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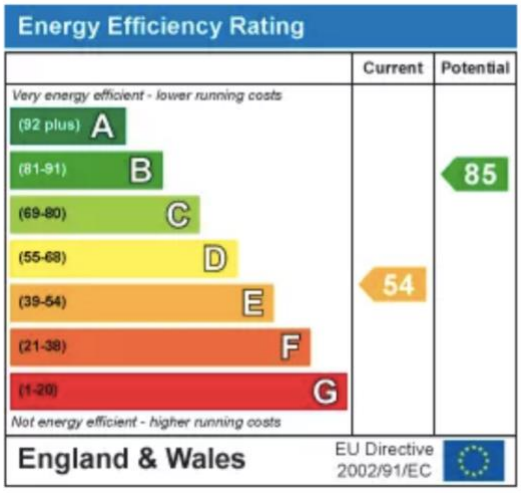
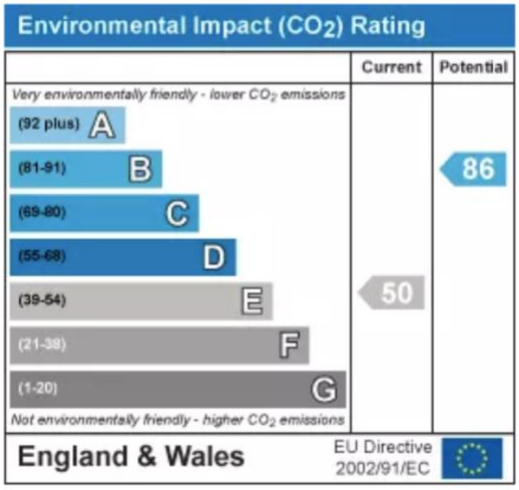
No.17 York Road, Fulford

Front Elevation of 17 Fulford Road

A Grade II Listed C18th two storey townhouse within the curtilage of a designation Conservation Area, Fulford Village. The house displays two three-light bow windows with prominent central 6x6 sash windows, three 6x6 flush sash windows with segmented arch lintels, and a central entrance with a hooded frieze atop fixed Doric columns. A solid six-panel door is fixed below a four-segment fan window. The brickwork is Flemish bond displaying patina and varying texture, and the roof is tiled with Welsh slate. Two chimney stacks remain to the far left and right of the front elevation. A utility passage connects the street and garden, and the property retains access. (HE, 1986)

The interior ground floor consists of a three reception/living rooms centred around a central entrance hall which permits access to a ground floor bathroom and the staircase. The kitchen is housed in an extension to the rear left of the plan. The utility passage permits a rear entrance to the hall. The first-floor houses four bedrooms and two bathrooms, both to the rear of the property. The attic space is converted for use and split into two spaces, both without amenities.





EPC Rating of a property of a similar age on the Fulford Road.

Engaging with changes to the building regarding the use and waste of energy, via the EPC scores shown above, requires fundamental changes to the built fabric of the building if carried out with the intent of achieving a score in the 'A' bracket. This is an unacceptable framework to follow when interacting with an historic building in a conservation area with additions being considered against different values. Such additions are necessary in a wider setting, with 40% of UK energy consumption being used in the domestic setting (CCC,2014). It is important to note that energy saving retrofit procedures are expensive and often involve changes to the fabric of the building. It is general practice to combine energy saving matters with transitional points in the building's lifespan, be it at the time of necessary rebuilding or with a change of occupancy when works are often carried out, as a means of protecting heritage fabric for as long as possible.

Layout plans for the property

The building sits as part of a terrace, so two party walls hinder thermal bridging between interior and exterior space. Changes to such walls, for instance installing wall surface insulation, would have to be catered for within the measurements of the adjacent rooms on the upper floors. The nature of an historic terraced row determines often that buildings have approximately similar appearances with fittings often reflecting the skill of craftspeople from the appropriate era. Along with the architectural significance of brick patina and bonding, decorative lintels and surrounds, and the two-story bow window, exterior insulation on either exterior face would be to the detriment of the building, its neighbours and its setting.

