need to retain and enhance the character of the existing building.
- The need to compliment the form and scale of the original building.
- The desire to retain all internal and external features which contribute to the character of the building.
- The need to provide sufficient improvements in the accommodation provided by the development to justify the necessary investment.
- The desire to achieve an energy efficient and sustainable form of development.

Access

The existing vehicular and pedestrian access into the site is to be retained.

The access drive and parking area facilitate parking within the immediate vicinity of the entrance to the property.

The reasonably level nature of the driveway and parking area within the site, ensures all occupiers and visitors, irrespective of age or disability have convenient and equal access to the dwelling.

Sustainability, Energy Efficiency and Carbon Reductions

The existing property is of traditional solid wall construction. The property has no floor or wall insulation and only minimal levels of roof insulation. The existing heating system is oil based and cooking is by LPG bottled gas, delivered to site in small refillable cylinders - both of which are non-renewable fossil fuels.

The detailed design and specification of the extension will ensure that the energy requirement and usage of the building is minimized and that the fuels used are either low carbon or renewable. This will be achieved by a 'fabric first' approach with higher levels of insulation within the walls, floor and roof structure and greater efficiency of the 'Controlled Fittings and Services' than is required under the current Building Regulations - AD L1B - Conservation of fuel and power in existing dwellings. The oil fired heating system is to be replaced by a highly efficient Biomass boiler which is both renewable and sustainable.

The proposal includes the install of an array of Photovoltaic panels with battery storage, producing up to 7.2 KWPeak on the southwest elevation of the property.

The property is to be provided with 100% of low energy light fitting, some of which will be linked to PIR sensors to ensure that they will only be in use whilst the room is occupied. Areas of dual function such as kitchen/living space will have zoned lighting areas with multiple points of control to facilitate the opportunity to only light chosen areas in isolation to the rest of the room.

The proposal includes the incorporation of zoned control of the heating system within both the extension and the existing house, allowing areas with different heating requirements to be compartmentalised, thereby achieving substantial energy savings.

The existing property sits within a small valley with the rear of the property backing onto high ground levels with a natural woodland screening which does impact on the natural lighting of the dwelling. The proposed extensions have been designed with a high level of glazing with a south/southeasterly orientation as allowed by the site, in order to benefit significantly from passive solar gains over the annual cycle, but without the overheating risk of glazing orientated fully south and also to maximise the benefit of natural lighting and reduce the dependency on artificial lighting.

The internal layout has been designed to incorporate the daytime accommodation at the front of the property in order to obtain maximum benefit from the naturally available light during the course of the day. All areas of the habitable accommodation are illuminated with high levels of natural daylight

The building complies with Part F of the Building Regulations, utilising intermittent extractor fans and openable window casements facilitating natural cross ventilation and a Building Regulation compliant Air Change Rate

The increase in the size of the property and the improvements to the accommodation provided that would result from the proposed development makes the thermal upgrading of the existing structure and the investment required for the installation of a Biomass boiler installation financially viable