

PART NINETEEN

DESIGN STATEMENT

Proposed New House of Exceptional Design Quality



Design Statement

Proposed New House of Exceptional Design Quality

1.0 Introduction

- 1.1 This is a full application submitted to Mid Sussex District Council for the erection of a single dwelling and its associated infrastructure of exceptional design quality under the policy provisions of paragraph 84 (bullet point e) and 139 of the National Planning Policy Framework (NPPF 2023). Located at Caldyne Park, Turners Hill Rd, West Sussex. The site of this application is located on the southern side of Wallage Lane.
- 1.2 This Design Statement has been prepared to accompany this application, exhibiting the proposal's conformity with NPPF policy paragraph 84 (bullet point e). In that, it proposes a dwelling that would help raise the standard of design, reflecting the highest standards in architecture, and significantly enhance its immediate setting, benefitting the defining characteristics of the local area.
- 1.3 Additionally, significant weight should be given to the proposal as it satisfies the NPPF policy paragraph 139 (bullet point b). In that, the dwelling reflects an innovative and outstanding design that promotes high levels of sustainability and will raise the standard of design more generally in the area, which unifies with the overall form and layout of its surroundings.

2.0 The Site & Surrounding Area

- 2.1 The landscape and design proposals have been informed by a detailed and rigorous site analysis. The key to good design, which fulfils the Council's objectives, is not only to provide for the needs of the occupants but also to respond sensitively to the characteristics of the site and its surroundings. These characteristics will influence the dwellings siting, form, scale and landscaping. There are a number of components of good design and achieving high quality design, as follows:

- **Site Appraisal** - Maximum benefits from the site and its features can only be obtained if a full survey of the site and its setting is carried out. When the context and characteristics of the site are fully understood, a design can evolve which reflects the character of the locality, thereby enabling the development to be readily integrated into the environment.
- **Site Layout** - New buildings should make a positive contribution to the special quality of the area and their setting.
- **Site History** - An understanding and acknowledgment of the sites history is essential for the development of an integrated and progressive proposal.
- **Massing and Form** - The form and massing of new buildings is one of the most important factors in the successful integration of new houses in established settings.
- **Materials** - Choice of materials should reflect and reinforce the character of the area.
- **External Appearance** - New buildings should be well proportioned. Genuinely creative and innovative designs should also be attractive. Contemporary designs, reinterpreting traditional forms and using local materials creatively, can add to the richness and interest of the area.

- 2.2 The application site extends to approximately 5.8 hectares (14.3 acres) and is located in a predominantly wooded countryside, to the east of Crawley Down. The site lies within the **Parish of Cophorne**, within the administrative jurisdiction of **Mid Sussex District Council**, which in turn lies within the County of **West Sussex**. The Site is just outside the High Weald Area of Outstanding Natural Beauty which otherwise dominates the rest of Mid Sussex District Council.
- 2.3 The site is an irregularly shaped parcel of land located on the southern side of Wallage Lane and benefits from two established vehicular entry points. The main vehicular access is provided from Turners Hill Road to the west and secondary entry point is from Wallage Lane to the north. The junction of these two roads is to the west of the site. The mouth of the access is sufficiently wide and deep enough to enable a vehicle to park off the highway before entering through the gates and into the site. On exit from the site, visibility is good in both directions.
- 2.4 The Landscape setting around the site is predominantly woodland interspersed with gently undulating medium to large scale agricultural countryside. The site is predominantly wooded whilst enjoying open areas or glades. There are a few sporadically located residential dwellings and commercial uses. The site sits within an area of ancient woodland and was formerly used as a MoD fuel storage depot .

The key landscape characteristics of the area are as follows: -

- 2.5 **Woodland** - Sussex is one of the most wooded parts of lowland Britain with ancient woodland covering approximately 39,000ha (10%) of the county. Bluebell woods associated with coppicing, open wood pasture associated with deer parks and the small Wealden woods in ghyll valleys are a key part of Sussex's distinctive and varied landscape. A great extent of interconnected ancient woods, steep-sided gill woodlands, wooded heaths and shaws, generally in small holdings with extensive archaeology and evidence of long term management.



Woodland

- 2.6 **Routeways** - Ancient routeways in the form of ridge-top roads and a dense system of radiating droveways, often narrow, deeply sunken and edged with trees, wildflower-rich verges and boundary banks

- 2.7 **Settlements** - A very high density of dispersed historic settlements of farmsteads and hamlets with late medieval villages founded on trade and non-agricultural rural industries. A dominance of traditional timber-framed buildings with steep roofs often hipped or half-hipped and an extraordinarily high survival rate of farm buildings dating from the 17th century or earlier.



Settlements

- 2.8 **Field and Heath** - Small, irregularly-shaped and productive fields bounded by hedgerows and small woodlands predominantly of medieval origin and managed historically as a mosaic of small agricultural holdings typically used for livestock grazing. Distinctive zones of heaths and inned river valleys



Field and Heath

- 2.9 **Ancient Woodland** - includes 'ancient semi-natural woodland' mainly made up of trees and shrubs native to the site, usually arising from natural regeneration. The real value of ancient woodland is what's hidden beneath the leaf litter. Ancient woodland soils are unique, rich in nutrients and still have the original layers laid down by centuries of falling leaves. They've developed without disturbance from ploughing or chemicals and are alive with fungi, insects, microbes and worms.

- 2.10 Over time, the creatures and microscopic life forms living in these soils have developed close-knit communities and relationships that we are only just beginning to discover and understand. Woodland floor plants have also evolved alongside these communities, often coming to depend upon them for survival. Some orchids, for instance, rely on certain kinds of fungi for nutrients, and in some cases their seeds won't germinate without their presence.
- 2.11 In addition to the wider landscape characteristics, the site analysis has considered the characteristics of the site and immediately surrounding area. The site itself is dominated by ancient and more recent woodland but with clearings and glades scattered amongst it, presenting opportunities for sunlight and daylight penetration and for locating a new building without harming the landscape character.



Ancient Woodland = 

Wider Landscape Architectural Characteristics

- 2.12 The site is surrounded by three key built-up areas that define the architectural characteristics of its immediate setting, which includes, Turners Hill, Crawley Down and Cophorne. Additionally, there is a rich history of local brickworks, quarries and sawmills which supported the construction of local buildings. Currently only quarries remain locally, with the lambs Phillpots Quarry located within 5 miles of the site.
- 2.13 The Cophorne Neighbourhood Plan defines its architectural 'character in part due to the use of traditional building materials. The use of non-traditional materials has the ability to detract from this character'.
- 2.14 The closest settlement to the site is Turners Hill Village which sits on a steep ridge of the Sussex Weald between the North and South Downs. The village is centred on a small village green which is at the junction of two historically important routes. The histoically significant areas of the village is now a Conservation Area with buildings dating back to 17th and 18th centuries, a number of which are listed.
- 2.15 There is a mix of house types and styles, some dating from the 17th and 18th centuries, and some of the buildings are listed. Despite the intrusive effects of heavy traffic, the older parts of the village have retained their character and attractive appearance.

Land at Caldyne Park,
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- 2.16 The New Stone Cottages on East Steet are defined as a key contributor to the character of the Turners Hill conservation area. Built in 1919 by Lord Cowdray and designed by Sir Aston Webb, the row of cottages consist of five pairs built with *STONE LOWER* and *TIMBERED UPPER PARTS*.



Key Defining Architectural Characteristics

- 2.17 The Surrounding Architectural Characteristics are defined by the use of locally sourced and available materials - primarily Stone, Brick and Timber.



Locally Available Materials

Site Analysis

- 2.18 Wind speeds are generally very low throughout the year due to the site being heavily sheltered and protected by mature trees along its boundaries. There is therefore limited opportunity to harness the wind's energy on this particular site.
- 2.19 With regard to solar site characteristics, a solar shading study revealed that in the morning and evening there is a large coverage of shading in the open areas, due to the surrounding tree belt. This highlighted the optimum point on the site that receives little to no shading throughout the

day from the surrounding woodland tree belt. With regards to annual patterns of solar radiation, in the summer months there is a need to capture daytime heat from passive solar radiation and release it into the house overnight when external temperatures drop below comfort levels. In the winter months, the requirement for heating is much greater, as one may expect, resulting in the need for other sustainable forms of heating. The monthly relative humidity levels are comparatively high compared to the rest of the UK. It is therefore important to reduce relative humidity levels in the house to ensure the optimum environment for human comfort and health. This can be achieved through the use of hygroscopic building materials and the design of the building fabric will need to ensure relative humidity is optimised.

- 2.20 The solar shading study was repeated for 0m, 3m, 6m and 12m, this showed that as you elevate by 3m there is at least a 35% reduction in shading. An understanding of the extent of the shadow projection from the existing trees is crucial to considerations of the optimum location, height, and orientation of the proposed house and fenestration in regard to the bioclimatic development which has formed an integral part of the scheme.
- 2.21 The site is fully hidden in distant views by the existing woodland and tree belt on the site and the immediate surrounding area. The open areas of the site are also screened to a significant extent by virtue of the existing woodland and peripheral vegetation, including in views from the public highway (Turners Hill Rd & Wallage Ln).
- 2.22 Turning to the character of the local area, a characteristic settlement pattern of CUT high density dispersed historic settlements of farmsteads and hamlets. Buildings within the environs of the site are predominantly detached houses, some with associated barns and outbuildings, and set within large spacious plots surrounded by mature tree belts and woodland. Crawley to the West, though physically separated, exerts a strong functional and visual influence on the area. There is a dominance of traditional timber-framed buildings with steep roofs often hipped or half-hipped, varying in quality and of building sizes and heights. Similarly, an eclectic mix of materials are utilised with no common relationship to a neighbourhood style or suite of materials. Materials include black shiplap timber, stone cladding, red brick, render, thatch, clay and slate tiles and in some cases plastic weatherboarding. It is clear that there is no singular form of development within this part of the Mid-Sussex High Weald Character Area that epitomises local distinctiveness.
- 2.23 Following a detailed site analysis, a series of design considerations emerged that have informed the design development process and ultimately the landscape and development proposals that are proposed within this application. These can be summarised as follows:

- **Enhancing the landscape character and value** - Opportunities exist to both preserve existing landscape features and to enhance where possible. Improve habitat and biodiversity of the site.
- **Enclosure** - The site's strong sense of enclosure is one of its key features.
- **Protect the clearings** - The site is heavily wooded and doesn't have much open space. Clearings should be retained as much as possible. Opportunities exist to significantly enhance the biodiversity value of the central open part of the site.
- **Respect the root protection areas** - It is important not to encroach on the tree root protection areas.
- **Maximise daylight** - The woodland creates a lot of shadowing and therefore we need to grab as much sunlight within the open areas of the site throughout the day as possible.

- **Topography** – Utilising the sloping landscape and minimise the removal of material from the site.
- **Building location** – Working with the existing topography, landscape features and local climatic conditions to generate the sustainable design solution for this site.

- 2.24 The detailed site analysis (and its history) strongly directed the positioning of the building and the form it took. We interrogated the environmental qualities and various options for locating the dwelling on the site. In each instance, we assessed the impact on context, outlook, shadow, topography, terrain, passive solar gain, site history, entrance & access.



