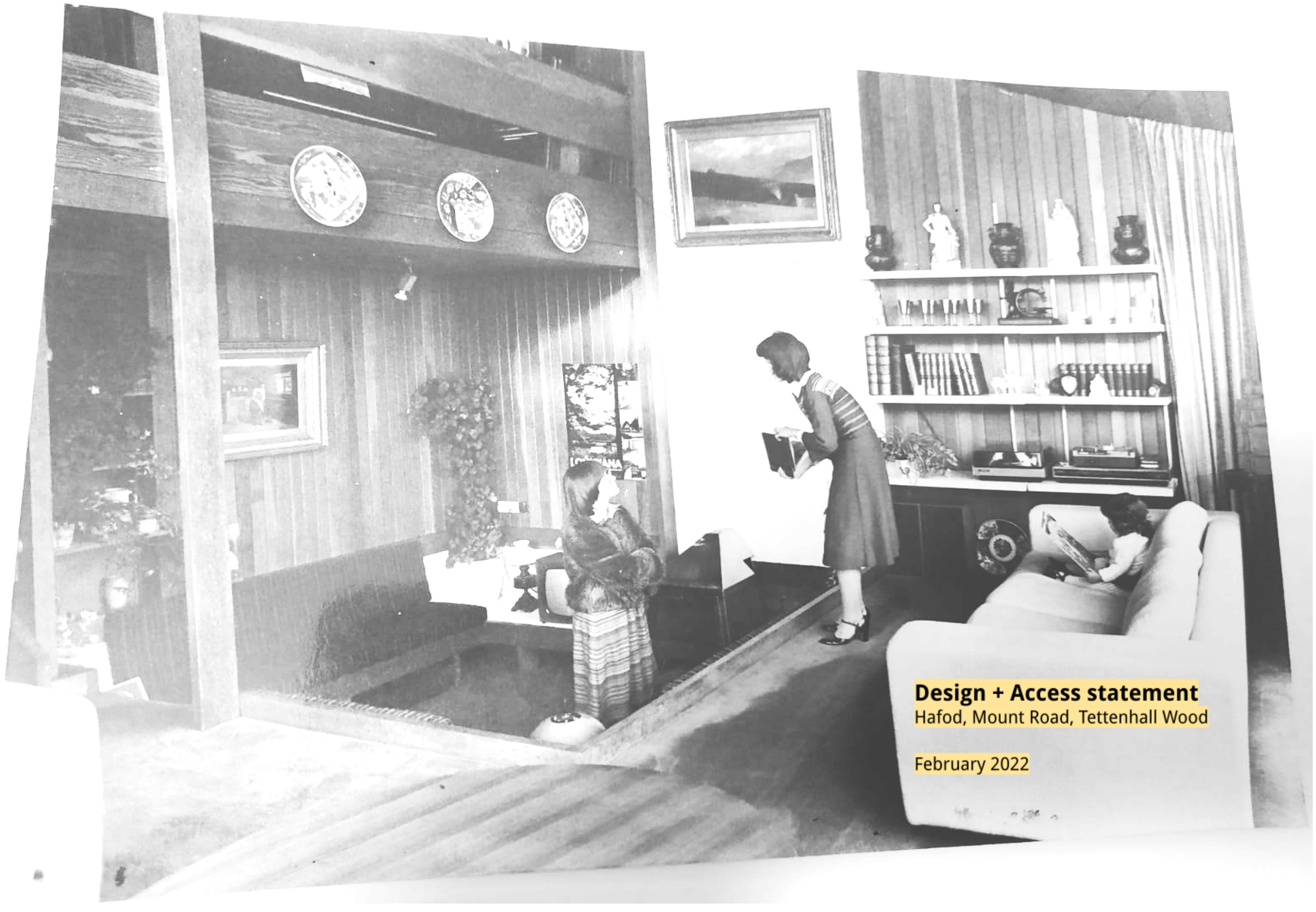


Design + Access statement
Hafod, Mount Road, Tettenhall Wood

February 2022

Contents:

image opposite: current state of building - photographed 2021

cover image: living room + 'conversation pit' circa late 1970s, Phillips family photograph

1. Process

This application is submitted to confirm the proposals to refurbish a mid 20th century modernist residential property situated in Tettenhall Wood, Wolverhampton.

