



CROSS ROAD DESIGN & ACCESS STATEMENT

JUNE 2020 REV 00

CROSS ROAD, ANGMERING



Google aerial image of the site

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APPENDICES

Other relevant reports referred to in this document (submitted as separate documents)

Pre-Planning feedback letter from Arun District Council

Arun District Council's feedback to the pre-planning application that pre seeded this application (ref PAA/140/19)

Landscape, Ecology and Biodiversity information (provided by Lizard Landscaping Design and Ecology)

Landscape Plan (illustrating areas of soft and hard landscape and screening to enhance private and neighbour amenity)

Landscape Design Strategy (describing the above)

Environmental Impact Assessment (including the biodiversity survey and report, ecological survey and report)

Tree Constraints Plan

Existing Tree Survey

Tree Retention and Protection Plan

Arboricultural Impact Assessment and Method Statement (Tree Protection and Protection)

DEFRA Biodiversity Metric (Biodiversity Net Gain Plan)

Site Analysis (provided by EAS)

Flood Risk Assessment

Land Contamination Report

Sustainability Technology (provided by Enhabit Mechanical and Electrical Engineers)

Mechanical Services Schematic (heating, hot and cold water and solar)

Mecanical and Ventilation Services Specification

Mechanical Services Layout

Ventilation Report (MVHR Layout)

Solar Technologies

Introduction

This application seeks Full Planning Approval for a new build, detached 5-bedroom house with an attached single storey double garage and carport.

The new house accommodates the main living spaces and bedrooms on two floors with a mezzanine to one of the bedrooms at roof level and a single-storey basement below part of the house. Traditional materials and forms have been worked alongside contemporary components and architectural detailing to create a modern building that reflects and celebrates the vernacular materials and the site's locality.

The proposal includes hard and soft landscaping across the whole site and an access road from Cross Road (to the east of 1 Cross Road) through the site to the new house, garage and carport.

The site is currently undeveloped with a number of TPO trees and mature vegetation. As a result, a number of independent studies and reports have been completed and their conclusions co-originated within the design to ensure the existing assets of the site are suitably managed, protected, enhanced and integrated into the proposed scheme. Please see the contents above for a list of these reports submitted as separate documents within this application.

A previous planning application (ref R/91/17/PL) and a constructive pre-planning process (ref PAA/140/19) have positively informed the scheme throughout the design process. Please refer to Planning History and Pre-Planning below for more details.

The application consists of the main planning drawings, this Design and Access Statement, a photo montage street scene, various consultant's report (as noted in the contents of this document), a Planning summary and Completed CIL forms.

We would be happy to help with any queries or welcome any dialogue during the statutory period to aid the success of the application, please do call or email if you have and queries or require any further information.

Site & Planning

Site Description

Setting: The site is approximately 3,238 sqm (approximately 0.3 hectares) vacant back land within the Willowhayne Estate and is surrounded by large detached houses set within large private gardens. The site is predominately flat with grass, scrubs, vegetation and mature trees, a number of which have Tree Preservation Orders (see Arboriculture below).

The site previously formed part of the gardens to 'The Spires', a large detached dwelling accessed from Springfield Close. The Spires Estate was divided into three plots, 'The Spires' itself, plot 1 to the west and plot 2 to the north, for which planning permission for the division of the land, alterations to the original house and the construction of two new 5-bedroom houses (one on plot 1 and one on 2) was granted. The northern site (plot 2) with access from Cross Road (to the east of 1 Cross Road) forms the site for this application.

The Willowhayne Estate comprises of a mixture of large detached residential properties that vary in age and architectural style. The majority of the surrounding properties are two storey, set back from the road with large maturely landscaped private plots. The Spires building itself is not Listed but is of architectural merit and historic interest.

The site sits approximately mid-way between Angmering train station, 0.6 m to the North and the coastline 0.7m to the South, it is within walking distance of bus stops and a range of services. It is within Rustington Neighborhood Plan Area, within the Built-Up Area Boundary and of interest to the Willowhayne Estate Residents.

Biodiversity / Protected Species / Ecology: Due to the existing undeveloped nature of the site a Net Biodiversity Gain site plan has been completed by Lizard Landscape Design and Ecology (LLD) and submitted as part of this application along with; A full Ecological Survey and Report; Badger Sett, Reptile & Bat Surveys and Mitigation Proposals.