Any exterior alterations would need to comply with the guidance of the LPA, but a there is certainly scope for changes within the attic/roof, currently acting as a warm space. If the tiles are removed, the best method of insulating the roof at rafter level would likely be rafter insulation (STBA, 2021) (HE, 2016). Rebound effects regarding Interstitial Condensation and trapped moisture are likely if work is contracted poorly, although like over-heating, these problems are prevalent with most retrofit options for roof insulation. The heritage concerns with lost fabric are null as the attic rooms are converted previously and this work is sympathetic to the exterior elevation.

It could also be suggested at the time of works that the pitch of the roof is altered slightly to give greater depth to the eaves. By keeping larger parts of the brickwork dry, the thermal capabilities of the mass are increased. This change, and a survey of the rainwater goods for high volume transfer, are likely the only suitable adjustments to the front elevation without detriment to the character of the building.

The Utility passage provides an opportunity to insulate the adjacent rooms on the ground floor and those directly above on the first floor without interacting with the interior space. With the addition of surface insulation and a water-shedding cladding, this would prevent thermal bridging into an uninsulated space. This change would be subject to the sufficient width of the corridor after works. For new builds this is 900mm with pinch points at 750mm, although the exact measurements of a historic building are in the hands of the LPA. (H.M.Gov,2010)

Insulating the rear extension to the north of the plot is an area in which major works can be carried out. The lack of historic fabric allows for major changes, either internal or external. The extension currently houses the kitchen which is likely an often-used space and a source of high energy use. At the next available opportunity, suitable wall insulation should be accommodated

alongside a review of the roof insulation. A change to low-energy use kitchen products with better EPC ratings would be advised when change is appropriate. Ventilation is paramount in a high humidity environment.

Alternate heating and energy methods are possible but unlikely to be suitable for a property of this nature. The most plausible solution would be a biomass boiler housed in a rear outhouse within the plot for its proximity to newer parts of the building and the amenities at the rear of the property, however the expense is likely a limiting factor in the conversion of the old system alongside the installation of the new one. Suitable ventilation must be accommodated for and the proximity to other plots may make the retrofit untenable within LPA guidelines. Changes to current energy storage and distribution system will aid energy usage although these changes will interact with historic fabric. Pipe insulation and changes from old to new water storage goods, demand that less energy is used by the heating element.

Other exterior considerations rely on the surroundings and setting of the property. The front elevation is West facing with shelter from the South by the neighbouring property, meaning that there are few daylight hours to warm the appropriate walls. The rear of the property has the same issue. The front elevation also faces a road, so the gradient of both the pavement and road should be checked to ensure appropriate drainage to minimise continuous damp from standing water. The average wind direction may help dry the facing wall, but will also minimise the efficacy of the wall as a thermal mass.

For the interior, floor insulation on all storeys would be a plausible addition without great detriment to the building, although the most crucial would be the ground floor. It is likely that each floor is suspended in a building of this period with floorboards resting on perpendicular bridging and filling joists (HE,2016), therefore with the skill of an appropriate craftsperson these floorboards can be raised exposing a ventilated void below. It is important to use a vapour permeable membrane to avoid trapping moisture in the void which increases the chances of rising damp in the lower wall sections (STBA,2021). The original

boards can be refitted without significant change to the historic assets, although an additional retrofit method could be works for increased airtightness provided sufficient ventilation is provided.

Increasing airtightness around windows and doors is an entirely suitable and recommended change. The frames for all openings can house a membrane or gasket, often a cotton-faced rubber seal, which blocks any gaps around the window and goes un-noticed once installed. Ventilation is crucial in a building of this period and permanently sealed windows would increase the likelihood of associated issues. Secondary window systems would achieve the same effect with regards to air tightness, with the added benefit of better internal insulation. Secondary glazing is aesthetically sympathetic from the exterior, but can be hard to install. Although interior shutters are not original details to the building, they are often seen in houses from a similar period and are a visually tidier solution to an interior, providing the same solution as glazing in a more cost-effective manner. Internal shutters are reliant on a deep window reveal on the interior side. Blocking the chimney flues with an adaptable system such as an angle adjusted shutter or 'flue balloon' provide an unobtrusive solution to heat loss, although ensuring appropriate ventilation from elsewhere is advised.

With these appropriate changes carried out correctly (in line with the Statement of Significance, LPA Guidance and Sustainable Practice Guidance, the building should respond with warmer internal spaces and lower energy consumption resulting in a better EPC rating.

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