1.1 Site history

Constructed as a pair during 1968-1970, Hafod and Kontur were designed and built simultaneously by Michael Phillips and Derek Cutler, founding partners of the architectural practice PCPT. Both properties were initially situated on similar size plots but following the purchase of additional land to the west by the Phillips family, the garden of Hafod was extended and this also allowed for the addition of a separate annex building added during the 1990s.

Following the sale of Hafod in 2004, additional construction work was undertaken in the garden adjacent to the house, forming a large terrace and retaining wall. Planning applications were submitted by the previous owner in 2010 and 2014.

Initial proposals for the extension of the original house with the addition of further storeys above the garage and entrance level volumes were refused (10/00555/FUL) due to the 'unacceptable overbearing impact' caused to neighbouring properties. The subsequent revised application proposed the complete demolition of the existing house and construction of a new larger property (14/00243/FUL). This application was granted but no further work was undertaken and the site was advertised for sale.

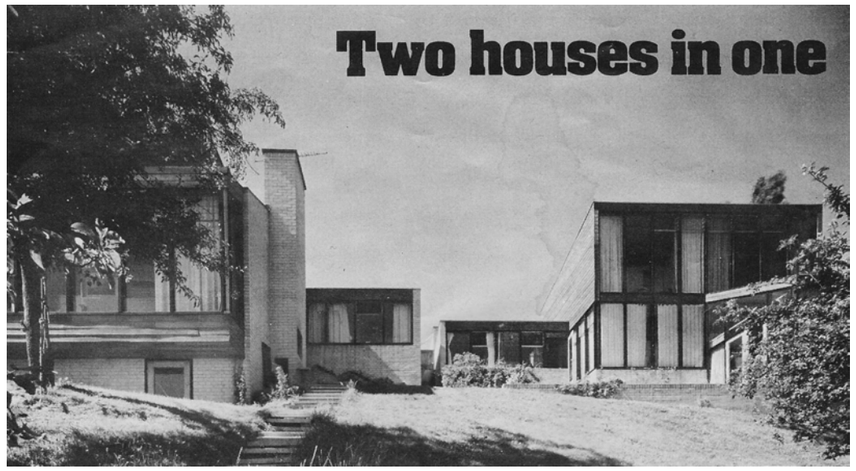
Until its purchase by the current applicant in 2021 the property received no maintenance and fell into extensive disrepair during this seven year period..

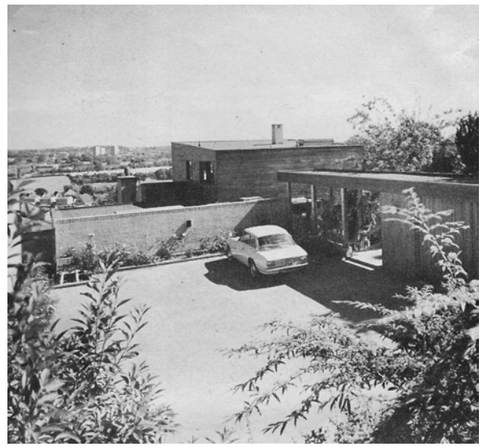
This application seeks a new approval for the refurbishment of the property to its original condition, with improvements to bring the construction quality, energy efficiency and living experience up to 21st century standards.

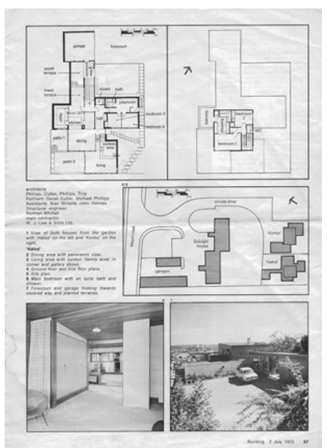
The quality of the original building can be seen in trade magazines published after its completion (pictured opposite), demonstrating that it was a fine example of this period of architecture in layout, form and material quality.

This application seeks to demonstrate that the original home can be salvaged and reinstated, improving the environment for the surrounding properties and retaining the house as an ongoing example of 'mid-century modernist' architecture.

images opposite: excerpts from Building Magazine article 1972 showing original design







1.2 Existing building condition

Purchased by the current applicant in spring 2021, the building was found to have suffered structural failure, water ingress, failing services and extensive damage to all surfaces and rooms. In particular, the additional annex building constructed in the 1990s and original garage structure had collapsed and were a major safety hazard. These structures were demolished during 2021 to ensure the safety of operatives and visitors and allow surveys and structural examination of the main house to be undertaken. The submitted drawings depict these structures before demolition so that proposals may be judged against the original footprint and scale of the house.

