Redwood, Tunbridge Wells, TN2 4RP

Design, Access and Planning Statement

Revision A: 11th April 2022

Document Number: 2103-DASPS-REVA

Studio Bloom | Architecture + Design

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1.0 INTRODUCTION

This document is the Design & Access and Planning Statement for the proposed application at Redwood, Sandown Park, Tunbridge Wells, TN2 4RP.

The proposal is for a new 4 bed eco dwelling, with separate garage, new vehicular access and driveway. The proposed scheme is nestled in and around the existing trees on site and the landscape forms an important and intrinsic part of the design. The main dwelling is arranged over two floors in an H - shaped plan, forming open courtyards and framing views to the north and south.

This statement sets out the site conditions and context to the proposal and the relevant planning policy and history.

This application is a update with a handful of revisions previously consented scheme 20/00073/FULL:

- Increase in first floor GIA by 25.7 sqm to create a more generous entrance hall and first floor landing. The master bedroom is relocated to the north east wing of the dwelling to create more privacy to and from existing neighbours at Tanners.

- Decrease in garage footprint by 10sqm and over-all ridge height reduction by 1.4m, significantly reducing the bulk and mass of this building.

- The levels of insulation have been upgraded and an MVHR system has been introduced to improve energy conservation standards. To accommodate a deeper floor void at first floor for the MVHR ductwork and due to the increased insulation to the ground floor slab, a small rise in the over-all ridge height of the proposed dwelling is required, approximately 185mm.

- This proposal seeks to remove existing c grade trees to the existing west boundary [T4 & T5] and proposes a new hedge [in place of existing close-board timber fence] along this boundary as a replacement and to further green Sandown Park. The quality of this proposed west boundary will greatly exceed that of the existing condition.

- A new and comprehensive landscape scheme has introduced significant new planting and a new rainwater drainage scheme. The proposed SUDs and attenuation scheme seeks to create a more naturalistic, sensitive attenuation of rainwater on site, removing the need for plastic attenuation crates beneath the proposed dwelling and instead augmenting the existing contours and levels of the site to create natural holding basins for flood water.

- There are some revised external window and door positions through out the scheme.

- Introduction of standing seam metal cladding to the central block of the dwelling to create additional interest to the north & south elevations.

Alongside this Design & Access Statement the following documents are submitted:

- General Arrangement Drawings describing the scheme | Studio Bloom
- Tree Survey, Arboricultural Report & Impact Assessment | Ben Larkham Associates
- Structural Report, foundation design & method statement | Braemar Engineering
- Drainage & Landscape Proposal | Robert Bray Associates

2.0 THE SITE

Site Location
The site is located off Sandown Park at Tanners, Pembury Grange, Tunbridge Wells. The proposed site has been formed by a subdivision of the adjacent garden at Tanners to create a new residential address to the north end of the site. The application site has a number of well established trees within it and therefore the proposed design is such that the elements of the new dwelling nestle carefully between them.

Site Area
The area of the application site is approximately 1,000sqm. The site rises from its northern most boundary to its southern boundary with Tanners. There is a gentle fall across the site as well from west to east between Sandown Park & neighbours Clochedell,

Site Boundaries
The application site lies to the east of Sandown Park. The west boundary with Sandown Park, north boundary to an empty woodland site and south boundary to neighbouring dwelling Tanners consist of 2m close-board fencing, with double gate access within the west boundary. To the east boundary with neighbouring garden at Clochedell is a 1.3m post and rail fence, planted with 4m high ever green hedging.

Site Character
The site is characterised by the mature trees that are dotted and spaced within it. The species range from an A-Grade striking Giant Redwood, to B & C Grade Sweet Chestnuts, Beeches, Oak, Larch and Holly.

The backdrop to the perimeter is generally green and leafy. The site is well screened to the west, north and east by fencing, hedges and trees.

The Trees
The site is currently covered by a TPO Woodland Order.

A tree survey has been carried out by Ben Larkham Associates and is appended to this application along with a report and impact assessment.

The proposal considers the removal of the following trees: T4 Yew [C1 grade] and T5 Holm Oak [C1 grade].

