

Eldridge Smerin were asked by the owners of the land adjacent to 13 Linksway to act as Architects for the design and construction of a new house on the site, as a single family dwelling for their use. The site benefited from outline planning permission ( reference number 53509/APP/2004/1605 ) for a new detached house with a separate garage block and the owners, who have lived at 13 Linksway for over 30 years, asked Eldridge Smerin to develop proposals for a new house on the site. The aspiration of the Clients was to create a house that is laid out more efficiently, has better natural light, a closer relationship with its garden setting and better suits their family's needs than their current house. They also want something that in its materials and construction addresses issues of energy use, sustainability and environmental impact and has a design integrity that properly reflects the time it was created in. Consent for such a house was sought and full planning permission granted in 2008 ( reference number 53509/APP/2008/1787 ). Planning consent was then granted for the same design of house when consent was re-applied for by Eldridge Smerin in 2011 ( reference number 53509/APP/2011/1053 ), by Andrews Eades in 2014 ( reference number 53509/APP/2014/722 ) and by Smerin Architects ( the successor practice to Eldridge Smerin ) in 2017 ( reference number 25665/APP/2017/346 ) and 2020 ( reference number 25665/APP/2020/1347 ). Smerin Architects have now been asked by the Clients to submit a further planning application, again using the same design of house that has been granted consent previously.

## Background

The site is located on the eastern side of Linksway that lies on the southern fringes of Northwood and forms part of The Copsewood Estate, which is designated as an area of Special Local Character, in recognition of the special relationship between the houses on the estate and its woodland setting. Linksway runs along the eastern edge of the estate and Northwood Golf Course and is a broad road lined either side by mature trees and substantial detached houses. The road was laid out with the rest of The Copsewood Estate in the 1920's when the original houses on the road were built using a variety of architectural styles. 13 Linksway is an Arts and Crafts influenced design in brick with a tiled roof and expressed timberwork to the gables, 15 Linksway is a symmetrical neo-Georgian design also in brick with a tiled roof whilst 11 Linksway is an exercise in vernacular design with painted render elevations typical of the period. More recently planning permission has been granted for 11 Linksway to be rebuilt as a significantly larger house.

The newly created site of 13A Linksway is consistent in size with the other plots on the eastern side of Linksway. The houses have a variety of footprints but conform to a loose building line set well back from the road screened by hedges or railings with generous driveways between. The site for the new house will be 30 metres wide which is consistent with the widths of plots on Linksway, that are generally between 25 and 30 metres wide. The relationship to the boundaries of neighbouring properties to the north and south varies considerably with several houses being set close to the boundary line. All houses are laid out to exploit the extensive views available south-eastwards across the golf course and woodland beyond. A number of houses have been built in recent years on the eastern side of Linksway on similar sites formed from what were originally double width plots. Houses to the western side of Linksway conform to a similar pattern albeit with slightly smaller plot widths reflecting the less desirable outlook westwards across the rest of the estate to Ducks Hill.

The site itself comprises part of what used to be the land around 13 Linksway. The western side towards the road is currently part of the driveway and includes a separate double garage block and gateway onto Linksway. A mature close clipped Beech hedge screens both sites from the road. The remainder of the site has many of the features of a typical suburban garden including a small water garden, an asphalt tennis court and a variety of ornamental trees. The southern boundary with 15 Linksway is defined by a chainlink fence shielded by shrubs with a number of mature deciduous trees adjacent. The area immediately behind the garage block of 15 Linksway is marked by a row of conifers planted to act as a screen between the properties. Although the site is open, much of the site has already been built on in one way or another and is therefore technically not 'greenfield'.

## Organisational Strategy

The strategy for the new house is based on a number of key principles. Firstly to preserve and enhance the natural qualities of the site with its mixture of mature trees, planted boundaries and open grassed areas. Secondly to limit the visual impact of the house when seen from the street, the adjoining houses and the golf course. Thirdly to maximise the views and southerly orientation of the site and fourthly to create a house that is environmentally responsive at a holistic level and environmentally responsible in the choice of materials and construction.

The strategy for the site generally follows the landscape strategy of the scheme already granted outline planning consent. This preserves the existing trees to the perimeter of the site that are generally in good condition. The new house is set 15 metres back from the road and follows the loose building line of the other houses on Linksway. To preserve the green character of the front garden the driveway area is limited to a small area for visitor parking off the main approach to the house which is accessed from a

new gateway off the road. The existing gateway is relocated northwards to provide access to the existing house on the adjoining site. The new house includes basement accommodation for utility areas, plant and garden storage to enable the surrounding garden to remain as natural as possible. A shallow external terrace wraps around the southern end of the house linking the internal spaces directly to the garden. A low garage is discretely set perpendicular to the house and serves the new and existing houses, remaining largely invisible from the road apart from the ridge of the pitched roof.