The main house is an early example of timber frame construction in the UK, using a plywood sheathed 'open' wall panel system wherever the structure is above ground, over concrete brick cavity and retaining wall construction as it cuts into the sandstone hillside.

When completed in 1970, the property had extensive south facing glazing throughout, seeking to capitalise on the view across the valley (see images in appendix). Many of these were removed subsequently due to the impact of wind and rain on this highly exposed elevation. Additional cladding was added and window sizes were reduced.

The timber frame construction was an advanced construction strategy for the period but the building regulation requirements of that time were met without the use of insulation or internal vapour barrier membranes common in today's construction. South facing aspects of the timber frame are in good condition due to seasonal drying opportunities, however the north facing timber frame elevations of the building had suffered complete structural failure due to a combination of interstitial condensation in humid spaces such as bathrooms. In addition, the failures of the poorly constructed annex added to the building had caused substantial damage to the main structure. 50% of the 1st floor wall structure was reconstructed in 2021 also to prevent further structural failure.

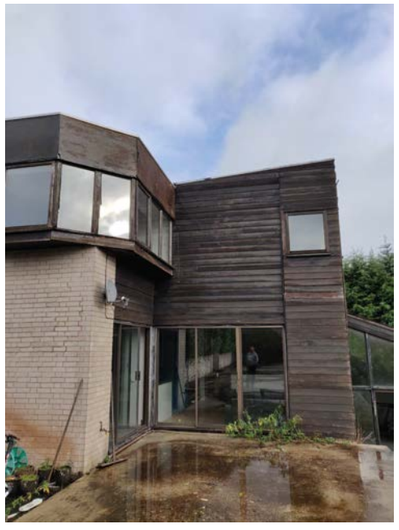
Although the house interior had several original design and material features intact, they had either been damaged by previous interventions or lack of maintenance. All interior surfaces have now been removed in order to expose the original structure and confirm whether refurbishment is possible. This action will also allow for the insulation of the building to current standards.

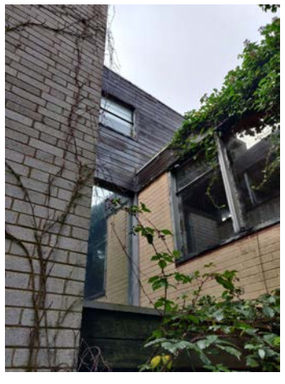
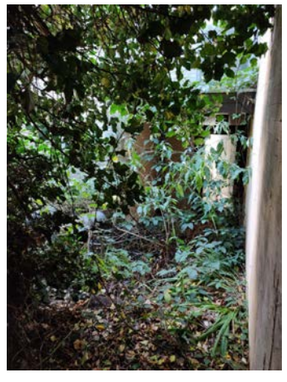
The photographs provided demonstrate the condition of the building at various stages during 2021, indicating primarily the scale and arrangement of the building that the new proposals seek to be judged against.

An application is made due to the need for changes to the structure, part demolition and reconstruction resulting in a minor change to the footprint, plus the adjustment to window positions and sizes proposed in an effort to return the building closer to its original appearance.

images opposite - building condition during 2021



2. Design

Following discussions with one of the original architects and communication with the family who lived in the property from 1970 to 2004, information was made available to help demonstrate the original design of the house. This has been used to inform the new proposals and develop a proposal that aims to respect the original spatial hierarchy, proportions, fenestration and views; whilst improving the environmental performance and weather resilience.

2.1 Use

The property is a detached residential family home with off street parking in the adjacent yard and garage accessed via a shared drive approached from Kirstead Gardens cul de sac.

The original home was a 4 bed property, with 2 children's bedrooms on the entrance level and 2 further bedrooms on the 1st floor. A separate annex was added (see building history) forming a 5th bedroom, living and kitchen space with its own dedicated address and access.

This proposal creates a 4 bed home plus study, integrating the area used by the annex into the main body of the house and adding further living space. The total footprint of the building is slightly increased to accommodate the connection between these two areas of the home.