Please refer to all the relevant information provided by LLD (as listed above in the contents) for full details regarding the existing site, the impact of the proposed scheme and proposed means of mitigation and enhancement of the biodiversity and ecology of the site.

Arboriculture: The site has many trees, a number of which have Tree Preservation Orders (TPO). To ensure the existing trees are protected a tree survey and Arboricultural Implications Assessment (AIA) with a tree survey schedule, a Root Protection Assessment (RPA) schedule and a tree constraints plan (with accurately plotted trees has been completed by Lizard Landscape Design and Ecology (LLD).

Please refer to all the relevant information provided by LLD (as listed above in the contents) for full details regarding the existing site, the impact of the proposed scheme and proposed means of mitigation and enhancement.

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Flood Risk: The site is within a Flood zone 1 area. However due to the provision of a habitable basement, a Flood Risk Assessment (FRA) (including winter ground testing) has been completed by EAS (Environmental Assessment Services) to ensure the basement would not be at risk of flooding from groundwater or surface water sources.

As a result of the work completed for the FRA, EAS have confirmed:

- There will be no requirement for flood warning and evacuation plans as the site is in Flood Zone 1 and not within a flood risk area (not 2 or 3).
- The site would not be isolated by flooding in the surrounding area.
- Flood resistant and resilient measures will only comprise keeping groundwater out of the basement.

The points below illustrate the design implications raised by the Flood Risk Assessment and how each of these points have been incorporated or proposed to be implemented (at the suitable time):

- The basement is not to house any bedrooms.

The proposals do not include bedrooms at basement level.

- The basement is to be tanked to a waterproof standard incorporating a sump with an automatic pump as a precautionary measure.

The detail design of the tanking will ensure these measures are achieved as a minimum.

- The ground floor level should not be less than 300mm above the existing ground level.

The ground level has been increased to 300mm above existing ground level. This has increased the main ridge height by 0.35m above the previously approved house for the site. Please refer to scale for more information regarding the ridge height.

- A Sustainable Drainage Solution (SuDs) will be required, comprising of a soak-away and additional SuDS options such as permeable paving over drainage blankets and rainwater harvesting from the down pipes for garden irrigation.

A Sustainable Drainage Solution has been incorporated, please refer to the Drainage section for more information regarding the SuDs.

- A maintenance management plan incorporating the recommended maintenance of any new chambers, gullies, soak-away and clearance of the debris from the large amount of vegetation on the site should be collated during the detail design stage, provided to client and advised to be provided and implemented by the freeholder of the property now and in the future.

The client will commission the collation, completion and provision of a maintenance plan as part of the detail design, construction and completion stages of the project.

Please refer to the Flood Risk Assessment by EAS for full details of this report.

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Land Contamination: It is unlikely the site is contaminated due to its previous domestic garden use. However, it's historic use is unknown and therefore due to the dig required for the basement a Preliminary Risk Assessment (Phase 1 report) has been completed by EAS.

The overall conclusions and recommendations of the Contamination Risk Assessment were:

- No contamination has been identified.
- The probability of impact for residential use is low due to there being no historical land use other than park/gardens.
- The overall risk rating for the site is low.
- No further intrusive site investigation is required in this case, subject to;
 - o the council being informed, and necessary remediation work carried out if any unexpected contamination is identified, and
 - o groundworkers engaged in the development site use appropriate industrial hygiene measures to reduce any potential risk.

Please refer to the Contamination Risk Assessment by EAS for full details of this report.

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Planning History

As noted above, Planning Permission has previously been granted for a new detached 5-bedroom house on the site as part of an application for two new detached houses on separate plots of the garden land of 'The Spires'.

Relevant Planning and Pre-Planning applications relating to the application site are:

R/91/17/PL

Erection of 2 dwellings with two detached garages. Approved 15.06.2017.

R/172/19/T

Various works to various trees. Approved Conditionally 17.09.2019.

Pre-Planning

PAA/140/19

New build, 5-bed family house with similar siting, layout, orientation and mass as previously approved scheme R/91/17/PL.