Aerial View - Site Outline

3.0 Historical Development

- 3.1 The 25 acres of land at Rowfant was originally acquired by the Air Ministry at the beginning of the second world war. Used as a secure fuel storage site by the RAF, as the fuel stores at Gatwick airport were considered extremely vulnerable. The land at Rowfant was developed by the ministry for sinking oil storage tanks underground. It is understood that the site was initially substantially cleared with the first buildings and storage tanks being constructed on the site between 1938 and 1939, with more added in 1943 to 1944. Architecturally of no particular interest, and constructed in concrete and brick with slate roofs.
- 3.2 During construction the 4,000 tonne capacity cylindrical fuel tanks were sunk into the ground. Evidently when the storage tanks were constructed in 1939, not only were the trees removed but the significant and irreplaceable ancient soil was removed from the site to sink the tanks into the ground.
- 3.3 In addition to the six fuel storage tanks on the site there were three 20,000 gallon water tanks for fire fighting at the Rowfant depot. With the ever-present risk of bombing attacks, it was essential that an air raid shelter be built for the service personnel working there. The huge structure, made from concrete, exists today at the site on the other side of Wallage Lane.

- 3.4 The tanks were removed between 1999 and 2001 which resulted in further substantial clearing of the site. The ministry of defence did not remove the storage containers in a delicate manner. The earth was moved out of the way using bull dozers with little regard for either the sites Biodiversity or ancient status. Fresh alien soil must have been brought back into the site to fill the voids left by the tanks. This is today evidenced as large mounds of earth in the location of the historic storage containers. The essential characteristic that defines Ancient woodland is that it is at least over 400 yrs old with the real value being the ancient irreplaceable soil. The historic nature of the ancient soil has therefore been substantially eroded not once, but twice in 1939 and 1999.
- 3.5 Due to the history of the site being in MOD ownership (formerly the Air Ministry) since the 1930's, the planning history of the site during this time is limited. Being within MOD ownership the site benefited from Crown immunity and this may explain the apparent lack of planning history records for the site between the 1930's and 1999. Sold by the Ministry of Defence in 1999 and now owned by builders Caldynes Ltd.



View of storage fuel tank with steel removed and concrete being destroyed



View inside storage tank showing concrete walls with steel removed



4.0 Proposal

- 4.1

Full planning permission is sought for the erection of a dwelling of exceptional design quality and innovative sustainable nature within the wooded countryside in West Sussex under the policy provisions of paragraph 84(e) & 139(b) of the National Planning Policy Framework.
- 4.2

In addition to the completed and signed application form and certificates of ownership, the plans and documentation that comprise the application are as follows: -
 - Design Development Documents and Detailed Plans, Elevations, Sections, Exploded Axonometrics, Detailed Sections and Contextual Renderings prepared by DD Architects
 - Ecological Scoping Survey (May 2014) prepared by Calumma Ecological Services
 - Desktop Biodiversity Report (April 2014) prepared by Calumma Ecological Services
 - Surface & Foul Water Drainage Assessment (May 2021) prepared by RIDA
 - Bat Survey Report (January 2020) prepared by Verdant Ecology
 - Dormouse Survey Report (January 2020) prepared by Verdant Ecology
 - Reptile Survey and Mitigation Report (January 2020) prepared by Verdant Ecology
 - Ecology/Arboriculture Summary (January 2020) prepared by Verdant Ecology
- 4.3

The development proposals are the result of a detailed and thorough analysis of the site and surrounding area, informed by expertise in the architectural, environmental, arboricultural and ecological fields.
- 4.4

The fundamental objective of the proposals was to design a new house for the site that is of exceptional design quality and sustainably innovative, reflecting the highest standards in architecture whilst being sensitive to the defining characteristics of the local area, and making a significant enhancement to its immediate setting.
- 4.5

The critical development of this project has cultivated a unique and multifaceted scheme that not only forms a highly sustainable dwelling but enhances and ensures the preservation of its setting and the surrounding Ancient Woodland (heritage asset).
- 4.6

At the core of this proposal is the creation of a highly sustainable house of truly outstanding quality of design that will further the Government's design and sustainability objectives by assisting in meeting the challenge of climate change through high quality sustainable design and construction, thereby helping to raise the standards of design more generally.
- 4.7

Underpinning the proposals are important environmental design strategies that have evolved from the detailed site analysis. Cumulatively, these design strategies have established a basis upon which something truly outstanding can be achieved for the site. The approach to the landscape and ecological strategy for the site has adopted the principle of conservation first followed by enhancement. There are six elements to the landscape and ecological proposals, as explained next.

1. Removal of Invasive Rhododendrons

- 4.8

Since the clearance of both woodland and the fuel storage tanks in 1999, non-native rhododendrons have invaded the woodland and is growing prolifically in the previous locations of the fuel storage tanks. On inspection it is evident that rhododendron is fast spreading and is taking over large parts of the woodland and ancient woodland within the site. One of the most damaging and unfortunately most common invasive species is the rhododendron (Rhododendron ponticum).
- 4.9

The thick evergreen foliage smothers native vegetation and its associated flora and fauna, whilst its roots exude a ‘cocktail’ of toxic chemicals including cyanide which further poisons the ground. Eventually nothing is left beneath the trees but rhododendron, to the detriment of wildlife. Rhododendrons cannot be controlled by grazing as most species, from humans to horses, birds and insect are poisoned if they ingest it. It is for this reason that the rhododendron plant has spread throughout the site unhindered.
- 4.10

Removal of the rhododendrons combined with careful woodland management to bring sunlight to the woodland floor, will encourage native species to thrive once again and start reversing the years of damage. The best way to eliminate rhododendron depends on the height to which it is growing, but may include spraying with herbicide, grubbing it out or cutting it and treating the stumps.



Invasive Rhododendrons On-Site (Panorma - P04)

2. Ancient Woodland Management

- 4.11

Ancient woods have been around for many centuries which have developed into ecosystems that are rich, complex and irreplaceable. Ancient woodlands are woods that are believed to exist since 1600AD, however many are older and some may even link back to woodland that covered the UK around 10,000 years ago after the Last Ice Age.
- 4.12

Ancient woodland now only covers around 2% of the UK. Much of what remains has been damaged by planting with non-native conifers or colonisation by invasive species. However, careful woodland management to let in sunlight and removal of non-native species including the rhododendron, encourages native species to thrive again, reversing the years of damage. The applicant will agree a compensation method to ensure the longevity of the remaining Ancient Woodland throughout the Site. As set out by the Forestry Commission and Natural England on the gov.uk web site (<https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences>).

- 4.13

The ancient woodland boundary surrounding the site is proposed to remain with the applicant entering into a Woodland Management Plan to ensure the maintenance and future enhancement of the ancient woodland boundary. Such Woodland Management Plan, in helping to conserve and enhance the biodiversity of the remaining boundary woodland, would meet with the objectives of both the NPPF and the Council's policy in relation to biodiversity and nature conservation. Active management of the ancient woodland boundary will enable the enhancement and protection of the woodland which is currently unmanaged and overgrown with Rhododendron.

- 4.14

Such Woodland Management Plan, would be undertaken by a team of specialists to restore or manage the ancient woodland by planting new native trees and removing rhododendron invading the woodland. The proposed scheme will secure the future of the ancient woodland as a heritage asset.

3. Open Meadow Protection and Enhancement

- 4.15

Although the site and surrounding area is heavily wooded, there are large open glades within that contribute to the character and quality of the site itself and to the wider landscape. It is therefore important to protect these open spaces, such that they can be enjoyed from within and outside of the dwelling, and to protect the woodland that surrounds them. It was also important to protect the integrity of the woodland and its connectivity to the wider landscape, ensuring that the development sits well within the landscape and natural site topography as opposed to imposing itself upon it.
- 4.16

The site's biodiversity will be enhanced through improvements to the existing species poor open grassed areas. The grassed areas will be enhanced by establishing a species rich low-land meadow, based on typical species present in the adjacent grassland. Following suitable ground preparation, these areas will be developed from seed sourced with local provenance. Scattered along the border between the meadow and woodland will be a variety of indigenous meadow grasses. This new habitat will support declining species such as orchids and other flowers, whilst also supporting butterflies such as the Brown Hairstreak Butterfly and the Duke of Burgundy. After the rhododendrons removal the woodland floor will be dispersed with a species rich native woodland wildflower meadow and new native understory planting, to form a seamless transition from woodland to glade and meadow.



Proposed Enriched Species

4. Woodland Enhancement & Conservation

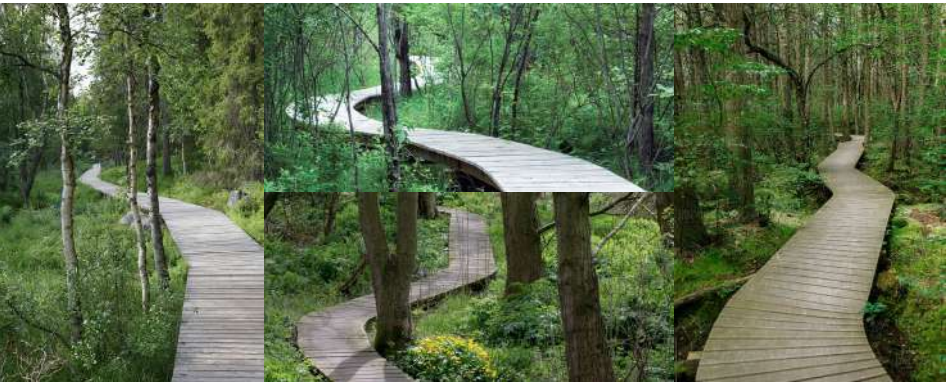
- 4.17

The landscape proposals seek to preserve and enhance both the site and the area's intrinsic landscape character. This is achieved through the retention of the distinct spaces within the site, the preservation and enhancement of the natural boundary screening, enhancement of green infrastructure through the creation of new woodland planting areas of indigenous species and woodland management to improve habitat value and enhance longevity.
- 4.18

In ecological terms, it is proposed to enhance the connectivity of the perimeter tree belts as important wildlife corridors, to enhance species diversity within the tree belts and woodland areas and preserve important trees (identified in the Ecological Report) as potential bat roosting.
- 4.19

Removal of specific trees and invasive plants identified in the Tree Survey will open up areas of the existing woodland and create areas with increased light conditions. This provides the opportunity to introduce native woodland understory planting to create a rich, diverse and natural habitat that responds to the surrounding landscape character. New individual specimen tree planting will help to diversify the existing age and range of the woodland. Managing and restoring the woodland accords with the policy objectives for enhancing the environmental quality of the area. Active management of the woodland will strengthen the age diversity, habitat diversity and replace the removed trees.
- 4.20

To protect and conserve both the ancient woodland and woodland a raised boardwalk is proposed, which will seemingly float along the woodland floor. This will prevent ground vegetation from being destroyed or disturbed by people walking throughout the site (dog walks or nature walks etc...) whilst supporting the necessary ongoing woodland management with as little impact on the ground flora and ecology as possible. The paths will be positioned along the existing tracks which will be the primary routes for the initial rhododendron removal and woodland management. The boardwalk will then be installed on top of these paths allowing the ground vegetation to flourish.