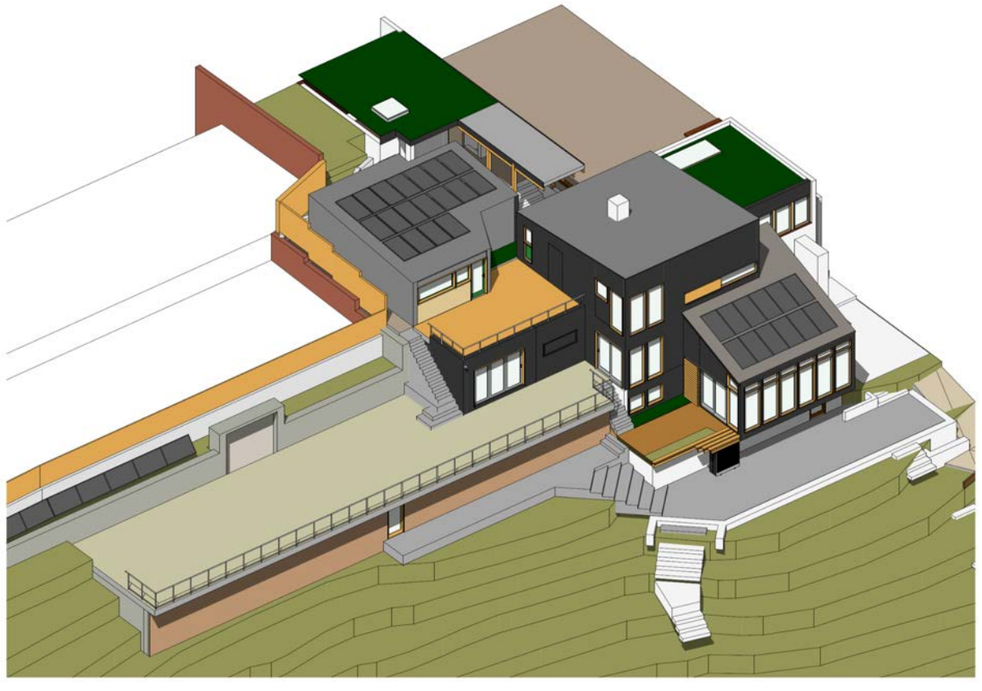
2.2 Layout and Scale

The layout of the building will be reinstated with the same fundamental room arrangements, uses and sizes as the original property throughout the main volume of the house. An additional circulation route and living space has been added to the rear of the property to provide a route to the volume originally taken by the annex, bringing the spaces together as one home.

The vertical scale of the building remains unchanged, with no changes to roof or storey heights. The pitch of the roof over the proposed replacement for the annex has been adjusted to improve the visual integration with the main house and provide additional south facing surface for photovoltaic panels and renewable energy generation. Minor changes to the internal layout include adjustments to the sanitary provision and utility spaces to accommodate renewable energy technologies and heat recovery ventilation systems.

An Air Source Heat Pump is proposed to be installed at the rear of the property, deemed to be the least visually intrusive location.

The previously uncompleted external terrace will be made safe with hand railing and drainage with the addition of typical garden structures such as pergolas for shade and privacy. Original features typical of the period will be reinstated (having been removed by the previous owner), such as the 'conversation pit' situated in the mid-level living area.



images opposite - top: annex subject to demolition | bottom: proposed extension on site of annex

2.3 Appearance

Material proposals retain the original arrangement and palette of the building as designed in 1968, with minor adjustments to improve performance or accommodate contemporary best practice building techniques.

Tectonic legibility of the different volumes that form the house is underlined by the use of masonry to all surfaces that meet the ground or cut into the hill side, supporting the lighter timber frame and clad forms above. This distinction is repeated with new timber cladding finishes applied to all surfaces above the original masonry walls.

An alteration to the cladding detail is proposed, using a dark stained vertical ‘board and batten’ finish in lieu of the original horizontal board, aiming to reinforce the difference between these elements and the lower masonry forms and horizontal brickwork.

Greater unity between the main house and annex space is created by the use of matching vertical timber cladding and fenestration visible on approach to the home, whereas an alternative material finish is proposed for the rear surfaces of the annex to distinguish between the new extension and original mass of the house.

Tall, narrow windows are reintroduced to the property, repeating the original proportions. External solar shading will be provided by the use of external blinds and shutters expected to be lowered across part of the window during the summer months.

Triple glazed high performance windows with a grey metal clad exterior will be installed within natural timber reveals, cills and heads.

All existing brickwork will be cleaned and re-pointed where conditions allow. Should weathering or damage prove too extensive, brick surfaces will be coated in white masonry paint.