Furthermore the arboriculturalist has been involved closely in the design development of the project; from pre app stage, to full planning and will remain involved to safeguard the trees during construction. The detailed arboricultural report forms part of this application.

3.0 PLANNING STATEMENT

Planning History

20/00073/FULL | 1st May 2020
Division of an existing residential garden to create and establish a new 4 bed dwelling house with vehicular access and separate garage.

Planning consent was granted for a scheme exceedingly similar to that of the current application following supportive pre app consultation 18/03919/PAMEET.

Planning Policy

The relevant local policies and guidance are:
Tunbridge Wells Local Plan 2006
EN1, EN13, H5, TP4, TP5 & TP9
Tunbridge Wells Core Strategy 2010
CP1, CP4, CP5, CP9
Site Allocations Local Plan 2016
NPPF

There are no specific on-site policy designations but land to the north is designated as Green Belt and Kent Special Landscape Area. The site is covered by a woodland Tree Preservation Order.

EN1 Development Control Criteria

i) Nature and intensity of the proposed use.
The development is for a single detached family dwelling. Sandown Park is an area of medium density residential housing with a mixture of detached family housing ranging from a large manor house at Pembury Grange to detached and semi detached dwellings ranging from 1.5 - 2 storeys in height. The proposed footprint is 19% of the site, which is commensurate with the density of neighbouring house at Tanners and constitutes a low density development approach to the site.

ii) Residential amenities of adjoining owners.
As the site plan indicates the closest neighbour to the east is 40m from the centre of the proposed site, with the neighbours across the road at Sandown Park being 50m from the application site. The nature of the proposal is such that there will be no overshadowing effect on any of these neighbours and window locations and positions have been considered to minimise any effect of overlooking to maintain privacy between existing and proposed dwellings.

Clochedell
The adjacent dwelling to Tanners is within the closest proximity to the application site, however there is still a 40m separation distance between the proposed site and the dwelling house at Clochedell. There are mature shrubs to the boundary providing 4m high screening between the properties and a couple of Cyprus pines on the boundary that screen the upper floors of Clochedell on the boundary side of the dwelling with Tanners.

Tanners
The neighbouring house at Tanners is the second closest property to the application site and this dwelling is orientated predominantly to the north, whilst the application site is rotated to the north-east - avoiding any direct overlooking between the two properties.

67-71 Sandown Park
These three plots form the neighbouring dwellings to the west along the entire length of the proposed application boundary. These dwellings sit within 45-50m radius of the application site. The existing dwellings are set back from the road with front gardens and are screened by mature hedges and a line of mature birch trees within the pavement and further mature trees to the private gardens themselves.

iii.) Design of the proposal
The design of the proposed dwelling is detailed further in this application statement. However suffice it to say that the proposal is of a similar scale to the dwellings in the surrounding neighbourhood. The orientation of the proposal is incredibly site specific and designed to nestle around the existing mature trees on site. The form of the proposed dwelling is a series of pitched roofs expressing the individual living functions within, the proposed materials are to be that of silvered larch and grey metal roofing to blend the dwelling into the natural muted tones of the surrounding site.

The layout of the dwelling makes the best use of daylight available in the most open part of the site. The design places the living areas to the south, with glazed openings to allow passive solar gain, but also screening elements to prevent overheating in the summer months.

iv.) Loss of features
The proposal has been carefully design to weave its way around the A & B class trees on site.

Replacement planting and hedging is to be introduced within the site and specifically to the west boundary to maintain and enhance the leafy green street scene to Sandown Park [see landscape and arboricultural reports for detailed information on landscape proposals].

v.) Nature conservation
A phase 1 habitat and ecological survey has been undertaken previously and shows that the proposal will have no serious adverse effect on the flora and fauna of the site. The proposed dwelling is such that it touches the ground very lightly, situated on screwpiles with a proposed SUDs solution to ensure that any rainwater falling on the roof of the dwelling is captured and returned to the site to keep soil conditions the same as they are currently. [see landscape report for SUDs scheme]

vi) Security
The proposal follows secure by design principles.

vii) Access
The proposed building steps gently with the levels on site to create a series of spaces that hover above the ground as there can be no excavation of foundations or footings, therefore the building has to respond to the natural levels of the site. Each step in the building has been designed to be accessible in-line with Part M of the building regulations.