Arun District Council's feedback to the scheme submitted for pre-planning concluded that subject to the detailed comments the scheme would likely be approved due to its similar character and visual amenity reflecting that of the area, its neighbouring residential amenity, space standards, car and cycle provision and safe access. Please refer to the copy of the letter from Arun District Council dated 16.01.2020 submitted with this application for the full response.

Since the Pre-Planning application, the detailed comments raised in the Council's feedback have been used to further develop the design incorporating input from a wider design team including EAS (Environmental Assessment Services Ltd), Lizard landscape Design and Ecology and Enhabit (Mechanical and Electrical Engineers) to ensure the design proposed in this full planning application is robust and positively addresses Arun District Council's comments.

We have used this Design and Access Statement to illustrate how the design has been developed to address the initial brief, relevant planning policies and the points raised (within the pre-planning feedback) regarding Crime Prevention, Biodiversity, Protected Species, Land Contamination, Protected trees, Flooding, Sustainable Construction, Highways, Transport, Parking, Amenity Space and Neighbour Amenity. Please do contact us if you have any queries regarding any of these points.

Proposed Scheme

Setting & Layout

The character of the surrounding properties is of two storey pitched roof detached houses set back from the road with front, back and side gardens.

The site itself is set back from the road and thus is hidden from the street scene (please see the photo montage street scene also submitted with this application). The setting and layout of the house on the site, has been driven by the existing conditions of the site and relationship/impact on the backs and sides of the surrounding properties, potential for renewable energy (now or in the future) and enjoyment of the site itself.

The proposed house sits in a similar position as the previously permitted house, albeit with an attached garage rather than a detached garage.

The position and orientation of the new house:

- Aids natural navigation and reduces the extent of driveway required (and thus vehicular disruption on the private or neighbouring external amenity space) by facing the entrance and combining the access to the house and garage in one place. The relocation of the garage (from the previous permitted scheme) also enables vehicle access to the house for disabled and/or services (see 'Access' below), avoids being the focus of the main vista onto the site from Cross Road and reduces additional hard landscaping in the south east corner.
- Minimises the disruption to the existing mature trees and utilises them within the proposed landscaping to aid the extent of screening/privacy between the new house and the neighbouring properties. (see 'Landscaping' section below)
- Promotes views across the longer vistas (east and west) ensuring enhancing its own sense of space and privacy within its setting.
- Eliminates adverse overlooking from the front and rear openings of the new dwelling to neighbouring properties to the east or west.
- Prevents significant overbearing, loss of outlook, light or privacy to the neighbouring properties.
- Creates large garden spaces to the east and west for good private amenity (see 'Landscaping' section below).
- Promotes the amount of natural daylight gained within the internal spaces whilst managing solar gain.
- Whilst the roof does not maximise the south facing aspect of the site, due to the other considerations noted above, efficient solar energy can be gained via solar panels on the west facing pitch of the main roof. Please refer to the Solar Technologies Layout and Mechanical Services Schematic (provided by Enhabit) for more information regarding the design, layout and amount of solar energy proposed.

Please see 'Scale and Form' below with regards to how the proposed house responds to the local characters scale and form.

Internally the layout for the house has been designed to:

- Maximise the enjoyment of the views out across the site east and west, through the position of the larger openings.
- Minimise overlooking and loss of privacy to and from the closest properties 'The Spires' to the south and 3 Cross Road to the north. This is achieved through the use of louvres to the corner glazing in the kitchen, the overhanging eaves to the southern kitchen window, higher window sill levels (over 1.7m in the dressing room) and obscured glazing to the main bathroom and en-suite to the north, in addition to the obscuring of the bathroom window by the carport/garage roof to the north.
- Gain natural daylight throughout the day and control solar gain.
- Provide open plan living yet enable each space to be separately closed off to manage the distribution of heat, ventilation and noise.

A double height hall open to the dining space creates a feature space through which you enter the house and pass through between all the other rooms. A ground level connecting doors between the separate rooms around the central double height space promotes a sense of open plan whilst enabling each space to be closed off to manage heat, ventilation and noise separately when required.

The kitchen family room takes advantage of natural daylight from the east, south and west. The full height bi-fold doors to the east and west maximises the natural daylight throughout the day and focuses the vistas of the room across the wider stretches of the site and main garden areas. The solar gain from the south facing windows is reduced through louvres to the corner window and a higher sill level (above the kitchen counter) and oversailing low eaves above the central southern window.