Roof surfaces will be a combination of sedum blanket on flat roofs and metal standing seam finishes on pitched roof to the upper storey volumes. The tiled rear roof plane will be re-tiled and incorporate in-set photovoltaic panels.

Where adjustments to window sizes have been made to manage layout changes or reduce overheating, infill panels of cedar shingles will be added to accompany the vertical timber cladding.

The roof covering between garage and main entrance will be reinstated in its original format and scale, with timber cladding integrated into a new garage door entrance. Adjustments to the entrance courtyard will be made to assist with rainwater management and landscaping improvements.

images opposite - rear, side elevation + axo indicating material proposals - see drgs. 450a 10+11

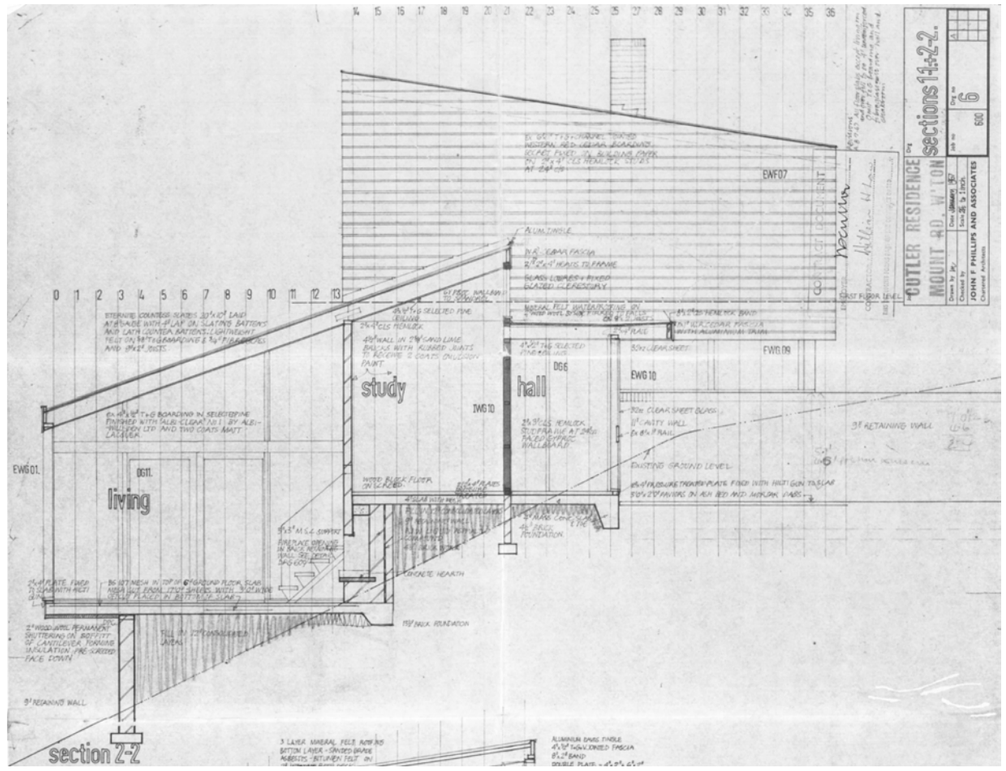
2.4 Construction and energy efficiency

No major alterations to the original primary structure are intended and any proposed changes are predominantly focused on the upgrade and repair of existing walls, floors and roofs. Removal of all internal and external surfaces will allow the addition of insulation as well as wind and air tightness membranes to dramatically improve the building fabric performance. A focus on materials that avoid oil based production will reduce the embodied carbon footprint of the project.

Woodfibre and cork insulation will be installed within and over the timber frame before external cladding is replaced and internal finishes reinstalled. Due to the complex nature of the building form, a variety of products and installation details will be used, resulting in a range of possible u-values. Detailed thermal analysis will be undertaken to optimise the overall performance of the envelope, taking into account the risks of overheating and inform the extent of shading required.