Proposed Ecological Raised Boardwalk Examples

5. Sustainable Drainage & Recycling Site Resources

- 4.21

Rainwater from roof runoff is utilised in the dwelling via a two stage filtration system, any excess and a proportion of surface water will also be retained on site for reuse. All wastewater will be treated on-site and treated liquid effluent will join the water flow sequence. The water flow sequence is contained within the site boundaries culminating at a drainage basin, which allows for natural filtration of water into the substrata. The drainage basin creates the opportunity to enhance

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the existing seasonal wetland area, improving habitat value through increased biodiversity and creating a truly multifunctional landscape feature.

The Landscape Masterplan

4.27 Bringing together the separate elements of the environmental proposals as described above, the Landscape Masterplan will achieve the following significant benefits:

- Woodland Management Plan to ensure the removal of rhododendron, alongside the open spaces being managed by a Biodiversity plan.

- Improved low-land species rich meadow based on typical species present in neighbouring grassland.

- New native woodland trees and understory planting to enhance the wildlife corridors within the site, habitat connectivity, screening and improved biodiversity. Also to strengthen the age diversity of the woodland and replace removed trees.

- Removal of specific trees and invasive plants to open up areas of the existing woodland and create areas with increased light conditions for ground flora to thrive.

- Utilisation of existing vehicular access track to avoid the creation of an additional access and converting it into an Ecological SuDS Driveway using the TTE System.

- Species rich native woodland wildflower meadow dispersed throughout the site, to form a seamless transition from woodland to glade and meadow.

- Species rich glade of indigenous meadow grasses set within the woodland and woodland borders.

- Woodland preserved and enhanced through active management to increase age, longevity and habitat diversity.

- Log Walling - Logs cut from trees to be removed and through on-going management of the woodland will be stacked to create both rich hibernacula and walls which define space and routeways throughout the site.

- Hibernaculum - Throughout the site a dense network of new rich habitats for invertebrates and insects will be created.

- Terrace integrating internal and external spaces. Natural stone of local provenance to integrate with the landscape setting and the new dwelling.

- Bio-solar (Intensive Green) Roof which will support a diverse selection of fauna and flora, whilst providing on-site renewable energy and water management.

- Drainage basin and associated wetland habitat enhancement, with natural stone channel directs excess surface and roof water to the drainage basin.

- An ecological raised boardwalk which will allow the ground flora and ecology to thrive whilst routes for woodland management and leisure walks etc... will be created to ensure the ongoing care, appreciation and conservation of the woodland.

4.28 The Increased Biodiversity improvements accord with the Landscape Character to ensure that they do not have an adverse impact. 100 years ago the landscape would be manipulated so as best to show off the house, rather than the other way around. The proposal has however undertaking a landscape-led approach to ensure that both the proposed dwelling and increased biodiversity measures enhance the landscape character and Green Corridors.

4.29 Planning is concerned with securing improvements and enhancements to our natural and built environment, in the wider public interest. The proposed landscape and ecological strategy for the site will not only significantly enhance the immediate setting of the site and the proposed new house but it will also result in the conservation and restoration of existing habitats and the creation of a number of different and significant new habitats, thereby resulting in an overall significant net gain to biodiversity. These important environmental measures underpin the design proposal and are in themselves outstanding, but it is the shear quality and skilful assimilation of the new dwelling within the landscape that in combination achieves the design quality envisaged by paragraph 84(e) of the NPPF, thereby helping to raise the standards of design more generally in rural areas. The landscape proposals are exceptional for a development of this kind, but the design quality of the house elevates these proposals to another level.

The Design - Site Layout

4.30 A detailed site analysis has informed the layout, scale, form and outward appearance of the proposed dwelling, taking account of the landscape characteristics of the site and its contribution to the character and quality of the wider landscape of which it forms a part. Taking into account the key landscape features of the site and the aspiration to adopt a conservation first approach followed by enhancement, it is imperative to the success of the proposals that any new building on the site respects and maintains important landscape features and respects the landscape character of the site and surrounding area.

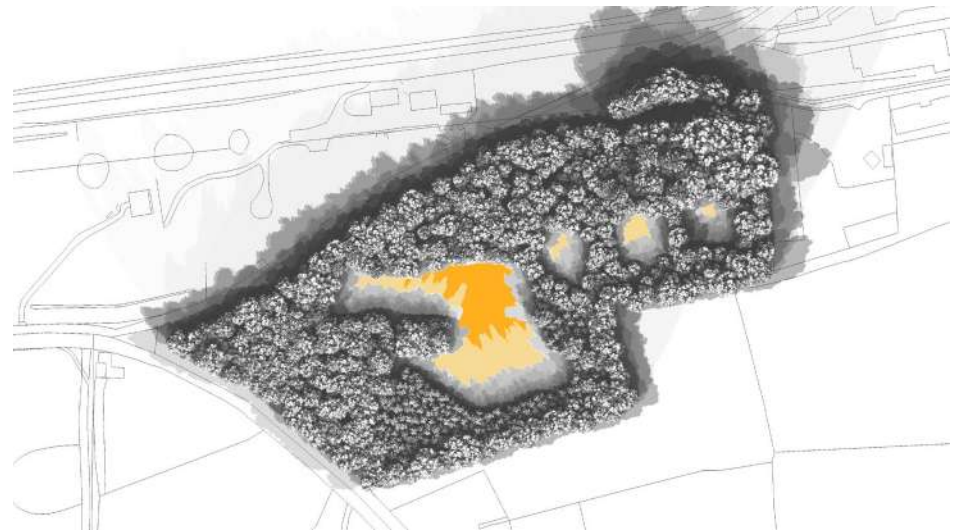
4.31 To this end, the siting of the proposed dwelling has been informed by the environmental design strategies outlined earlier in this Statement and a series of other opportunities and constraints identified through the site analysis. Key amongst these was the desire to protect the open glades within the site and to minimise disruption to the trees and woodland that surround the site.

4.32 Respecting the integrity of the woodland is a key facet of the design proposal. It was important that the built form of the development was sited predominantly outside of the Root Protection Area's to avoid loss or damage to existing trees. This study assisted in identifying three main glades where tree roots do not permeate below ground.

4.33 To this end, the conceptual approach to design adopted by the proposals creates a high quality house cleverly designed as a contemporary environmental building which seamlessly integrates with the landscape, maintains and enhances key landscape features within the site and significantly enhances wildlife habitats and biodiversity. This whole site approach to design is truly unique.

4.34 The solar shading study highlighted that the central parts of the site in the location of the greatest expanse of open glade achieved most daylight and the majority of direct sunlight throughout the day. The middle part of the day is when the central glade receives most sunlight (approx. 13:00hrs) and this gradually dissipates as the sun wraps around to the west. However, during the winter months when the sun is set lower in the sky a larger area of the open is shaded at ground level.

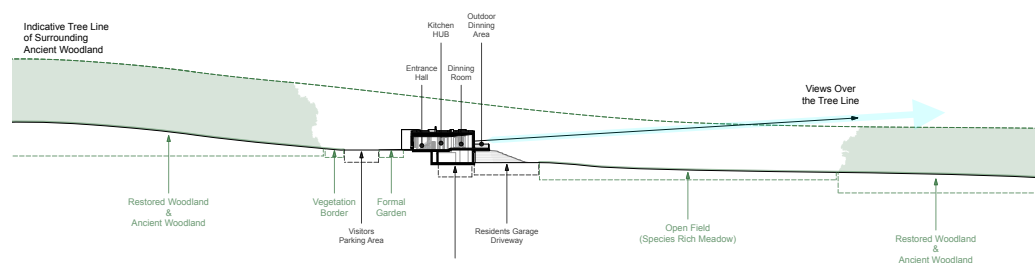
4.35 The solar shading study revealed an optimum position (between 3m and the ground level) on site that would ensure the dwelling would receive sufficient solar gain all year round (passivhaus). Above 6m the study revealed that the area will receive complete sunlight all-year round (weather permitting) ensuring that any rooftop solar panels have an optimal position.



Combined Sun Study - Showing Optimum Solar Gain Location

4.36 Other layout design drivers include the public and private spaces within the site (with the glades providing the private areas), site history (positioning of the fuel storage tanks), site topography (the slope of the site), conservation of the ancient woodland, enhancement of the woodland, outlook (views throughout and over the tree belt enclosure), and the location of the existing vehicular access and driveway within the site.

4.37 The extensive and critical site analysis enables us to establish the optimal position and orientation of the proposed dwelling, which sits harmoniously within the local environment and enhances the surrounding area's character. (See 'Part 13 - Positioning & Orientation', for further information)



Proposed Orientation & Sitting - Site Section

4.38 The proposal has been carefully developed three-dimensionally, ensuring that the scheme makes full use of the site's natural topography. This enables the dwelling to nestle within the landscape whilst providing breathtaking views within and outside the site (over the tree line).



Proposed Habitat Enhancement Examples



Design Statement

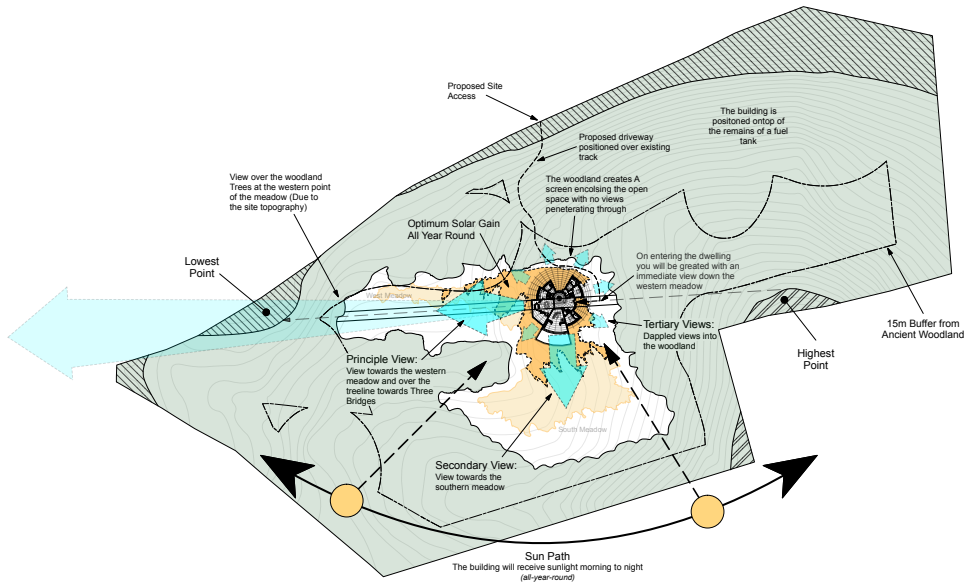
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4.39 The house has been strategically positioned towards the north-east of the central open space, through an extensive analysis that has been outlined in the design development statement. There are a number of reasons for and advantages resulting from the sitting of the house in this location:

- The house is carefully positioned outside of the shadow created by the mature boundary trees, thereby maximising solar gain and optimising the solar roof (PV panels).
- The open aspect of the site, which is a key landscape feature, is retained and enhanced through appropriate landscape treatment.
- Positioned on the existing slab of one of the fuel storage tanks previously on the site. Reducing the adverse impact on the ground ecology.
- The house is orientated and positioned to appreciate the views of the open species rich low-land meadows within the enclosure of the woodland.
- The proposal utilises a much-reduced driveway to ensure that more of the landscape is given back to nature. The remaining driveway will be replaced with a TTE Turf Grid that provides a naturalistic surface that safeguards the existing and new ground ecology.
- The house is positioned to take advantage of the site topography composing a unique primary view over the tree belt enclosure (to the west of the site).
- The garage is located within the footprint of the dwelling, to ensure there is no additional intrusions into the landscape.
- The sitting of the house has been carefully considered to respond to the site's immediate and wider context and would clearly make a positive contribution to the landscape.