The formal lounge and dining room face the more private west facing garden to the rear of the property.

At first floor, a balcony landing crosses the entrance hall, accessed via the stairs in the hall. The landing leads to the family bathroom and all five bedrooms, including bedroom 5 which has a mezzanine within the roof space above overlooking the hall through a glazed screen. All the bedrooms face east or west over the main areas of the garden. The dressing room to the south is lit by a southern window positioned above 1.7m from the floor height to manage any overlooking issues over 'The Spires'.

At second floor level, within the roof space, bedroom 5 mezzanine leads to an en-suite and two loft spaces for the MVHR (mechanical ventilation heat recovery) ventilation plant and general storage.

The basement is accessed via a stair housed within a glass link between the house and the garage. The glass link is accessed from the office. The glass link acts as a lightwell to the basement, enables a direct exit from the basement to the outside (for fire safety purposes), sheltered access directly from the house to the carport/garage and visually separates the garage from the house. Additional natural light and natural ventilation is also gained in the basement from an external lower terrace to the north of the carport/garage.

The garage has large opening garage doors either end to enable vehicle access from the front and storage access for garden equipment and accessories from the rear.

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Scale & Form

The traditional two storey pitch roofed form is representative of the local character of the Willowhayne Estate that surrounds the site.

The proposed footprint is larger than that of the previously approved scheme (R/91/17/PL). This is primarily due to the addition of an attached single storey carport/garage (rather than the separate detached garage). In addition to the carport/garage, the thickness of the walls has been increased (400mm) to allow for a higher quality sustainable building fabric with improved thermal performance and levels of airtightness.

The ridge height is approximately 0.4metres higher than that of the previously approved scheme (R/91/17/PL). Primarily due to the level of the ground floor (300mm above the existing ground level, as advised in the Flood Risk Assessment), additional accommodation in the roof and a thicker roof construction allowing for improved thermal requirements of Part L 2020. Any detrimental impact resulting from this slight increase in height has been mitigated through the use of a hipped roof that minimizes the length of the ridge and thus any impact on the site or its surrounding.

Appearance & Materials

The fenestration design and palette of materials has been developed to use local vernacular materials alongside contemporary components and architectural detailing to create a modern appearance that complements the color and texture of the locality.

The movement of the oak frame, texture of the clay tiles and brick create a warm depth to the facades between the clean architectural contemporary lines of the aluminum glazing and metal rainwater goods.