3.1.2 EN13 Trees & woodland protection
The proposed application site is classified under a two TPOs (references 011/1981 and 013/2003) - the latter being a Woodland TPO. Each of the trees on site have been surveyed and analysed by the arboriculturalist. This analysis has directly informed which trees may be removed on site and which are to be retained. Further more the impact of the proposed dwelling on the trees to be retained has been considered both in terms of the detailed protection during the construction process as well as on-going maintenance and long-term health of the trees. This is all detailed further in the application and separately appended arboricultural report.

3.1.3 H5 Residential development within Limits to Built Development
The site lies within the Limits to Built Development of Tunbridge Wells and infill development of this type is acceptable and in-line with policy.

3.1.4 TP4 Access to road network
A single additional dwelling will not have a huge increase on the intensity of traffic on this quiet no-through road. Vehicle access to the site is located at the north end of the site with good visibility in both directions. There are only three properties along Sandown Park, to the north of the proposed dwelling, therefore traffic coming from this direction will be minimal.

3.1.5 TP5 & TP9 Vehicle and Cycle Parking
The proposed parking provision in in-line with KCC guidelines on parking for suburban residence, Creating 2 side by side parking spaces within an enclosed garage space. Secure cycle parking is also provided within the garage.

3.1.6 CP1 Delivery of Development
The proposal lies within the LBD and is therefore suitable for development at this scale.

3.1.7 CP4 Environment
The proposed development has been design to sit lightly on the site, through screwpile foundations the building is raised above the ground, respecting the existing tree roots. In addition to this the proposal is for the replacement of the closeboard fence to Sandown Park with a beech hedge, providing further greening to the streetscape as well as additional habitat for wildlife.

3.1.8 CP5 Sustainable Design & Construction
Sustainable methods of energy generation are proposed (air source heat pump). The foundation design requires no excavation and removal of site spoil. The main construction & cladding materials are FSC timber, with high levels of thermal insulation proposed. The orientation of the proposal allows for passive solar gains.

3.1.9 CP9 Development in Royal Tunbridge Wells
As the largest settlement in the Borough, Tunbridge Wells is a focus for new development, which should aim to preserve its special character. This proposal is for a contemporary and sustainable piece of architecture, very site specific and therefore creating an exemplary method of house building in Tunbridge Wells.

The policies of the Government's National Planning Policy Framework (2018) are a material consideration that is capable of overriding the development plan. Relevant sections that the proposal adheres to include:

3.1.10 NPPF S2 Achieving sustainable development
Paragraph 11(d)(ii) is engaged because TWBC cannot currently demonstrate a 5 year supply of housing land. Development should be permitted unless any adverse impacts of doing so would significantly and demonstrably outweigh the benefits.

3.1.11 NPPF S4 Decision Making
LPA's should approach development proposals in a positive and creative way, work proactively with applicants and seek to approve applications for sustainable development where possible.

3.1.12 NPPF S5 Delivering a sufficient supply of homes
The government seeks to significantly boost the supply of homes, encourage people wishing to commission or build their own homes and support the development of windfall sites within existing

settlements for homes. LPA's should provide a minimum of five years' worth of housing or specific deliverable sites. TWBC are currently unable to do this.

3.1.13 NPPF S8 Promoting sustainable transport
Development should only be prevented or refused on highway grounds if there would be an unacceptable impact on highway safety or the residual cumulative impacts on the road network are severe.

3.1.14 NPPF S11 Making effective use of land
Promotes and supports the development of underutilised land and achieving appropriate densities.

3.1.15 NPPF S12 Achieving well-designed places
Developments should function well, be visually attractive, be sympathetic to local character, have a strong sense of place and optimise the potential of the site. Great weight should be given to outstanding or innovative designs which promote high levels of sustainability or help raise the standard of design more generally in an area, so long as they fit in with the overall form and layout of their surroundings.