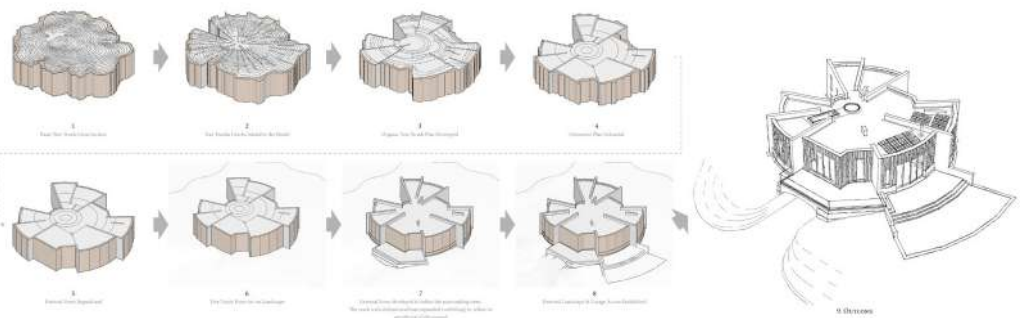
Proposed Orientation & Sitting - Site Plan

The Design - Concept Evolution

4.40 The central concept for the design and appearance of the house was inspired by the cross-section of a tree trunk (as shown in the design development statement - Part Fourteen). From this inspiration, developed the two principal elements of the dwelling (external form and plan), creating a series of unique internal spaces that sit harmoniously within a highly attractive and resolved visual façade.

External Form:

4.41 The external form is developed alongside the 2D internal layout, which ensures both the internal space requirements are satisfied and that the external form responds effectively to site constraints, such as topography and views across, outside and within the site, whilst also making optimal use of solar gain, initially with the removal of the North facing segments. The developed external form has extracted an architectural language from the original organic tree trunk and regularises the features to form a series of geometric components.

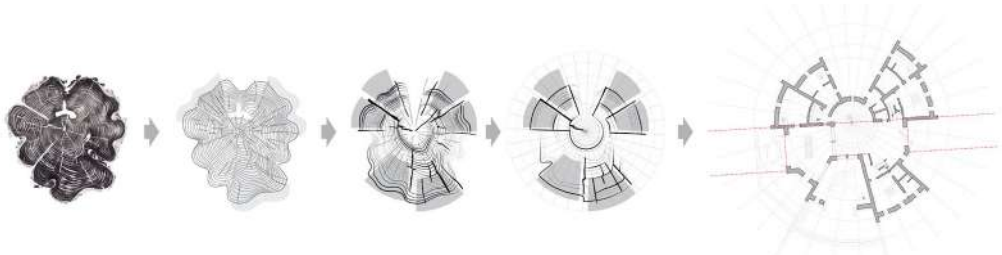


3D Concept Realisation - External Form

4.42 The form has been developed into a series of segments of varying lengths that have been carefully adapted to internal and external parameters. Critically, two of the segmented areas were altered to signify the entrances and provide the principal strategic view through the dwelling, into the west meadow and over the woodland tree line. Floor-to-ceiling glazing has been integrated into the facade, maximising the direct sunlight entering the dwellings and the views out.

Internal Layout:

4.43 From the central concept, a dwelling developed which is made from a series of varying lengthened segments around a central core. Each segment was determined by key site features and the internal room requirements, which transformed the building into a series of segmented spaces of varying levels, lengths and heights that successfully unite the site and internal layout. The central core of the building (HUB) was established to provide a fixed point that the rest of the spaces (segments) are anchored from. The living spaces were then positioned to sit on the sloping terrain and then the outer walls were raised ensuring the rooms receive full daylight all year round (passive solar gain). The combination of the dwellings sitting and 360° aspect generates unique and special opportunities (views) to enjoy wonderful moments as one passes from one space to the next. This all creates not only a highly attractive and unique visual envelope to the building but it also generates fantastic internal spaces within the building, rarely experienced in a residential environment.

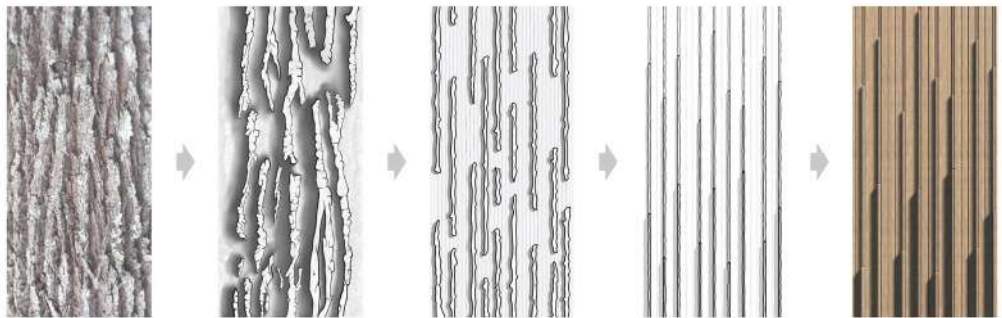


2D Concept Realisation - Plan

4.44 The philosophy of the trunk concept has been further developed in the interior using 'The Raumplan Theory', reflecting the harmony of the external form. (As per The Raumplan Theory) The spaces are divided through level changes that have been arranged/developed based on their importance and space requirements, in combination with the site's natural level changes. The dwellings' combined sitting, spatial arrangement, and 360-degree aspect generate unique and exceptional views to enjoy beautiful moments as one passes between and within spaces.

Bark Cladding Detail:

4.45 In addition, to the development of the internal layout and external form, a cladding detail was developed that mimics the shadow and texture of bark on a tree trunk. The cladding was developed from an extensive iterative process analysing the surrounding woodland bark to establish an architectural language that can be implemented on the building's facade. Rather than continuing the bark shadow effect up the facade of the building, it recesses into the cladding to visually lighten the top of the building, mimicking the surrounding trees.



Bark Cladding Development

The Design - Form & Appearance

4.46 Self-evidently, for designs to be considered original or exceptional or outstanding they will be of a form and appearance that is different to that which already exists. In this connection, planning should not attempt to impose architectural styles or particular tastes and they should not stifle innovation, originality or initiative through unsubstantiated requirements to conform to certain development forms and styles. However, it is proper to seek to reinforce or promote local distinctiveness. Moreover, high quality and inclusive design should address the connections between people and places and secure the integration of new development into the natural, built and historic environment.

4.47 The dwelling is constructed from a series of straight/geometric elements, which, in combination with the dry-laid stonework and timber vertical cladding, gives the illusion of a curved façade. The proposal has been meticulously designed to ensure the harmony of the concentric concept is also embodied in the external form.

4.48 The intentional and careful design utilises the natural level changes of the site, forming a dwelling that is nestled into the existing topography and anchored to the landscape through a locally sourced stone base, on top of which lightweight vertical timber (bark) cladding echos the surrounding woodland. Additionally, the intensive green roof merges the building with the surrounding landscape, enabling innovative solar panels to be nestled into the roof.

Form & Appearance Views:

4.49 Throughout the development of the proposal a detailed 3D model evolved allowing us to critically analyse each choice in context. This method allowed us to develop a scheme that is not only highly attractive but sits harmoniously within the surrounding landscaping. We then extracted the model and developed a series of renderings expressing the proposal within context. (See 'Part 14 - Proposed Views' for further imagery).

4.50 The form and appearance of the dwelling has been critically developed to ensure that it enhances the landscape and conserves the remaining heritage asset on-site (ancient woodland). Stone walling has been chosen to anchor the building to the ground, whilst also in areas raising to the roof emphasising the focal points of the building (entrances & key views). A lightweight timber cladding has then been fixed to the remaining envelope of the building to merge the building with surrounding woodland.



Meadow Views - Dwelling Merging with the Landscape



4.51 The building has also been thoroughly tested to ensure that the dwelling sits beautifully all year round. Below is an aerial view of the proposed dwelling each season:



Summer



Autumn



Winter



Spring

Approach:

- 4.52 The proposal utilises a reduced portion of the existing vehicular entry (from Wallage Lane) to maximise the landscape returned to nature. The existing hardstanding is to be removed and replaced with the TTE Turf Grid, providing a naturalistic surface that safeguards the existing and new ground ecology and surrounding flora and fauna.
- 4.53 On approach, the first experience is a view of the dwelling through the dappled woodland, observing its unique frontage and sitting that forms a harmonious threshold between the building and landscape. There are two choices of parking and entry into the property - formal and informal - visitors are guided to the formal entrance by markings on the SuDS roadway.



Dwelling Approach

- 4.54 Upon entering the site, the dwelling has three access points. The first is the main and formal entrance (which has visitor parking), which is strategically elevated to provide beautiful views across the entire site. The second is the side entrance that is designed to be used by the occupiers to access the garden, and the third is the informal garage entrance.



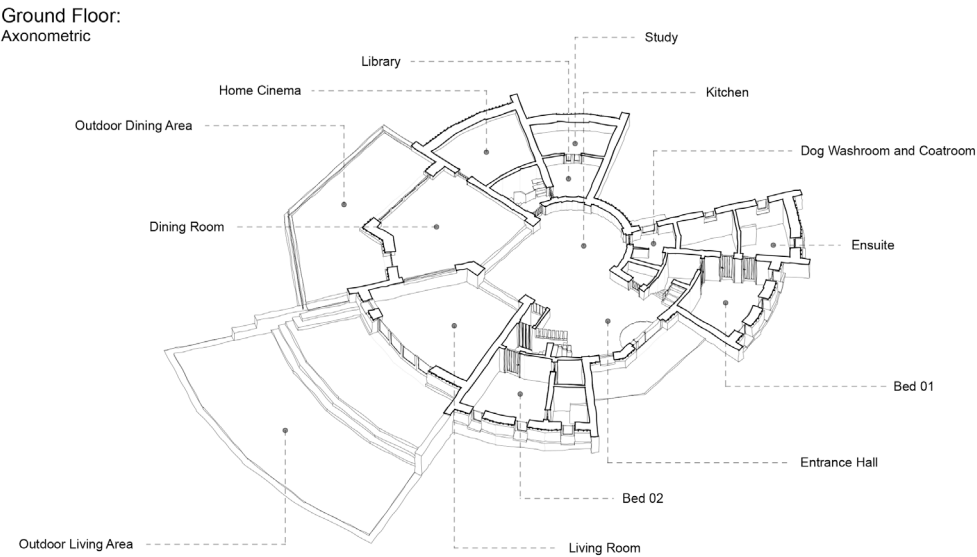
Main Entrance Side Entrance Garage Entrance

Sitting:

- 4.55 Building construction is not a clean operation, with excavation works disturbing otherwise ecologically rich soil. Therefore, the proposal seeks to minimise this disturbance during construction by localising all building work.
- 4.56 The building footprint is located on the remaining concrete slab and foundations of the fuel storage tank, providing the opportunity to locate the garage within the dwellings footprint while ensuring no additional intrusions into the landscape. Reducing the proposal's overall landscape and ecological impact by minimising further disturbance in other areas around this sensitive site.
- 4.57 The lightweight timber-clad building sits on a locally sourced stone gabion wall that dissolves into the landscape. Whilst the reclaimed brick walls (that have evolved from the concept) segment the dwelling and anchor it into the landscape.