#### External Appearance

The external appearance of the house aims to be 'in keeping' with the surrounding area when viewed from the road but with subtle architectural details to give it a distinctive quality when seen closer at hand. It follows a number of principles established at the outset of the design process with Hillingdon's Conservation and Design officers; The house is rectilinear in form and has a distinct pitched roof. Openings and areas of glazing are limited in size and framed by areas of solid walling. The elevations are articulated to provide variation and a verticality of emphasis. Materials used are those generally found in the area such as brickwork, render and tiling.

The front and side elevations are predominantly finished in buff facing brickwork with the first floor and partial second floor beneath the pitched roof set in at either end to limit the apparent scale of the house when viewed from the road. Glazed openings to the front are linked to create a series of vertical niches, the proportion of which is echoed in the projecting seating bay which helps terminate the axis of the driveway on the approach to the house. The entrance is articulated by another vertical element, this time formed from frameless glazed panels which help flood the entrance hall with daylight.

The rear elevation has larger areas of glazing facing the rear garden. At ground floor level the dining area off the kitchen is formed from a projecting bay that includes areas of roof glazing to allow daylight into all areas of the ground floor. Bedrooms beneath the pitched roof at second floor level have raised metal clad dormers that animate the tiled roof.

Although the rear of the house incorporates large areas of glazing, the height of the existing trees and shrub planting on the boundaries shields views into and out of the house from the upper levels with the general absence of openings to each end maintaining the privacy of the adjacent properties.

#### Landscape Strategy

As noted earlier the landscape strategy for the site follows that of the scheme already granted outline planning consent. This preserves the mature trees adjacent that are largely confined to the boundaries. The exception to this is the need to remove a modest sized Plum tree currently growing in the Beech hedge to the front of the site to create room for the new gateway. This was shown on the outline consent scheme that included creation of the new gateway in that position.

Arboricultural consultant Patrick Stileman has carried out a survey of existing trees on the site and his report was included as part of the application granted consent in 2008. His detailed assessment of the construction clearances required from the existing trees on the site has identified the need to remove the screen of conifers on the southern boundary which preclude the construction of both the current proposals and outline consent scheme. As they were planted approximately 25 years ago as a grouping to provide visual screening between the properties it is not possible to selectively thin them out and it is therefore proposed to remove them and replace them with new planted screen formed by semi-mature Hornbeams. This would be mirrored on the new northern boundary by a similar new Hornbeam screen. The proposal to remove the conifer screen was discussed at a pre-application meeting on site with Hillingdon's Tree Officer who accepted their removal in principle subject to replacement with a new planted screen. Patrick Stileman visited site in 2020 and re-issued his previous report. It is believed that it is still valid for the current application.

Landscape works would also include new tree planting to the new northern boundary ways to reinforce the sylvan quality of the site and replacement of the existing asphalt tennis court to the rear garden with a lawn. The new driveway which is finished in granite cobble setts would be constructed using no-dig construction with a proprietary high tensile geogrid and aggregate sub-base overlay to ensure that existing tree roots in close proximity remain undamaged. The position of the new house and driveway lies outside the clearance area to the existing trees on the site.

#### Environmental Strategy

The organisation and proposed construction of the house also address the Clients' desire to have a house that is as environmentally sustainable and responsive as practically possible. This manifests itself in a number of ways ranging from the passive aspects of the layout, construction and materials used in the house to the choice of active environmental services systems incorporated into it.

The choice of a linear form with a series of large glazed openings facing east and west coupled with the use of a heavyweight concrete structure and masonry exterior will allow passive solar gain to be maximised during winter months. The high thermal mass of the reinforced concrete structure acts as a temperature stabiliser moderating temperature fluctuations by slowing down heat gain in the summer and limiting heat loss in the winter. This is helped by the extent to which the house is set partially below ground level. Maximising passive heating potential is key to producing a low energy house with 30% of all UK delivered energy currently being used on domestic heating which far outweighs other energy uses.

The use of concrete as a structure and finish to some areas internally, when sourced from a local plant that utilises a proportion of recycled material or blast-furnace waste, helps minimise the embodied energy in the envelope of the building. All materials specified for use on the project would be carefully audited to ensure they have zero ozone depletion potential and where possible are environmentally passive in manufacture and use. Natural materials utilised would be specified from sustainable sources and suppliers with the appropriate accreditation such as the Forest Stewardship Council.

External glazing units would be double or triple glazed and have a thermal coating to the inside of the cavity to assist in reducing their U-Value. All elements of the external envelope of the house would be detailed and the execution monitored on site to help ensure that air leakage and hence heat loss from the house is kept to a minimum.