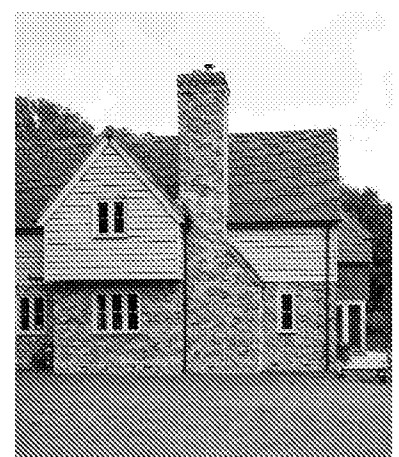
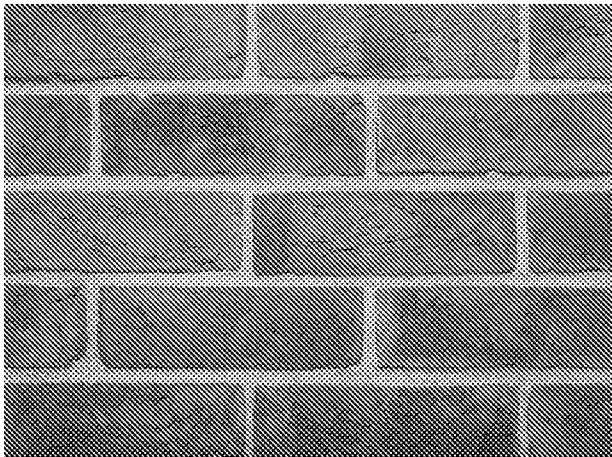
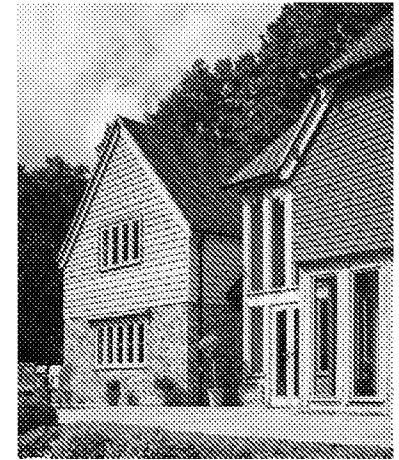
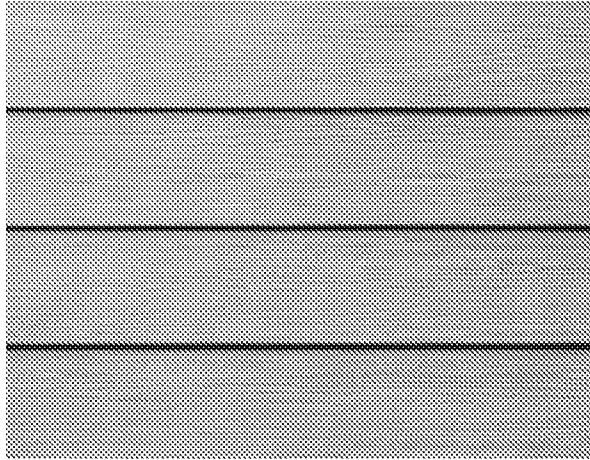
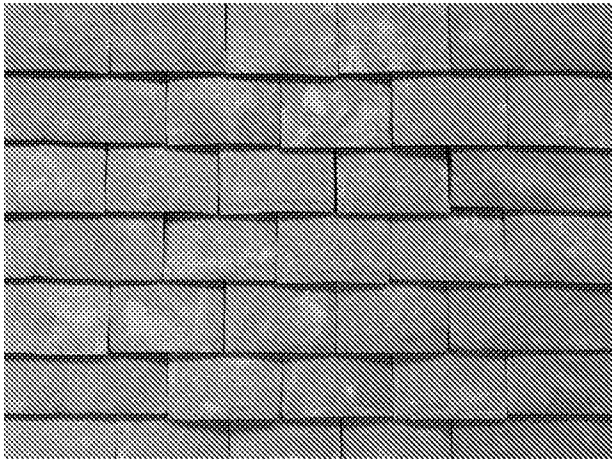
The exposed oak frame infilled with glass and timber cladding accentuate the lighter timber framed core and corner window features alongside the weightier brick and tile hung walls either side.

The oak frame is also exposed along the south elevation to support the catslide roof over the south facing kitchen window, and at either end of the carport/garage to form a porch to the wide openings.

The two tall brick chimneys are topped with clean modern chimney cowels. This enables the front chimney to be used for ventilation and the rear for a fire if required.

Solar panels are proposed to be installed at the same time as the tiling of the roof to enable inline solar panels to be used if viable at the time of construction.

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Materials

Precedent

Amount & Use

Use

The proposed house is for the private owner of the site and his family to live in as their primary residence.

Size and Internal Amenity

The house has a gross internal area of approximately 556 sqm (this includes the basement and glass link, excludes loft area and the garage).

The garage is approximately 45sqm.

The house has been designed to meet the national and local internal and external space standards.

Storage is provided on every floor: a storeroom in the basement, a cloak/boot room, Utility/pantry, Laundry/Utility, boot cupboard, IT server and general built in cupboards at ground level; a laundry cupboard and built in wardrobes at first floor; and a wardrobe and loft storage space within the roof space accommodation.

All rooms meet the minimum width requirements and allow for full furniture and activity zones. Floor to ceiling heights are standard to better than standard, and circulation space exceeds the minimum standards.

Size and External Amenity

The external amenity space of approximately 3000sqm wraps around the new house, providing a varied external space for the residents. Please refer to the Landscape Plan and Landscape Design Strategy (by LLD) for more detail regarding these various areas. The impact on the neighbours' amenity has been considered throughout the design stages of the project, using orientation, placement and detailing to reduce any visual and physical impact of the new scheme on the surrounding neighbours. Soft landscaping and considerate planting has been incorporated into the landscape design to reduce overlooking and enhance a sense of privacy for the neighbours and new residents of the site.