The Design – Internal Layout

- 4.58 The internal layout of the house is a response to local climatic conditions, key site features and future occupant lifestyle studies. In keeping with the irregular external appearance of the building, the internal room spaces are interesting yet functional.
- 4.59 The general living spaces (requiring more natural daylight for internal comfort) have been positioned south facing so that they receive most of the direct sunlight, with the rooms not occupied as often or less reliant on daylight are positioned north-east (Bedrooms) and north-west (Cinema & Library) facing.



Exploded Axonometric - Ground Floor Internal Layout

- 4.60 On approach to the dwelling from the existing track (north), there are two choices of parking and entry into the house. The Infromal one is from the garage (lower ground floor) where one is directed to a steel staircase beside the garage (with a large rooflight), which takes one up into the ground floor landing (leading to the Kitchen or library) and a wheelchair accessible lift that takes you up to entrance hall. This entrance is intended primarily for private and everyday use. Upon entry into the kitchen, you are able to see through the building and out into the meadows and woodland beyond through a variety of large glazings, offering an almost 360° views. This immediately connects the house to the outside space. The use of locally sourced natural stone that borders the internal rooms and paves the external areas, anchors the building into the ground whilst contrasting the timber (sustainably sourced oak or sweet chestnut) parquet flooring. The kitchen then leads to the living room, dining room and bedrooms.
- 4.61 An informal and private entrance has also been positioned on the ground floor which accesses a (dog) wash/utility room (and then kitchen), this is the most informal entrance and is to be typically used by the owners and their guests. This entrance is connected to the woodland boardwalk to be used by people coming back from the walk who may need to clean themselves or their dog before entering the house.

- 4.62 The second and main entrance into the house is through a larger and more striking approach on the east elevation, through a large corten steel pivot door. On entry into the house, one is greeted to a large, spacious, high ceiling entrance hall. With framed views through the kitchen and dining room into the eastern meadow and beyond into/over the surrounding woodland. On either side of the entrance hallway is access to the dwellings four bedrooms, W.C. and wheelchair friendly lift (from garage). Access to the split level bedrooms (four) is via contemporary stone cantilevered stairs, each bedroom has an en-suite and walk-in wardrobe.
- 4.63 Moving beyond the entrance hall, straight ahead is the open plan living spaces (kitchen, living room, dining room). The internal finish will be an eco-friendly plaster called Shirasu-Kabe which has unique air purifying, humidity conditioning and deodorizing properties (see low carbon building strategies for further information). The open plan living space not only has large views outside but also has access to outdoor areas that wraps around the facade uniting the dwelling to the outside space and site.

Internal Layout Views:

- 4.64 The internal layout has also been extensively developed through the three-dimensional model, ensuring that with each decision the interior remains functional, captivating and unified with the surrounding landscape. The interior has been developed using Raumplan theory which has strengthened these unique internal experiences and merged interior with exterior.



View Upon Entering Entrance View



Living Room View Dining Room View

Design Statement

Proposed New House of Exceptional Design Quality

CALDYNE PARK

Land at Caldyne Park,
Turners Hill Rd,
West Sussex
RH10 4NB

The Design - Materials

- 4.65 The rationale behind the choice and application of building materials carries forward the desire to create a highly efficient building envelope whilst finishing the building in materials that are distinctive to the local area. It was also crucial in the selection of materials that the embodied energy in the construction of the house is minimised in order to make the development as sustainable as possible.
- 4.66 To this end, construction materials have been selected that have the least embodied energy, create the least amount of waste and use locally available, grown or manufactured materials. This approach extends to the hard landscaped parts of the site immediately adjacent to the house, ensuring an integrated whole site approach to sustainable development. The facade is established with a blend of materials such as; Horsham dry laid stone, sweet chestnut timber cladding, corten steel, frameless glass railings, reclaimed bricks and timber framed triple glazed windows & doors. The proposed materials are characteristic of the local area and will also minimise the visual impact of the scheme.



Primary Material Palette



Secondary Material Palette

- 4.67 The external stone walling, which extends from the building down to the ground, anchors the house to the landscape and will comprise locally sourced natural stone (Horsham stone) and will be constructed as a dry stone wall with jumpers. The crevasses between the infill stone provide habitats for insects and invertebrates, further enhancing the site's biodiversity value. The timber cladding will be locally sourced sweet chestnut timber that provides a more environmentally friendly and lower carbon footprint alternative to traditional oak, but still matches buildings within the site's locality and will be stained to a desired shade. The cladding has been developed to mimic the shadow and texture of the bark on the surrounding trees. The parapet is finished with accoya-treated sweet chestnut to provide a simple, slender, lightweight finish, mimicking the lightweight top of trees. In addition, the intensive green roof presents an opportunity to install solar panels nestled within the vegetation (biosolar), removing the adverse impact of standard solar panel appearance and views.

The Design - Innovative Low Carbon Strategies

- 4.68 The proposal integrates a comprehensive low-carbon strategy, demonstrating a **highly innovative** approach to form an overall proposal of **exceptional design quality**. Parts 15 - 17 in the proposal documents provide a detailed breakdown and explanation of the pioneering solutions that have been specifically design and employed within the proposal.
- 4.69 The innovative low-carbon strategies have been divided as follows:
1. Innovative Low Carbon Building Strategies:
 - Construction & Materials
 2. Innovative Low Carbon Energy Strategies:
 - Passivhaus Design
 - Power Technologies
 - Heating Strategies
 - Drainage and Water Treatment

Construction & Materials Strategies

- 4.70 At the heart of the proposals is a comprehensive, **innovative low carbon strategy** adopting the principles of 'fabric first'. Before considering how the energy requirements of the house would be met through sustainable means, the challenge in innovation terms was to **minimise the amount of energy the building requires** to function.
- 4.71 Accordingly, to maximise the energy efficiency of the house:
- The upper walls comprise 300mm structurally insulated panels (SIPs), clad with actis breather membrane to enhance the thermal and airtightness performance of the building with a heat loss (U-value) of 0.07 W/m²K.
 - The windows will be triple glazed, triple sealed Argon filled timber framed and insulated windows to Passivhaus certification standards and with a U-value of less than 0.8 W/m²K.
 - The warm roof comprises a CLT roofing structure topped with a hybrid blue and intensive green roof (up to 520mm substrate), with a minimum heat loss (U-value) of 0.1 W/m²K. The CLT roofing system will be prefabricated off-site and clad on site.
 - The lower walls comprise a 300mm Thermalite (Hi-Strength 7) filled cavity wall, clad externally with locally sourced stone walling (200mm) and lined internally with 100mm insulation to enhance the thermal and airtightness performance of the building with a heat loss (U-value) of 0.10 W/m²K.
 - The ground floor will have high levels of insulation around and beneath a 70% cement replacement 'eco' concrete reinforced slab with a heat loss (U-value) of 0.10 W/m²K.

- 4.72 Rather than using invasive and destructive concrete pile foundations the proposal will use innovative helical pile foundations, which provides a less-invasive, more environmentally friendly, cheaper and quicker alternative to traditional foundations. Helical Pile foundations installation is vibration free, it has no excess spoil to remove, no curing period needed so load tests can be

immediately undertaken following installation, there's no concrete or grout needed minimising mess and waste and equipment on-site. At its end of life it can also be simple to remove via reversal of installation process and can therefore be recycled unlike concrete.

- 4.73 The lower walls will be constructed from an innovative insulative Thermalite blockwork (Hi-Strength 7) to guarantee excellent thermal insulation, acoustic insulation, fire resistance, and light for quick, economical construction. The blockwork is manufactured from up to 80% pulverised fuel ash, a waste product from UK power stations, and the process waste is crushed and recycled into the next mix. Offering a far more environmentally friendly and thermally insulating option compared to standard reinforced concrete walls.
- 4.74 The upper walls and roofing systems will be prefabricated off-site, then unloaded and assembled on-site for a quicker, simpler and more environmentally friendly construction. The upper walls will be constructed from 300mm Structurally Insulated Panels (SIPs), offering a more energy-efficient, stronger, quieter and significantly more airtight alternative to older technologies, reducing overall CO2 emissions. The roof will be constructed from a CLT slab system that will sit on the SIP walls. CLT offers an environmentally friendly and lightweight yet strong alternative to a concrete slab. This solid-engineered wood panel has superior acoustic and thermal performance and is also fast and easy to install, generating almost no waste on-site.



Helical Piles



Thermalite



CLT

- 4.75 The proposed driveway will utilise the existing vehicular access track to avoid the creation of additional access and thereby minimise additional construction works and environmental impact. The driveway will be created via an 'ecological' and sustainable grass driveway grid that has an innovative construction principle which protects the ecosystem and integrates it into the site, Safeguarding the ground life and ecology of the site. It allows for permanent greenery coverage as it provides protection to the turf against pressure loading and shearing forces. It will also protect the soil against post-compression ensuring the ground remains breathable, allowing new thriving vegetation to grow throughout the grid. It will also provides excellent root protection for trees in the site and improved root development (no breakage of the capillaries).
- 4.76 The proposed rooftop will be an innovative hybrid intensive green, blue and solar roof, which offers many passive benefits. These benefits include higher thermal and acoustic insulation, protection and extension of the roof life span, enhanced biodiversity, water storage (storm-water

management) and controlled water release that will be utilised within the building as part of the drainage/water treatment system. In addition, the integration of solar panels (solar roof) into the green roof maximises their energy output as the vegetation helps preserve ambient rooftop temperatures, keeping the modules at optimal output. The cooling effect increases panel output by up to 5%.



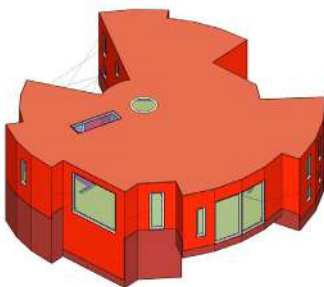
Hybrid Blue, Green & Solar Rooftop

- 4.77 The biosolar roof also enhances biodiversity through the creation of new habitats. Rain run-off from the solar panels creates damper areas to the front and drier regions at the back, which creates a 'habitat mosaic' which allows a wider variety of vegetation to flourish and, in turn, attract a broader range of species such as butterflies, bees, beetles and others.