3.1.16 NPPF 15 Conserving and enhancing the natural environment
Biodiversity should be protected and enhanced.

3.1.17 Conclusions
This is a sustainable development location within the limits to built development and not covered by any special policy designation. The development of housing on small sites and particularly of self-build projects should be encouraged. The contribution of these individual small sites towards meeting the currently deficient housing land supply is important.

The site lies within a residential area characterised by detached dwellings within individual plots. The proposed dwelling fits well within this local character and will not cause undue harm to residential amenities of neighbouring properties.

This proposal has been formed through a "tree-led", sensitive, innovative and tailored design approach with the aim being to mitigate any adverse impact upon the trees to an acceptable level. This principle is further explained in the following document.

4.0 THE PROPOSAL

The proposal is for a detached contemporary dwelling, arranged over two storeys, it sits sensitively within the existing trees on site, creating a connection between the internal living spaces and the external living spaces of the unique woodland garden.

The main dwelling is formed around an H-shaped plan, creating an open courtyard to the north around a long stemmed Oak - T7 and an open courtyard to the south, addressing the magnificent Redwood - T1 around which the living spaces are arranged.

The garage forms a separate single story building and is connected to the main house via a boardwalk that weaves through the woodland.

Ground Floor Layout

A Tree Led Design
The dwelling nestles in-between the beautiful mature trees of the site. The circulation through both the building and around the site create a series of moments of containment and exposure to the surrounding woodland.

Privacy | Introspective Layout
The layout of the house is very introspective, setting up views within the woodland site and keeping the gaze away from neighbouring homes.

Specific Openings
Skylights open up views to the canopies, with large glazed openings to the south and contrasting slot windows to frame specific key views to the north woodland.

First Floor Layout

Vaulted Roof Spaces
The first floor of the proposed dwelling occupies the roof-space of each pitched form. The reason for which is two fold. Firstly it enable skylights to directly connect the internal spaces with views of the tree-top canopies. Secondly it enables the dwelling to keep a lower ridge and eaves line, essentially the proposed massing is for one and a half storeys as opposed to two full storeys plus attic/ roof. This approach is in-line with the dwellings at Tanners and Clochedell, whose first floors both occupy roof space with dormers and skeilings.

Roof Layout

Pitched Roofs
The proposed roof forms are pitched to help shed and deflect any falling leaves and branches from the overhead trees.

Materials
The proposed material for the pitched roof elements is a standing seam metal cladding in a grey colour finish. Standing seam metal provides a resilient surface to leaf fall and will help to deflect any falling twigs or small branches.

Site Footprint

Site Areas

The proposed footprint of combined dwelling & garage is 180 sqm within a 956 sqm plot, representing an acceptable site density of 19%.

Building Location
The application site has a number of mature trees on it, the most significant of which is a Giant Redwood [T1] located towards the south of the plot. The existing trees on site have informed the development of the proposal, both in the location, orientation and massing of the proposed dwelling.

The new dwelling is proposed just to the north of centre of the site, its location is to encroach minimally on the Root Protection Zone for T1 and is nestled under and looks out onto the main trees to the north of the plot.

Massing and Volume

The proposed form of the dwelling is that of simple pitched roof volumes arranged in an H - shaped plan form, creating an open courtyard to the north around oak tree T7. This courtyard is mirrored to the south creating a semi- enclosed external space, with all three of the social living spaces within the house connecting and communicating across this outdoor space. The garage is a separate building and located to the north of the site.

The building steps in relation to the levels on site, generally stepping down across the site to the east and north. The dwelling must step with the site as its foundations are formed of screw piles which gently lift the building off the ground so as to cause minimal effect to the existing network of tree roots that run under the site.

Materials & Appearance

The proposed materials are naturally finished requiring minimal maintenance, which is particularly important given the number of deciduous trees on site.

Cladding
The proposed cladding material for the new dwelling is natural larch boards which are proposed to silver naturally over time, the warm grey tones of the timber sitting well amidst the brown, grey tones of the existing tree bark on site.