Heat and hot water demand will be met with the use of an Air Source Heat Pump, installed to the rear of the property. Combined with a large thermal store and underfloor heating this method of energy transfer can be between 3 and 4 times more efficient than direct electricity or fossil fuels. Electricity consumption will be offset by the energy generation from an extensive installation of photovoltaic panels to the south facing roofs. Internal temperature and air quality will be further managed by the installation of a Mechanical Ventilation with Heat Recovery system.

image opposite - example construction drawing of neighbouring property, showing timber frame



2.5 Landscaping

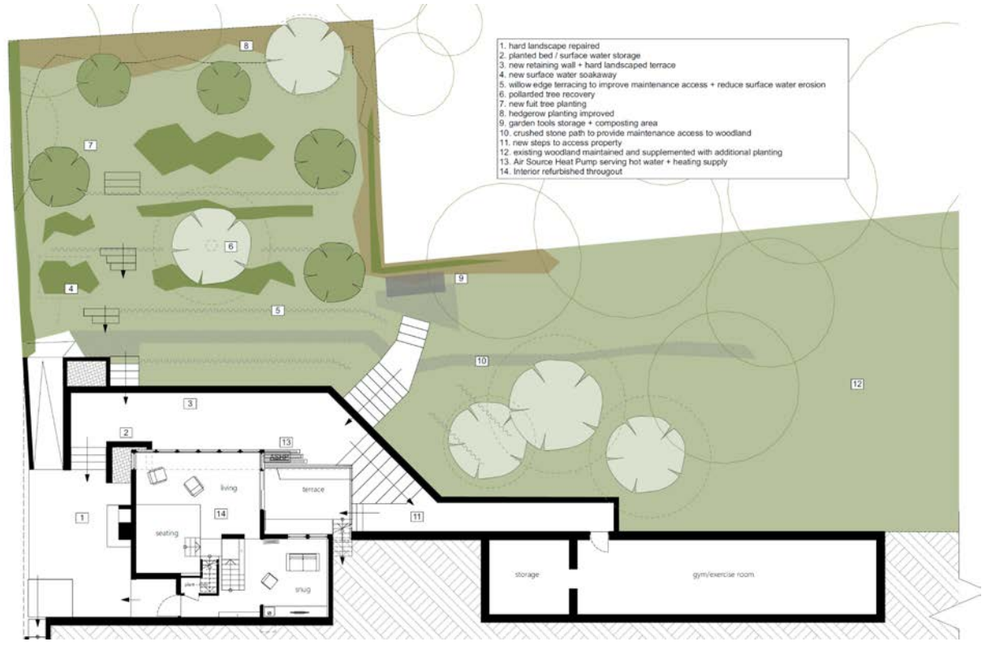
The property includes a substantial wooded garden area, expanded and planted by the original owners, in addition to the history of fruit trees on the site when the hillside served as the orchard for the The Slopes property on Mount Road. Much like the house, the landscape has suffered from extensive neglect and no maintenance has occurred in several years, resulting in the complete dominance of invasive species. Ivy vines had covered most of the ground and smothered all trees causing extensive damage to structures and other plantlife. Most existing trees adjacent to the house had died and were removed for safety purposes following confirmation that roots were compromised or trunks failing.

The proposed landscape remediation will return tree planting across the hillside, using fruit and nut species suitable to support a woodland garden or ‘permaculture’ strategy. Low level native shrubs and plants will be planted on the hillside and newly formed terraces to increase the biodiversity and reduce erosion to the soil from surface water run-off.

The final garden improvements will take some years to reach maturity, but the ongoing use of woodland gardening techniques will ensure the original ecological conditions are returned and the green corridor stretching from this site to the west of the valley ridge is maintained.

Additional tree planting will also assist with the reduction of overlooking to the properties below and improve privacy for all residents. Careful selection of species will be undertaken to ensure the mature height is suitable.

image opposite - proposed terrace and planting improvements - see drg 450a.07



2.6 Access

The property is accessed by vehicle and pedestrian via Kirstead Gardens, a cul de sac off Mount Road, Tettenhall Wood. FInal approach is via a private drive serving Hafod and neighbouring Kontur, via the rear of the Mount Court flats.

Improvements to the drive surface finish will be undertaken upon completion of the proposed works, ensuring good access for visitors, delivery and emergency services. Vehicle turning space is provided by the courtyards in front of both properties, allowing entry onto the public highway in a forward direction.

Due to the nature of the site and original design, no pedestrian access is possible without the use of steps. However, the proposed refurbishment seeks to provide a range of room types and services on the primary entry level of the home, ensuring that a residency would be possible on that floor only if an occupant's mobility was to alter. A power supply will be installed at the main entrance to allow for the addition of a stair lift from courtyard level to door if needed.

Sanitary provision and WC layouts will be provided to current building regulations Part M.

END