Passivhaus Credentials

- 4.78 The Passivhaus (or Passive House) standard is a building standard and construction concept designed to drastically increase the energy efficiency, comfort and longevity of a newly built property. Passivhaus buildings are eco-friendly by definition. They use extremely little energy (very energy efficient) without causing any environmental damage. This means that their energy demand can be satisfied by renewable energy sources where, in ordinary, 'inefficient' houses, the effect would be minimal. To meet the passivhaus standard for energy demand the building must use an annual maximum of **15kWh/m²yr** for heating or cooling to maintain the building at 20° C.
- 4.79 The final design has been tested and analysed to ensure that it meets or exceeds passivhaus requirements.

Climate: [UK] - South East England (London Gatwick)
TFA - 443.5 m²
Specific Annual Heat Demand (Qh): **11.23 kWh/m²yr**
FHLF - 3.18



Passivhaus Test Model



Design Statement

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Power Technologies - Generation & Conservation

- 4.80 Having made the building envelope as energy efficient as possible, the sustainable energy strategy then moved to the consideration of how the energy needs of the house in terms of heating and electricity could be generated on-site. Typically more energy is produced than required in the summer months and less energy is produced than required in the winter months. The challenge therefore is to design an energy system that is capable of maximising efficiency at all times of the year and during the day and night. This requires the effective storage of heat and power from day to night and the more difficult challenge to shorten or eliminate the reduced production of and greater demand for energy in the winter months.
- 4.81 Grid balancing is perhaps the greatest challenge currently faced by society. Whilst at present, there are sufficient power stations to provide for the net energy needs of the country, the real concern is the ability to provide for peaks in energy demand. Whilst many sustainable developments promote themselves on the basis that they are carbon neutral, this is commonly based on the calculation of net energy demand and supply of the development. However, the ‘holy grail’ in sustainable development terms is the ability to balance the energy demand and supply of developments such that there is sufficient energy generated and consumed throughout the day and night and crucially, throughout summer and winter.
- 4.82 Electricity is generated by nine AIKO N-Type ABC Black Hole Series Solar Panels to power the house during the day. We intend to produce 5,000kW of electricity for domestic consumption with the excess being exported to the Grid. These Cutting edge mono-crystalline Silicon Panels can each produce up to 615pW and only have an annual degradation of <0.35%.
- 4.83 The proposal incorporates Tesla Powerwall battery storage system to store ‘daytime’ solar generated electricity (surplus energy that is not used during the day) for use in the evening and night time period and thus providing a ‘grid balancing’ solution which cleverly eliminates dependence upon the grid during peak consumption periods. The roll out of this type of technology would have far reaching positive implications for the environment. The Tesla Battery’s Secondary output is used to power the MVHR and Immersion element, which would convert spare electricity back into heat for under-floor heating and domestic hot water support.
- 4.84 Even between April and September (the longest sunny days of the year), the majority of electricity consumption occurs outside most of the sunny period of the day. This leads to most electricity



AIKO Solar Panels



Tesla Powerwall



Immersion Element

being sent to the grid during the day and maintaining dependence on the National Grid for more than 12 hours in an average April – September day. Employing Powerwall battery storage as an integral part of the sustainable technology solution for the proposed development creates an opportunity to ‘offset’ daytime generated energy for use when demand is at its highest, i.e. the evening.

- 4.85 The proposal includes an ImmerSUN unit, which transfers all surplus solar generated electricity and diverts it to an immersion heater element in the Sunamp Thermal store. This technology minimises the buildings reliance upon the grid as on-site Solar Power generated energy can be stored for use when it is in high demand. This is the most holistic way possible of designing a truly sustainable dwelling.

Heating Strategies - Generation & Conservation

- 4.86 Vertical Borehole Heat Collectors are a pioneering state-of-the-art innovative sustainable technology that have been intergated into the scheme. Vertical Bore Holes ensure the performance of the collectors will remains consistent and unaffected all year round compared to horizontal collectors. Due to the temperature at 100m below ground level it is likely to remain consistent throughout the year unlike 1.5m below ground level (horizontal collectors). Ground source heat pumps can also be 300-400% efficient in terms of its electricity usage and it will be primarily run by solar energy which means that its carbon emissions will be reduced to zero. This forms part of a wider thermal energy supply strategy for the dwelling, incorporating the use of “Phase Change Materials” in a large thermal heat store, which serves the thermal requirements of the house.
- 4.87 Heat from the ground source heat pump is transferred to the Sunamp Thermal store which is filled with phase change materials. These provide latent heat storage which allows for the hot water storage capacity of 10 average houses. Using this innovative system is key, so more of the sun’s energy can be harnessed & stored.
- 4.88 Mechanical Ventilation Heat Recovery (MVHR) is an essential element of this passivhaus and low energy building. The proposed dwelling will be of a highly airtight construction requiring mechanical ventilation to move air around the house. Heat from the PCM Heat Stores is transferred to the air through an in-line duct heater and this warm air is circulated through the building via the MVHR system. Fresh air is proposed to enter the same trench as the PV cabling to warm outside air before entering the MVHR system.
- 4.89 Recreational use of the Log burner can top up the heat store ensuring no heat is wasted. All logs to come directly from the site. Which also forms part of a wider thermal energy supply strategy for the dwelling.
- 4.90 Whilst ensuring the house is highly insulated (low heat transmission) and airtight to meet and exceed passivhaus standards, thermal mass has been utilised internally. This will improve thermal comfort (by stabilising internal temperatures) and reduces energy costs by averaging out the temperature extremes (day-night). Although thermal mass has always been an aspect of buildings, only in recent years has it evolved as a tool to be deployed in the conservation of energy. Thermal mass in a dwelling can act as a thermal battery. During the summer it absorbs heat during the day and releases it by night to cooling breezes or clear night skies, keeping the house comfortable. In winter the same thermal mass can store the heat from the sun or heaters to release it at night, helping the home stay warm.

- 4.91 The proposed thermal mass consists; ‘eco’ concrete slab (primary), underfloor heating screed, internal masonry walling and gypsum plasterboard (secondary). These material have been picked as they are highly effective thermal masses due to their high specific heat capacity and high density. To be effective, the thermal mass have been integrated with sound passive design techniques. This means having appropriate areas of glazing facing appropriate directions with appropriate levels of shading, ventilation, insulation and thermal mass.

Drainage and Water Treatment

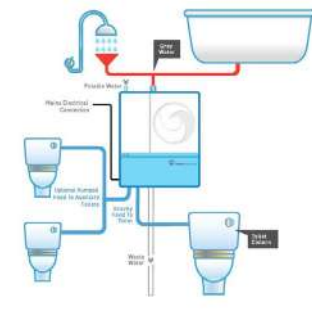
- 4.92 With regards to drainage and water, the conceptual approach is to minimise the need for and maximise the use of water. Rainwater from roof runoff is filtered via a two-stage filtration system. Water is heated by the heat store and used in showers and baths. The wastewater is then collected by a Reaqua unit, which filters and treats the water for use in flushing toilets. Incredibly, the Reaqua unit also recycles the heat from the waste (grey) water and transfers this to the heat store. The solid waste from the toilets is transferred into an Aquatron System. When the toilet is flushed, the contents of the bowl are transported to the Aquatron System where approximately 98% of the liquid fraction is separated by using the momentum of the flushing water, centrifugal force and gravity.
- 4.93 The solid waste falls down into the bio chamber where it is composted by bacteria, and if desired by worms. The composting process is free from odour and flies by virtue that the bio filter is ventilated and the small amount of liquid following the paper down into the bio chamber is removed by a drain at the base of the bio chamber. The resultant liquid proceeds to the UV unit where it is exposed to Ultra Violet (UV) light, which kills the bacteria. In this case, the liquid (foul water) is treated by a packaged water treatment plant prior to its transportation to a 3,000 litre rainwater harvester for reuse.
- 4.94 The rainwater harvester also collects surface water to maximise water efficiency. The resultant potable water can be used to irrigate the area and the overflow water is directed towards the drainage basin which will become an enhanced seasonal wetland area, with resultant ecological and biodiversity benefits.
- 4.95 The solid waste, once treated, forms a rich compost perfectly suited to growing fruit and vegetables if the residents decide or it can be scattered over the meadow for nourishment.



Aquatron



ROCA W+W



Reaqua +

- 4.96 The dwelling will utilise the ROCA W+W, which is a Washbasin and WC integrated together into a single piece of sanitary ware. Its innovative system filters the wash-basin water so it can be reused in the toilet whilst optimising space within the bathroom. A unique, distinct and original design that brings elegance and sustainability to the bathroom.
- 4.97 A foul sewage and surface water assessment was undertaken in may 2021 detailing the proposed sustainable drainage system and foul sewer design. Although this report was created for the previous scheme the water use and strategies remain the same in this scheme. The overflow water and surface water run-off will either be directed to shallow infiltration locations in 0.3m deep meadow planting or to the drainage basin to the north of the dwelling. The proposed drainage basin has been positioned in the existing seasonal wetland area and as part of the proposal native ferns and wetland flora are to be planted to enhance the species diversity.
- 4.98 Rather than a standard hardstanding driveway the proposal will utilise a self draining system called TTE*. The principle of the TTE* system is that every raindrop seeps into the ground directly where it falls. This creates permeable and unsealed areas without surface runoff, that prevents flooding and preserves the natural water cycle and groundwater regeneration. The ‘ecological’ grids protects the ecosystem and integrates itself into the site. Safeguarding the ground life and ecology of the site. It protects the soil against post-compression, the ground remains breathable and it protects the ground water from pollutants. It also provides root protection for old trees in the area and new plantings.

Outline Specification

- Treatable Floor Area = 443 m²
 - Airtightness = 0.6 AC/HR @ 50Pa
 - Upper Wall u-value = 0.07 W/m²K
 - Lower Wall u-value = 0.10 W/m²K
 - Roof u-value = 0.10 W/m²K
 - Floor u-value = 0.10 W/m²K
 - Triple Glazed Windows = < 0.8 W/m²K
 - Glazed Area = 81 m²
 - Glazed Area Facing Due South = 52.3 m² (65%)
 - General Occupancy = 4
 - Shading From Trees Etc = Negligable
 - Passive solar potential = Moderate
 - Specific Annual Heat Demand = 11.23 kWh/m²yr
 - Building Surface Area = 1410m²
 - Building Volume = 2407m³
- 4.99 In the above connection, the proposal is **truly innovative and of exceptional design** in that it is **‘well above average,’ ‘special,’ ‘inspiring’ and ‘unique’** when assessed against the general standard of normal housing proposals locally and nationally.
- 4.100 The holistic technical aspects of the proposals and their seamless integration with the rigorous approach to sustainable environmental design demonstrate the ‘raison d’être’ of NPPF paragraph 84 bullet (e) and exemplify what this positive element of national planning policy seeks to achieve.
- 4.101 The submitted proposal is entirely consistent with the vision and aspirations of the NPPF.