Roofing
The proposed roofing material is standing seam sheet metal. Sheet metal has been chosen as a robust material to easily shed leaf fall and to provide a robust skin against any stray branches that may fall from the overhead canopies.

Flat roofs have been avoided and the gutter detail is such that leaves won’t get caught, allowing rainwater to flow freely.

Decking
Decking or boardwalk is proposed for external amenity areas and connecting walkways through the woodland. The boardwalk material is proposed as a composite to ensure a non slip and durable surface within the woodland environment.

Site Specific Responses

Foundation Design & RPA

The proposed foundation design is by Braemar engineering; following a geotechnical site investigation, coupled with extensive knowledge of the root protection areas on site and consultation with the arboriculturalist. A screw-pile foundation system with steel ring beam and light weight EPS beam and block flooring is proposed beneath the building.

The screw-pile system has been designed with a one meter tolerance to enable the piles to be flexible in positioning when it comes to placing them on site. This tolerance will ensure that if a major tree root is found during the drilling of the pilot hole the pile can be repositioned within a meter of this location to avoid any major roots. [see structural engineer's drawings for more information]

Screw-piles, blocks and beams are a dry fix foundation solution, negating the requirement for concrete to be poured on site, which in turn removes any concern for leachate from cementitious materials.

Construction Process around RPA & Existing Trees

The consideration for the protection of the trees and their associated RPAs extends to the process and method of construction to include the following:

Protection of Tree Bark

- Prior to construction commencing the trees on site will be protected with carpet wraps to the circumference of the trunks - up to first floor level, with protective fencing to the perimeter of the working construction area to keep construction vehicles and materials away from the base of the trees.

Material storage

- Materials are not to be stored within the RPAs where possible, to avoid compaction of the roots. However where materials are to be stored within the working areas a scaffold system is to be erected for a temporary storage platform, designed to for minimal compaction.

Cranes & vehicles moving across site

- Impact matting required
- Spreaders required to the outriggers of the spider cranes that are required for the screw-piling

Scaffolding

- Spreaders required to the base of all scaffolds and towers during the cladding process.

Construction Method

The proposed construction method for the main shell of the house is a highly insulated series of SIP panels, clad in larch and standing seam steel.

Materials and sheet panels are to be carried through site where possible or through the use of the spider crane, suitably supported to minimise ground compaction at all times. The retained arboricultural consultant will make unscheduled inspections throughout the build process to ensure tree protection measures are being maintained.

Drainage and Water Attenuation

Dealing with the drainage and water attenuation on site is an integral aspect of the proposal. The possibility for rain water storage is minimal on site as the water must be returned back to the ground to keep the existing trees hydrated. However the combination of the proposed dwelling coupled with heavy rainfall

must be considered to avoid flash flooding or unattenuated surface water. The proposal therefore seeks to integrate the drainage and attenuation into the design of the dwelling and its landscape.

Tree Irrigation
The existing trees on site must remain well irrigated, therefore the rainwater that falls onto the new roof-scape of the dwelling is proposed to be taken via gutters and down pipes underneath the raised footprint of the building. The rainwater will be held in natural swales by introducing earth berms along the existing contours of the site topography to collect rainwater. This rainwater will seep back into the ground at a natural rate. This naturalistic scheme provides a no-dig solution without the introduction of tank membranes or attenuation tanks. [see landscape report for further detail]

Landscaping

This proposal is intrinsically about the connection of the dwelling to its site. Therefore the landscape design is as important as the design for the building. See RBA's landscape report for further detail regarding the landscape design.

The landscape proposal includes:

- Naturalistic drainage/ SUDs proposal
- Permeable driveway/ vehicular access
- Soft/ green boundary treatments
- Composite deck & board walk access

Sustainability

The proposed dwelling will comply fully with Part L of the Building Regulations. The driving concept of this 'woodland dwelling' has sustainability at the heart of its design.

Screw-piles
In terms of local environmental impact screw-piles provide minimal impact and intrusion on the site, lifting the dwelling off the woodland floor, enabling rainwater to permeate beneath the dwelling and not digging and filling deep trenches with concrete to form the building foundations.

