



Architects
Atelier De Linde



Architects
Tony Trifiletti



Landscape Architects
Joe Perkins Design

SCARP HOUSE

STAGE 3 – DESIGN AND ACCESS STATEMENT

13/08/2026

REV A

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INTRODUCTION

WIDER PROFESSIONAL TEAM

Atelier de Linde Limited – Angie Pool & Tara de Linde

TT Architecture Limited – Tony Trifiletti

Axiom Planning – Daniel Gender-Sherry & Emma Patchell

Joe Perkins Design – Joe Perkins & Katie Ryan

gta Civils and Transport – Rachel Stevenson

David Parfitt Landscape Consultancy Ltd – David Parfitt

The Arboricultural Consultancy Ltd – Ben Tidey

Tom Haley Ecology – Brooke Waites

Achieve Green – Jonathan Southworth

SITE CONTEXT

AERIAL MAP 2018



Fig.3- Annotated Aerial Map

CLIENT BRIEF

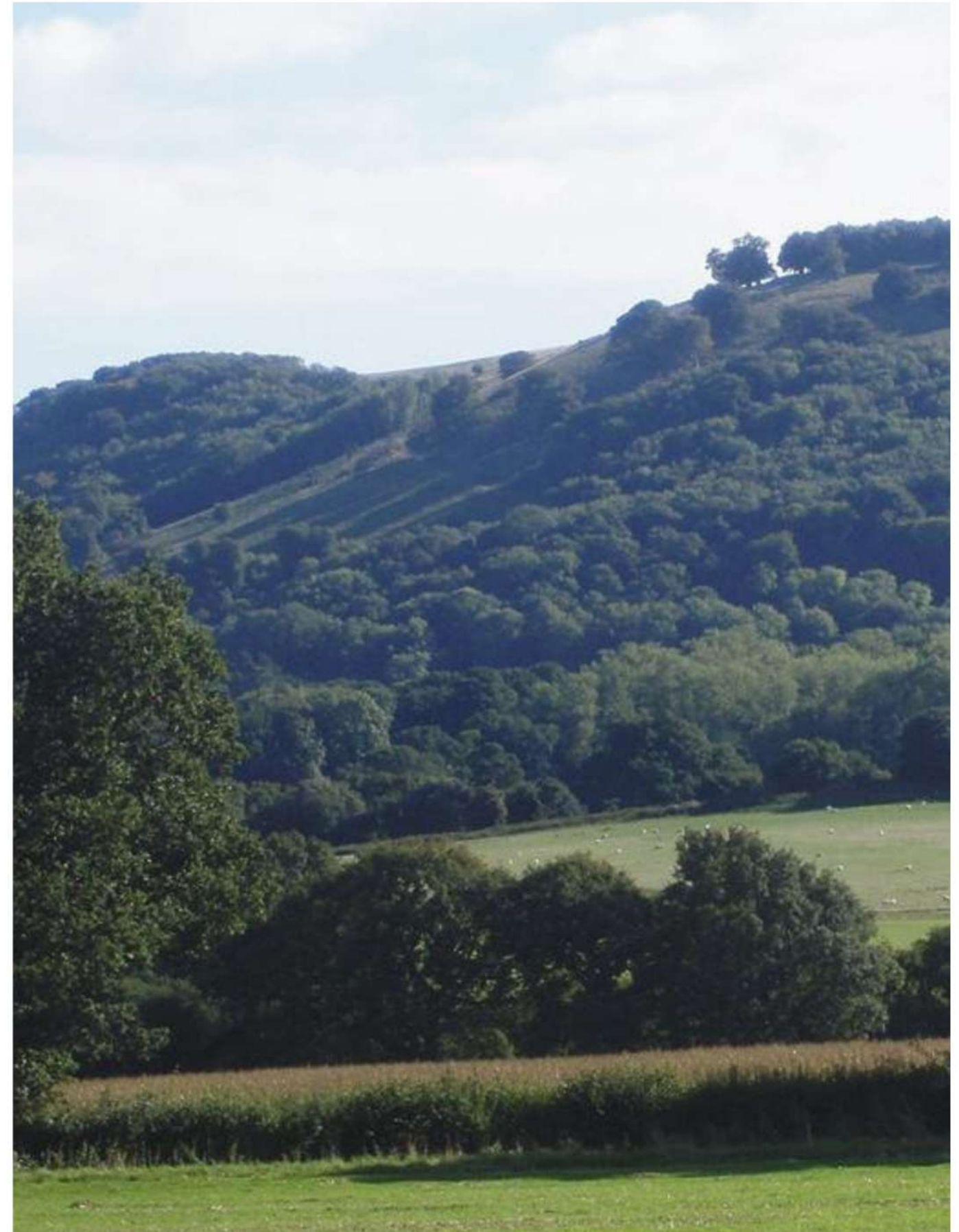
Our clients seek to create a sustainable, fabric first family home that is deeply rooted in its landscape and respectful of its setting. The clients who own Sunningdale spend significant time in and around the South Downs with their young family, and are committed and passionate about building a home that reflects the character, ecology, and spirit of the place.