5.0 DESIGN ASSESSMENT

- 5.1 By way of policy background, as you will be aware, the circumstances in which new dwellings of exceptional quality or innovative nature of design can be approved in the countryside are set out at paragraph 84, bullet point (e) of the Revised National Planning Policy Framework (NPPF23).
- 5.2 The pre-cursor to the NPPF in relation to new housing development in the countryside was Planning Policy Statement 7: Sustainable Development in Rural Areas (PPS7). Contrary to the normal policies of restraint for new residential development in the countryside, PPS7 contained an exciting provision (at paragraphs 10 and 11) that allowed new dwellings to be built in the countryside where they were of outstanding quality and design. Those dwellings proposed under the auspice of paragraphs 10 and 11 of PPS7 are commonly known as “PPS7 houses”.
- 5.3 At paragraph 10 of PPS7, the guidance stated that isolated new houses in the countryside would require special justification for planning permission to be granted, whilst at paragraph 11, the guidance went onto say: -
- Very occasionally**, the exceptional quality **and** innovative nature of the design of a proposed, isolated new house may provide this special justification for granting planning permission. Such a design should be truly outstanding and **ground-breaking**, for example, in its use of materials, methods of construction or its contribution to protecting and enhancing the environment, so helping to raise standards of design more generally in rural areas. The value of such a building will be found in its reflection of the highest standards in **contemporary architecture**, the significant enhancement of its immediate setting and its sensitivity to the defining characteristics of the local area.
- 5.4 It was this *provision* that allowed planning permission to be granted for the erection of new dwellings in the countryside where they were outside of defined settlement boundaries.
- 5.5 On 27th March 2012 the Coalition Government issued new national planning guidance in the form of the NPPF. Significantly, the provision that allows the erection of houses of exceptional quality and innovative nature of design in the countryside was retained in the new national planning policy framework.
- 5.6 On the 19th December 2023 the Conservative Government issued the Revised NPPF, which also retained this provision.
- 5.7 At paragraph 84 of the NPPF (2021), the guidance advises local planning authorities that they should avoid new isolated homes in the countryside unless one or more of the required circumstances apply. One such circumstance is paragraph 84e:
- b) The development would represent the optimal viable use of a heritage asset or would be appropriate enabling **development to secure the future of heritage assets**;
- e) The design is of **exceptional** quality, in that it:
- Is truly outstanding, reflecting the highest standards in architecture, and would help to raise standards of design more generally in rural areas; and
 - Would significantly enhance its immediate setting, and be sensitive to the defining characteristics of the local area.

- 5.8 It is clear from the wording of the revised policy that some of the more difficult terms in paragraph 11 of the former PPS7 were not carried forward into the new guidance. For example, terms such as **‘very occasionally’**, **‘innovative’** and **‘ground-breaking’** no longer appear in the policy wording.
- 5.9 Whilst there is no doubt that proposals do continue to have to demonstrate that a dwelling proposed under paragraph 84 of the **NPPF** is of exceptional design quality, and rightly so, the removal from the policy of some of these more difficult terms, with the inclusion of paragraph 139 within the **NPPF** (**‘Significant 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.) was a response by Government to encourage and support those proposals that genuinely seek to raise the bar of quality in the design and execution of new dwellings in the countryside. Significantly, the objective of the policy is not one of constraint, but one of aspiration.
- 5.10 When assessing any application submitted under the auspices of paragraph 84 (e) of the NPPF23 it is therefore important to establish what **‘exceptional’** means. **‘Exceptional’** means unusual, not typical. Such dwellings should be **‘well above average’**, **‘special’**, **‘inspiring’** and **‘unique’**. It is evidently important that the benchmark of **‘typical’** is understood when considering a proposal in relation to Para 84 of the NPPF.
- 5.11 The appropriate benchmark is therefore an assessment of a proposal against the general standard of normal housing proposals in this country. As explained above, paragraph 84 (e) is a positively focused part of national planning policy, which is both aspirational and, most importantly, **achievable**. The NPPF is clear in its purpose to promote and support improvements in the design and sustainability of new housing in England.
- 5.12 The existence of a policy such as paragraph 84 (e) is testament to the desire of Government to facilitate the building of better quality dwellings in rural areas. The policy is a response to the reality that, despite the drive to improve the design quality of new housing generally, new housing continues to be very ordinary and with very poor environmental considerations.
- 5.13 The NPPF also advises that housing applications should be considered in the context of the presumption in favour of sustainable development.
- 5.14 Whilst it is recognised that one of the core planning principles for achieving sustainable development is actively managing patterns of growth to make the fullest possible use of public transport, walking and cycling and focusing significant development in locations which are or can be made sustainable, sustainable development in planning terms is a much broader concept embracing a whole host of objectives.
- 5.15 There are three dimensions to sustainable development which give rise to the need for the planning system to perform a number of roles – an economic role, a social role and an environmental role. Therefore, to achieve sustainable development, economic, social and environmental roles should be sought jointly and simultaneously through the planning system.
- 5.16 Pursuing sustainable development involves seeking positive improvements in the quality of the built, natural and historic environment, as well as in people’s quality of life, including (but not limited to): - moving from a net loss of biodiversity to achieving net gains for nature, improving

- the conditions in which people work, widening the choice of high quality homes, securing high quality design, supporting the transition to a low carbon future, supporting renewable energy generation, contributing to conserving and enhancing the natural environment and reducing pollution, improving the health, social and cultural well-being for all and delivering sufficient community and cultural facilities.
- 5.17 It is therefore appropriate to take a broader view of sustainable development. For the reasons described more fully below, it is the case that the proposed development taken as a whole constitutes a sustainable form of development when considered in its full and proper meaning. The development proposals would achieve high quality inclusive design that would enhance the visual quality of the area. The proposals would assist in supporting the transition to a low carbon future by raising awareness of sustainable design and construction and generating sufficient energy to provide for both the needs of the dwelling itself and for additional properties, reducing current reliance on fossil fuels. The proposals would conserve and enhance the natural environment and achieve an overall net gain for biodiversity. The proposals would minimise water consumption and the proposals would create a new family house, widening the choice of high quality homes.
- 5.18 Moreover, the policy provision in paragraph 84(e) specifically concerns new isolated homes of exceptional quality in the countryside. By definition, proposals formulated under the aegis of paragraph 84 of the NPPF will not therefore be in the most sustainable locations.
- 5.19 However, in this regard, it is also important to take account of the fact that the proposed development does not involve “significant development” that would generate large numbers of vehicle movements, which may otherwise necessitate a more sustainable location to avoid significant harm to overall sustainability objectives.
- 5.20 For all of the aforementioned reasons, it is submitted that the proposed development would constitute a sustainable form of development when assessed against the policies in the NPPF taken as a whole.
- 5.21 The proposed new dwelling is a holistic proposal, which addresses a multitude of considerations and opportunities in its elegant and thoroughly considered design. We have proposed a special and unique dwelling, which is clever in its approach to design and sustainability, and yet sits respectfully within the landscape setting.
- 5.22 The simple elegant form of the proposed dwelling skilfully assimilates into the site while functionally and formally addressing a myriad of site considerations, including; Setting (the immediate and wider environment), Orientation, Water movement, Solar radiation, Ecology, Biodiversity and Landscape character.
- Living with Beauty - January 2020 - The report of the building better, building beautiful commission.**
- 5.23 The purpose of the ‘Building Better, Building Beautiful Commission’ is to tackle the challenge of poor-quality design and build of homes and places, across the country and help ensure as we build for the future. The Commission gathered evidence from both the public and private sector to develop practical policy solutions to ensure the design and style of new developments, including new settlements and the country’s high streets, help to grow a sense of community and place, not undermine it.

- The report proposes a new development and planning framework, which will:
- 5.24 1. Ask for Beauty
We do not see beauty as a cost, to be negotiated away once planning permission has been obtained. It is the benchmark that all new developments should meet. It includes everything that promotes a healthy and happy life, everything that makes a collection of buildings into a place, everything that turns anywhere into somewhere, and nowhere into home. In general, all that we seek by way of human health and environmental sustainability is bound up with beauty. So understood beauty should be an essential condition for the grant of planning permission.
- 5.25 2. Refuse Ugliness
People do not only want beauty in their surroundings. They are repelled by ugliness, which is a social cost that everyone is forced to bear. Ugliness means buildings that are unadaptable, unhealthy and unsightly, and which violate the context in which they are placed. Such buildings destroy the sense of place, undermine the spirit of community, and ensure that we are not at home in our world. Preventing ugliness should be a primary purpose of the planning system.
- 5.26 3. Promote Stewardship
Our built environment and our natural environment belong together. Both should be protected and enhanced for the long-term benefit of the communities that depend on them. Settlements should be renewed, regenerated and cared for. New developments should be regenerative, enhancing their environment and adding to the health, sustainability and biodiversity of their context. For too long now we have been exploiting and spoiling our country. The time has come to enhance and care for it instead. Designed to ensure that we pass on to future generations an inheritance at least as good as the one we have received. New developments should enhance the environment in which they occur, adding to the health, sustainability and biodiversity of their context, and therefore beauty.
- 5.27 The proposal is designed to fulfil these three goals; ensuring the site will be a beautiful place where people want to live and can flourish, freeing people from the blight of ugliness by regenerating the derelict and damaged site, and securing the long-term stewardship of the built heritage and surrounding natural environment within the site. Acting as a pacesetter and example of the success of prioritising beauty in all developments.
- 5.28 Beauty is not just a matter of how buildings look (though it does include this) but involves the wider ‘spirit of the place’. It involves both the visual character and the wider patterns of how we live and the demands we make on our natural environment and the planet. The proposal is designed as a beautiful building, that respects the heritage and landscape of the site and fits into the life and texture of the place. Supporting the cause of beauty on not only one scale but three scales; promoting beautiful buildings in beautiful places, where they are also beautifully placed. The extensive and intrinsic environmental nature of the project is continuous with the pursuit of beauty. Aligning with and exceeding the aspirations of the report.
- National Design Guide - October 2019** (Updated 30th January 2021) - *By the Ministry of Housing, Communities and Local Government.*
- 5.29 The National Planning Policy Framework makes clear that creating high quality buildings and places is fundamental to what the planning and development process should achieve. This design guide, the National Design Guide, illustrates how well-designed places that are beautiful,

Design Statement

Proposed New House of Exceptional Design Quality

- enduring and successful can be achieved in practice and forms part of the Government’s collection of planning practice guidance. The National Design Guide addresses the question of how we recognise well- designed places, by outlining and illustrating the Government’s priorities for well-designed places in the form of ten characteristics.
- 5.30

Buildings are an important component of places and proposals for built development are a focus of the development management system. However good design involves careful attention to other important components of places. These include:
 - the context for places and buildings;
 - hard and soft landscape;
 - technical infrastructure – transport, utilities, services such as drainage; and
 - social infrastructure – social, commercial, leisure uses and activities.
- 5.31

A well-designed place is unlikely to be achieved by focusing only on the appearance, materials and detailing of buildings. It comes about through making the right choices at all levels, including:
 - the layout (or masterplan);
 - the form and scale of buildings;
 - their appearance;
 - landscape;
 - materials; and
 - their detailing.
- 5.32

All developments are made up of these components put together in a particular way. The choices made in the design process contribute towards achieving the ten characteristics and shape the character of a place.
- 5.33