The Shell
Heat and energy conservation is one of the most efficient methods of creating a sustainable building. The proposed envelope has been modelled to test its efficiency and to explore the best levels and combinations of insulation, materials and solar shading.
The proposed structure is highly insulated SIPs construction, sheathed internally with an additional layer of insulation to avoid cold bridges. The SIPs will be specified from a certified sustainable source. EPS blocks are used to form the ground floor slab - a light weight, insulative material that is sheathed internally with additional insulation.
The structure has been modelled using the "Passive House Planning Package" software to achieve levels of insulation and airtightness necessary to achieve the Association of Environment Conscious Building (AECB) standard.

Cladding
The proposed larch cladding will also be sustainably sourced with a natural finish. The standing seam material to the roof and two of the elevation is to be a coated steel: GreenCoat® products feature a bio-based coating which uses a substantial portion of Swedish rapeseed oil instead of traditional fossil fuel oils.

As the rainwater is being put back into the ground, a coated steel is preferable to Zinc to avoid toxins being washed into the soil.

Heating

The proposed method of heating this dwelling is through the use of a sustainable air-source heat pump, which is integrated into the MVHR unit to provide comfortable fresh air though out the dwelling. There will be no gas connection to this dwelling.

Orientation & Solar Gain

The proposed dwelling is orientated such that the main living spaces are south facing, with large triple glazed openings, allowing solar gains to these spaces during the colder months of the year. During hotter summer months the existing tree canopies will provide shading as well as an externally fixed louvred canopy that can double up as a pergola, softening the courtyard edge.

Daylight

The proposed site is very shaded by trees during the summer months when the canopies are in full leaf, in the darker months the trees will lose their leaves and the dwelling will receive more daylight. However good levels of light are important to achieve within the dwelling, therefore vaulted ceiling and relatively large opening are proposed to increase the sky angle and therefore the amount of light penetrating the building.

5.0 ACCESS

Vehicular Access

A drop-kerb and new crossover is proposed to the north end of the site. This is to enable a new driveway and garage to be located here.

The site plan indicates adequate vision splays from the proposed driveway to the road. Two spaces are located within the garage, undercover and protected from leaf fall. A further three visitor spaces are achieved on the driveway in-front of the garage also.

Pedestrian Access

There are two key pedestrian access points within the scheme. The main access is off Sandown Park via a stepped boardwalk providing access to the main house. The second access is a less formal one, linking from the driveway again via stepped boardwalk to the rear utility door.

Secure cycle storage is proposed to the garage to encourage sustainable transport, as the Pembury Road has a dedicated off road cycle lane.

Safety and Security

The scheme has been carefully considered with security in mind. The site is divided into semi public and private space. Carefully placed lighting will ensure the site is well lit in winter months, with all lighting fixed downward so as not to disturb wildlife overhead and within the trees.

Refuse and Recycling Provision

The proposed scheme incorporates an enclosed bin store adjacent to the driveway for easy collection and away from habitable areas of the dwelling. This store incorporate three bins, one for refuse, one for recycling and one for food waste. The store is adequate for any future introduction of additional refuse bins.

Internal recycle and refuse storage will also be provided within the kitchen/ utility layout of the dwelling.

6.0 SUMMARY

This application is for a 4 bed eco dwelling to a woodland garden site adjacent to Sandown Park Tunbridge Wells. The dwelling is very similar to consented scheme 20/00073/FULL, but seeks to deliver a building with higher levels of insulation and incorporation of sustainable materials and technologies along with lower levels of site and environmental impact.

The landscaping, drainage, RPA impact and replacement planting scheme are all amended in this proposal to be less impactful, more sensitive and represent a lighter touch approach.

The overall ridge height of the dwelling has increased slightly to account for a greater build up of insulation to the ground floor slab and a deeper first floor construction to accommodate the ductwork for the MVHR.

The footprint of the overall built form is slightly decreased - due to a more compact garage proposal, however additional GIA is created at first floor over what was originally a single storey dining room.

The planning policy, guidance and addressing of site constraints are all still in alignment with those presented and satisfied in consented scheme 20/00073/FULL.