The above measures seek to reduce the energy consumption of the house and hence its contribution to carbon dioxide emissions into the atmosphere, through its layout and construction. It is intended that the house will also incorporate a number of active energy saving systems to further minimise its consumption of energy and water. The lift tower provides the outlet to a natural ventilation system that ventilates the house using wind pressure and stack effect without the need for mechanical fan assistance. Heat recovery units are used to capture heat from the warm waste air and return it to the incoming fresh air if appropriate.

Internally a low temperature hot water underfloor heating system would be used in conjunction with the areas of thermal mass in the building to maintain comfortable conditions with minimised energy usage. Hot water to this would be supplied by a domestic ground source heat pump system where a sealed loop of pipework buried horizontally or vertically in the ground is used to extract the latent heat present in the ground to provide hot water for space heating as well as use within the house. As well as reducing the energy consumption and resulting carbon dioxide emissions for heating, the ground source heat pump system can also be utilised in reverse to provide cooling if required. All the plant required for this would be located in the basement.

It is also planned to reduce water consumption by the house through the use of a grey water system where bath and wash-hand basin water is treated, stored and re-used to flush toilets. A rainwater harvesting system can also be incorporated to collect rainwater run-off from the roofs and driveway to supply the grey water system or store for irrigation of the landscape. The garage would have a sedum green roof system covering which helps control temperature fluctuations whilst also minimising site water runoff and benefiting the area's ecology.

The organisation of the house is such that all areas benefit from good levels of natural light, which will reduce the need for artificial lighting during daylight hours. Artificial lighting will be designed to maximise the use of low energy fittings with low wattage fluorescent or low voltage lamps. External lighting where used will be selected to avoid creating excessive light levels or light disturbance to neighbouring properties. All lighting internally and externally will be linked to a central lighting control system which can be programmed with a variety of lighting patterns for use throughout the day and night to help minimise artificial lighting whilst maintaining comfortable conditions.

The lighting control system would in turn be linked to a simple building management system that will bring together all the active systems in the house. The building management system monitors environmental conditions via sensors internally and externally and activates the appropriate system in response to changes within the house or the external conditions. As well as being programmable the system also has a degree of intelligence and is able to optimise conditions whilst minimising energy use.

#### Drainage

The Hydrogeological Assessment submitted with the current application confirms that the proposed basement will not result in flooding or ground instability as required by Policy DMHD 3 for basement development within Local Plan Part 2 Development Management Policies (2020). BRD Environmental prepared the report initially in 2014 and subsequently re-issued it in 2020 after an additional monitoring visit. They have confirmed that the findings and conclusion of the report remain valid for the current application.

## Accessibility

The layout of the new house enables wheelchair access to the key spaces on each level via an internal passenger lift. The ground floor entrance area includes a guest WC and cloakroom of sufficient size for wheelchair use and the entrance is linked to the external driveway by a shallow ramp with level access to the road.

## Long-term Maintenance

Minimising the maintenance requirements of the proposed house has also been a factor in its design. As well as auditing materials and finishes for their environmental properties, it is the intention to produce a building constructed from materials with a long inherent maintenance free life. The external brickwork, render and tiling and areas of fairfaced concrete internally need virtually no maintenance. Glazing and metalwork items would be self-finished or factory coated and apart from periodic cleaning should have a maintenance free life in excess of 30 years. Timber framing and cladding would be durable and with the addition of an impregnated sealer coat would weather naturally without requiring specific maintenance.

As a practice we give all Clients of newly completed projects a manual setting out maintenance recommendations for all elements internally and externally. Coupled with record drawings of a project this is available to be passed to any future owners.

## Consultations

During the development of the original scheme the proposals were discussed with members of Hillingdon's Conservation and Design team. The final form of the scheme reflects design principles established at the outset and a number of the comments made as the design developed. As noted above the landscape strategy was also discussed with Hillingdon's Tree Officer during a site visit.

## Summary

The combination of clear, simple organisation and massing with carefully detailed high quality finishes seeks to make the new house a sufficiently well mannered neighbour to those in the surrounding area that whilst being an honest product of its time also reflects the materials and features predominant in the area, as required by Hillingdon's UDP of development in areas of Special Local Character. In scale and massing terms it is consistent with the other properties on Linksway and is somewhat smaller with a more comfortable relationship with its site boundaries than a number new houses granted consent in recent years. This reflects the Clients' wish to have living spaces with a clear contemporary feel that are of good quality, environmentally sensitive and relate well to the site and its landscape setting. The Hydrogeological Assessment submitted with the current application also confirms that the proposed basement will not result in flooding or ground instability.