Services (Heating, Power and Drainage)

Heating: An Air Source Heat Pump system has been designed and fully integrated into the scheme by Enhabit (Mechanical and Electrical Engineers) to provide the heating and hot water instead of a traditional boiler to reduce the demand on non-renewable resources. Enhabit joined the design team at an early stage in the project to work alongside the Architect to ensure the Architectural and Services designs work efficiently together to form a truly cohesive scheme.

The use of an ASHP also precludes the necessity for a gas connection. Gas may be connected if desired for cooking or secondary heating (gas fire) however remains optional and the demand on such a non-renewable source reduced if not eliminated for future use. Please refer to Enhabit's reports submitted separately as part of this submission for more detail on the proposed heating and hot water system.

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Power: The new house will be connected to the mains electricity for power and supplemented by solar panels on the roof. An electric car charging facility will be provided within the garage to support the use of electric vehicles.

Drainage:

Surface: There is no formal surface water drainage on the existing site. A Sustainable Drainage System (SuDS) has been deemed necessary and thus incorporated within the design with regards to surface water drainage. Please refer to the Flood Risk Assessment by EAS for more information regarding the existing and proposed requirements concerning surface water drainage.

The Sustainable Drainage Solution has been incorporated through the provision of;

- a soak-away (7m x8m x0.4m deep) within the soft landscaped area of the garden. Please refer to the site plan (drawing number 1004) and figure 3 of the Flood Risk Assessment (by EAS) for the more information regarding the location and specification of the soak-away.
- a rain garden creating additional rainwater attenuation (refer to the Landscape Design Strategy for more information),
- permeable hard landscaping for the drive (refer to the Landscape Design Strategy for more information), and
- the provision of rainwater harvesting for irrigation purposes. Tanks are currently proposed to be below ground, subject to their viability. Their size and position are to be determined at detail design stage, allowing for the requirements of the rainwater garden).

Foul: Foul drainage will drain to the main sewer in Cross Road via a new pipe. The new pipe will run from the house, down the drive to the entrance and connect to the main sewer on the southern side of Cross Road close to the entrance of the site. Please refer to point 5.6 of the Flood Risk Assessment by EAS regarding the feasibility and foul drainage design work completed to date.

Access, Parking, Crime prevention, Bin strategy, Specific construction consideration

Access and Parking

Entrance:

New remote/client operated gates are proposed to be fitted at the entrance to the site from Cross Road. The gates will be similar in height to the existing close board fence. The gates are recessed back from the pavement edge to allow a safe pull in zone for cars entering or leaving the site. A waste collection area with a dedicated service gate is also provided to one side (adjacent to a secure mailbox).

Inclusive access:

Externally, the driveway leads from Cross Road to the front of the house and adjacent carport/garage, enabling all occupants and visitors to access the house.

Due to the advice of the Flood Risk Assessment, the ground floor level of the house is 300mm above the existing ground level. In accordance with Part M, the difference has been accommodated through a step of 150mm (aligned with the outside face of the front door) and a shallow (approximately 1:50) incline of 150mm from the existing ground level to the bottom of the entrance step.

Deliveries can be delivered and picked up from a secure mailbox at the gate or directly from the house via a security entrance system at the front gate.

Internally, the house has been designed to meet Part M category 1, with suitable activity zones, doors widths, corridor widths and details to ensure the house is a visitable dwelling.

Parking and bike storage provision:

The double garage has an internal width of 6m and length of 7.5m. The additional length provides an area of approximately 9sqm for the storage of bins and bikes, accessed independently from the rear garage doors of the garage to enable access without interrupting the use of the carport or garage.

The double garage, carport and driveway provide parking space for 7 cars (5 cars without blocking the two garaged spaces). If the calculation of 0.5 per car space within a garage is applied, the overall number of parking spaces 6 (4 without blocking other parked cars).

West Sussex County Council Parking Standards require a 5-bedroom house in a parking behavior zone of 5 to have 2.2 parking spaces. This can be rounded to 2. Therefore, the parking requirement of 2.2 spaces (rounded to 2) required by West Sussex County Council Parking Standards for a 5-bedroom house in a parking behavior zone of 5 is met and exceeded.