An understanding of the context, history and the cultural characteristics of the site and region has influenced the location, siting and design of the proposal. Ensuring it is well grounded in the locality and creates a positive sense of place to help foster a sense of belonging and contributes to well-being and community cohesion. The proposal has evolved with a thorough understanding of the sites opportunities and constraints, forming a proposal that is proportionate to the nature, size and sensitivity of the site and context beyond the site boundary. However, a well-designed proposal shouldn’t copy their surroundings in every way. Instead, the scheme has introduced elements that react to how we live today, to include innovation and to incorporate new sustainable features and systems. Enhancing positive qualities and improving negative ones. Exceeding the guidance of C1 (*Understand and relate well to the site, its local and wider context*) and C2 (*Value heritage, local history and culture*) of the national design guide.
- 5.34

The footprint and access of the proposal has been adapted from the historic fuel storage tank locations and tracks, adding a richness to the scheme from the unique integration of the sites heritage into the proposal in an environmentally sustainable way. The local vernacular has also informed the treatment of façades, characteristic materials and details, surpassing C2 (*Value heritage, local history and culture*) of the national design guide.
- 5.35

Well-designed, sustainable places with a strong identity give their users, occupiers and owners a sense of pride, helping to create and sustain communities. The scheme aims to delight its occupants and passers-by and will cater to a diverse range of residents and other users. Influenced
- by; the distinctive elements of the site, the light and shade cast on the site and an appreciation and understanding of vernacular, local character, landscape and local architectural precedents. The materials, construction details and planting have been selected with care for their context (local vernacular and native species) and are designed to suit the concept. The scheme responds to existing local character by extracting its own unique, high quality and attractive identity. Aligning with aspirations of I1 (*Respond to existing local character and identity*), I2 (*Well-designed, high quality and attractive*)and I3 (*Create character and identity*) of the national design guide.

5.36

Nature contributes to the quality of a place, and to people’s quality of life, and it is a critical component of a well-designed place. Nature has been prioritised so that diverse ecosystems can flourish to ensure a healthy natural environment that supports and enhances biodiversity. New natural features have been harmoniously incorporated into a multifunctional network that supports quality of place, biodiversity and water management, and addresses climate change mitigation and resilience. Food production and recreation provisions have been integrated to encourage self sufficiency, physical activity and promote health and well-being. Surpassing the guidelines of N1 (*Provide high quality, green open spaces with a variety of landscapes and activities, including play*) of the national design guide.

5.37

The landscape design has considered the wider and local context, access, connection between spaces, potential to contribute to strategic systems (water, energy and heat management) and its future management needs. The extensive environmental and ecological considerations produces a large biodiversity net gain that surpasses the 25-year Environment Plan. Existing areas of valuable biodiversity have been protected and enhanced, with priority given to rare or critical habitats and species. Confirming the project excels beyond the guidelines of N3 (*Support rich and varied biodiversity*) and N1 of the national design guide.

5.38

The dwellings functional, accessible and sustainable design ensures it fulfils H1 (*Healthy, comfortable and safe internal and external environment*) and H2 (*Well-related to external amenity and public spaces*) of the national guide. The internal environments and associated external spaces are designed to adapt and support the health and well-being of a diverse range of users, taking into account factors such as the ageing population and cultural differences. The comfort, safety, security, adaptability and ease of use designed into the proposal promotes an exceptional quality of life for the occupants.

5.39

The building has been designed as an exceptionally efficient and cost effective dwelling to run, reducing its greenhouse gas emissions and encouraging sustainable lifestyles. Strong attention to detail has been made concerning how the building operates on a day-to-day basis, both now and in the future. Refuse storage, cycle storage, services, utilities and external details like drainpipes and gutters have been thoroughly considered to minimise visual impact, unsightliness and avoid clutter. Fulfilling the points of H3 (*Attention to detail: storage, waste, servicing and utilities*) from the national design guide.

5.40

The proposal aims to conserve natural resources including land, water, energy and materials, responding to impacts of climate change by primarily reducing greenhouse gas emissions and minimising embodied energy. Following the energy hierarchy the proposal starts with; reducing the energy need, maximising energy efficiency and producing renewable energy on-site. The scheme makes the most of passive design strategies to minimise overheating and internal comfort by managing solar gain, layout, ventilation, thermal mass and insulation. Also addressing the potential effects of temperature extremes in summer and winter, increased flood risk, and more

intense weather events such as rainstorms. Fulfilling the ambition of R1 (*Follow the energy hierarchy*), R2 (*Selection of materials and construction techniques*) and R3 (*Maximise resilience*) of the national design guide.

5.41

Designed and planned for long-term stewardship, enables users to establish a sense of ownership and belonging, ensuring the building and site will age gracefully, whilst also able to adapt to users’ changing needs and evolving technologies. Designed so management and maintenance responsibilities are clearly defined for all parts of the development. Being designed and made to last fulfils points L1 (*Well-managed and maintained*), L2 (*Adaptable to changing needs and evolving technologies*) and L3 (*A sense of ownership*) of the national design guide.

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Design Statement

Proposed New House of Exceptional Design Quality

CALDYNE PARK

Land at Caldine Park,
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6.0 CONCLUSION

- 6.1 The central plank of the development proposals is the creation of a highly sustainable house of exceptional design quality that will further the Government's design and sustainability objectives by assisting in meeting the challenge of climate change through high quality sustainable design and construction, and landscape and ecological enhancements, thereby helping to raise the standards of design more generally. Underpinning the proposals are important landscape enhancement works that seek to protect and improve the landscape and ecological value of the site and surrounding area through the long-term protection of important existing landscape features and the restoration and creation of new landscape features and natural habitats.
- 6.2 The Government recognises that climate change is one of the greatest challenges to modern day society and that planning plays a key role in helping to shape places to secure radical reductions in greenhouse gas emissions, minimising vulnerability and providing resilience to the impacts of climate change. This objective is central to the economic, social and environmental dimensions of sustainable development.
- 6.3 Another important facet of sustainable development is high quality design. Good design is a key aspect of sustainable development, is indivisible from good planning and should contribute positively to making places better for people. Planning decisions should not attempt to impose architectural styles or particular tastes and they should not stifle innovation, originality or initiative. It is however proper to seek to promote or reinforce local distinctiveness, respond to local character and history and reflect the identity of local surroundings and materials, while not preventing or discouraging innovation. Local planning authorities should not refuse planning permission for buildings that promote high levels of sustainability because of concerns about incompatibility with an existing townscape, if those concerns have been mitigated by good design.
- 6.4 Adopting the Living with Beauty report and National Design Guide as a baseline for good design has allowed the design team to develop a comprehensive design that surpasses the guidance, creating an innovative and exceptional design.
- 6.5 Whilst visual appearance and the architecture of individual buildings are very important factors, securing high quality and inclusive design goes beyond aesthetic considerations to include connections between people and places and the integration of new development into the natural, built and historic environment.
- 6.6 In determining applications, "significant weight" should be given to innovative designs, which help to raise the standard of design more generally in the area. These national planning policy objectives are embodied in paragraph 84(e) and 139 of the NPPF. Whilst the bar set by paragraph 84 is necessarily high, it is clear that the support for houses of exceptional quality or of innovative nature of their design goes to the heart of sustainable development and the Government's objectives for climate change, high quality sustainable design and construction and environmental improvements that is the golden thread running through plan-making and decision-taking.
- 6.7 The proposals emanate from a detailed analysis and understanding of the site and its context with the surrounding area, including the key features and attributes of the landscape character area of which it forms a part. The site appraisal was informed by landscape, arboricultural and ecological surveys undertaken at the outset of the proposals and before any detailed design work was commissioned to provide a rich and in depth understanding of the site and locality. The

design approach adopts good practice guidance in achieving high quality sustainable design.

- 6.8 The detailed analysis of the site identified a number of constrains and highlighted a number of opportunities afforded by the specific landscape characteristics of the site and surrounding area. The design and layout of the proposed dwelling is considered to be respectful of its setting within a small area of woodland previously used as fuel storage during WW11. The design reflects the sensitive nature of the site and ensures its long term preservation.
- 6.9 The conceptual approach to the design of the house has evolved from the detailed site analysis and has created a dwelling that reinterprets the local vernacular in a contemporary and highly sustainable way. Creating a design that assimilates with the landscape and brings together the existing woodland, open glades and other landscape features into an integrated whole, set within an informal landscape setting. The proposed materials are also characteristic of the local area and will minimise the visual impact of the scheme.
- 6.10 However, it is not only the outward design of the house that merits strong praise, but the architectural approach to its sustainable design and construction and how this is linked to a holistic approach to integrated on-site energy generation, energy conservation and water and waste management for the entire development.
- 6.11 In this case, the exceptional quality of the proposals cannot be narrowed down to one or two aspects of the development, although the design elements of the house alone are outstanding. The exceptional quality is more far-reaching as it results from a holistic approach to design hereby the interrelationship of design, materials, siting, orientation, energy demands, energy generation, functional use of spaces, location and landscape when taken together would also significantly further the aims and objectives of the Government's core principles for climate change, design and the natural environment.
- 6.12 The innovations proposed as an integral part of the building design and construction, justify considerable praise. The starting point for this truly sustainable house is the building's ability to minimise heat loss and thereby reduce its demand for energy. The proposed house will be one of the most sustainable buildings in the country, performing beyond passivhaus standards.
- 6.13 The innovative series of low carbon energy strategies have not, to date, been implemented in any building elsewhere in the country. In this respect, the energy strategy for the house is highly innovative and truly outstanding.
- 6.14 For all of the aforementioned reasons, it is submitted to the Council that the multifaceted nature of the proposed development represents a truly outstanding and of exceptional design quality, reflecting the highest standards in architecture that will significantly enhance its immediate setting, whilst being sensitive to the defining characteristics of the local area, thereby helping to raise consciousness of high quality sustainable design and construction and of standards of design more generally in rural areas.
- 6.15 The proposals will secure the necessary conservation and enhancement of the landscape characteristics of the site and provide net gains in biodiversity to the benefit of the surrounding area. The application will also result in the safeguarding of the parts of the ancient woodland that remains and will assist in mitigating the impacts of climate change.

- 6.16 There are not considered to be any highway safety or neighbour amenity issues in relation to this application.
- 6.17 Overall it is considered that the proposal is well designed, respects the character and appearance of the site and its surroundings, and will significantly enhance the character of the area, the immediate countryside and public realm. For these reasons the application proposals should be supported.
- 6.18 The surrounding woodland, hedges and trees will be largely screened from the wider countryside; whilst the proposal itself ensures the conservation and longevity of the ancient woodland.
- 6.19 It is considered that the application meets the specific requirements of the NPPF in relation to new homes in the countryside, and increasing biodiversity as a result of its high quality design and proposed woodland management plan and on this basis there is a clear material planning consideration that justifies the grant of planning permission in this instance.
- 6.20 It is therefore respectfully requested that the council supports the objectives inherent within the proposals and gives substantial weight to the benefits that would flow from the grant of planning permission, in accordance with the advice, aims and policy objectives of the National Planning Policy Framework, the suite of plans and documents designed to protect and enhance the landscape and ecological value of our environment.