An electric car charging point is also to be provided within the double garage.

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Crime Prevention

The site's position in the centre of the urban block limits the benefits of natural public surveillance to the front of the property yet aids the ability to control and manage public access to the new house, garden and neighboring properties (from the site). The occupation of the site and installation of the following interventions will enhance the existing security not only for the new owners but also for the adjacent neighboring properties:

- New remote-controlled security gates, with audio (and potentially visual) connection to the new house in place of the existing gates at the site entrance on Cross Road.
- A secure large locked post box at the site entrance along Cross Road to reduce the need for people to access the main site unless invited or authorised by the owners.
- Remote controlled low-level sensitive security lighting to the drive and landscape to aid night surveillance when required.
- Built in security alarm in the house, basement and garage.
- High quality doors and windows installed with locks.
- Natural surveillance over the majority of the garden from the house.

Bin Storage / Collection

Provision for bin storage has been provided within the kitchen, garage and at the entrance to the site. Within the kitchen an undercounter refuse and recycling bin will be built into the fitted kitchen. In the garage and secure bin store at the gate, space for two 240 litre wheelie bins have been provided (one for refuse and one for recycling). Please refer to the ground floor plan for the garage provision and the site plan for the gate and collection positions. Additional space is also provided for other waste options now or in the future (such as green waste).

Collection of the refuse and recycling will be by the Council from the kerbside. The owner of the house will be responsible for placing the refuse and recycling on the kerbside (adjacent to the main entrance) on the correct day for collection.

Construction Management Plans

Given the degree of construction works involved in the creation of the basement a Construction Management Plan (CMP) setting out the management of noise, dust and vibration along with a Construction Traffic Management Plan (CTMP) setting out the management of construction vehicles in and out of the site from the access off Cross Road will be completed by the contractor prior to the commencement of any works associated with the basement. The Management Plans have not been drafted for inclusion in this application as they will benefit from a more detailed design of the basement and input of a contractor to ensure they are robust and suitable for implementation. We would therefore request this is dealt with as a condition if the Council wish to approve the CMP and CTMP prior to the commencement of the basement works.

Sustainability

Environmental Sustainability

The environmental sustainability of the project has been developed through a 'low tech, fabric first' approach, complimented by mechanical infrastructure to further reduce the potential energy demand and impact of the proposals on the environment.

The site's conditions (location and orientation) alongside the orientation, form and materials of the proposals have been considered and used to maximise the benefits of the natural (low tech) and mechanical (high tech) elements of the design, such as;

- The site is located approximately 0.6 miles from Angmering Train station (to the North), 0.7miles from the coastline (to the South) and within walking distance of bus stops and a range of services, making it highly accessible and suitable for the promotion of sustainable means of transport.
- Secure bike storage has been provided within the storage area of the garage to promote sustainable travel locally. Please note, the storage area is additional to the parking area of the garage and can be accessed separately.
- An electric car charging point is proposed to be installed within the double garage to promote the use of an electric car.
- The position, orientation, fenestration and internal layout of the rooms has been designed to enhance natural cross ventilation, daylight capture, solar gain, solar control and protection from the south west prevailing winds.
- Construction thicknesses have been increased to enable the external fabric of the building to provide a high thermal performance (in winter and summer) and good air tightness.
- A Sustainable Drainage System for surface water drainage (please refer to the Drainage section for more information)
- A Mechanical Ventilation Heat Recovery (MVHR) system has been designed and fully integrated into the scheme. Please refer to Enhabit's reports for more information regarding the MVHR.
- An Air Source Heat Pump (ASHP) heating system has been designed and fully integrated into the scheme by Enhabit (Mechanical and Electrical Engineers). Please refer to Enhabit's reports for more information regarding the ASHP.
- Solar panels have been incorporated into the design of the roof to maximise the solar energy potential alongside minimizing the visual impact of the panels and allowing for the optimum number based on the demand of the house and financial implications.

Social and Economic Sustainability

The house will enable the family of three generations to live together, pooling resources and energy use.

Proximity to the local shops and services will also enable the new residence to enhance and support the vibrancy and economy of the local area.