A key priority is the use of landscape to provide strong natural screening. The clients wish for the proposed house to remain visually discreet and largely hidden from neighbouring plots, leaving minimal impact on the wider landscape. To support this, they are particularly interested in how topography and planting structure can be used to soften the built form and embed the home within its surroundings.

The clients have a long-standing passion for building homes of exceptional quality. This project represents a personal and generational investment in creating a place that is both enduring and ecologically sensitive. They are especially drawn to the idea of a landscape that supports biodiversity, seasonal change, and long-term stewardship.

On the current plot, the clients invest heavily in growing produce for use in the kitchen by the family. Fruit, vegetables, and herbs are cultivated with care, and their garden plays an active role in daily family life. They are keen to explore how this productive landscape can be expanded through orchards, edible planting, and informal gathering spaces that connect domestic life with the rhythms of the land nearby and beyond. The proposed dwelling will deliver a landscape that supports a more sustainable lifestyle, limiting waste as well as a measurable impact on the long term health and wellness of its future custodians.

This is a deeply personal vision for a home that is shaped by the South Downs and our clients were adamant that ultimately any home built on this site would contribute positively to its location. Early conversations around the natural rhythms of the hills beyond, the clients personal love of walking the Downs and the fact that the scarps were identified as a key view from Sunningdale seemed a natural place to start developing a concept and gave context to the early design research and development.



INTRODUCTION & EARLY RESEARCH

SITE INTRODUCTION RECAP

The purpose of this document is to comprehensively support the outstanding design of the proposed development under paragraph 84 on land south of Sunningdale. This document outlines the in-depth analysis & research that underpins the high quality proposal demanded by this clause. The principles and concepts derived from this analysis ensure this proposal reflects the highest standards of architecture & enhances it's immediate setting whilst ensuring a sensitivity to the character of the local area.

SITE DETAILS

ADDRESS:

Land South of Sunningdale
Horsham Road
Steyning
BN44 3AA

LOCAL AUTHORITY

Horsham District Council

PARISH / WARD:

Steyning Parish Council

SITE INFORMATION

DESIGNATIONS:

- Not within ancient woodland or a 15m buffer zone.
- Not within an Archaeological Notification Area.
- Not within a conservation area.
- Not within an Area of Outstanding Natural Beauty.
- Not within or nearby a priority habitat.
- Not within any areas of Tree Preservation Order.

CONSTRAINTS:

- Not subject to any Article 4 direction (permitted development applies).
- Not within a brownfield land registry.
- Not within or nearby a section 106.
- Not within 50m of any listed buildings.

FLOOD RISKS:

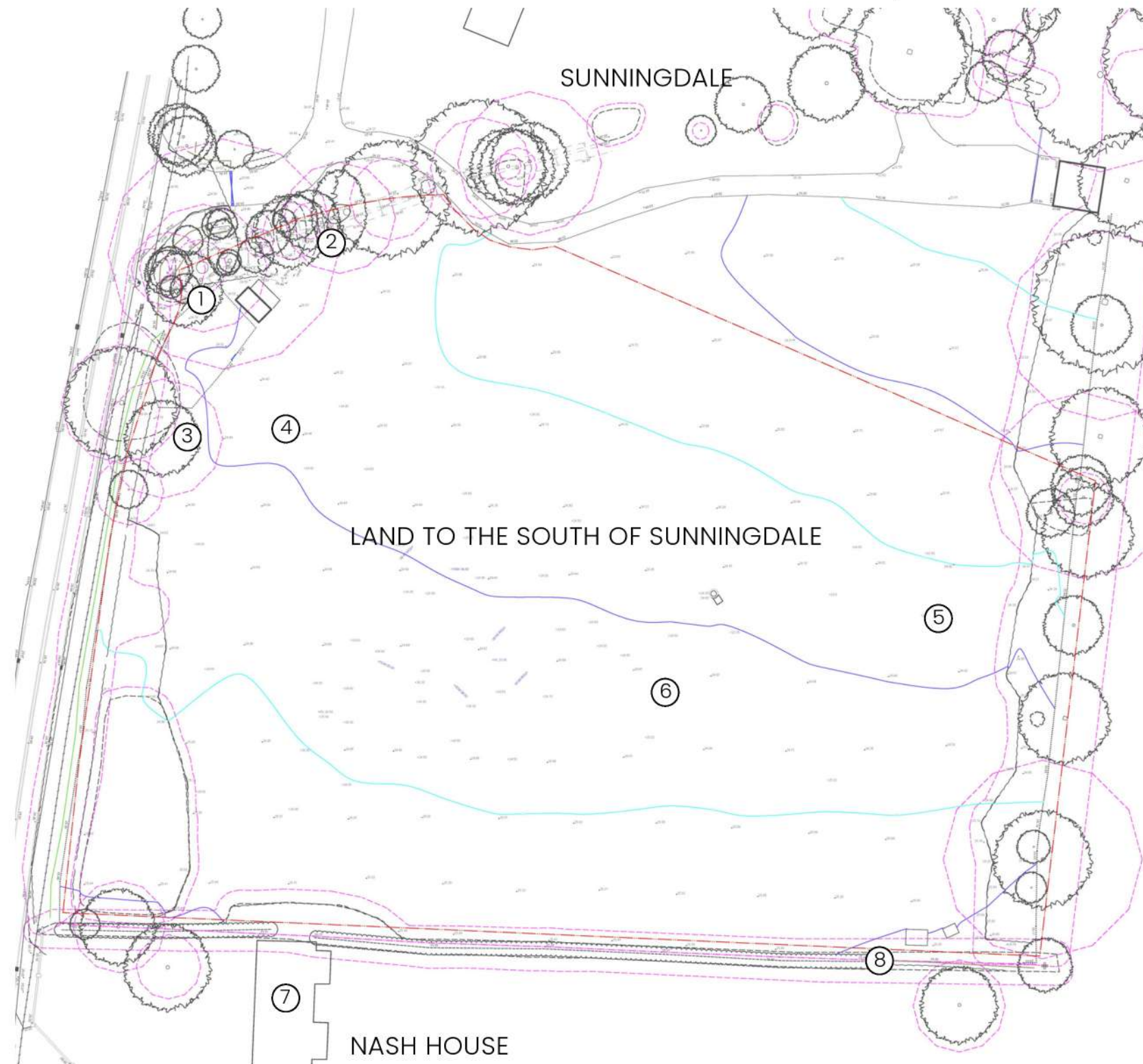
- Flood zone: 1
- Surface water: Low
- Rivers and the sea: Very low
- Groundwater: Unlikely
- Reservoirs: Unlikely

HM LAND REGISTRY:

- Tenure type: Freehold
- Restrictive covenants: No
- Easements: No

EXISTING SITE PLAN

LAND TO THE SOUTH OF SUNNINGDALE – TOPOGRAPHICAL DATA , KEY NOTES & SITE CONTEXT



- 1 EXISTING SITE ENTRANCE**
Gravel driveway and gate.
- 2 SUNNINGDALE DRIVEWAY**
Gravel driveway.
- 3 MATURE ASH TREES**
Collection of varying grades of mature trees and scrub.
- 4 PRODUCTIVE GARDEN STRUCTURES**
Polytunnel, vegetable garden and shed with concrete patio.
- 5 MATURE TREE BOUNDARY**
Mixed shrubs with mature Oak, Elder and Hazel.
- 6 WELL**
Brick and timber well with tiled roof and pump.
- 7 NEIGHBOURING PROPRTY**
Partially screened by shrubs.
- 8 GARDEN FURNITURE**
Timber bench and play furniture.

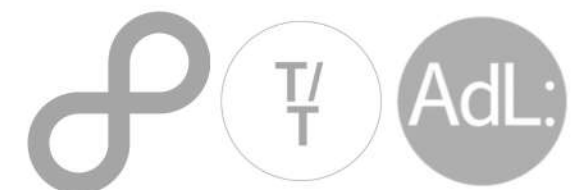
Fig.4- Existing Site Plan

SITE CONTEXT



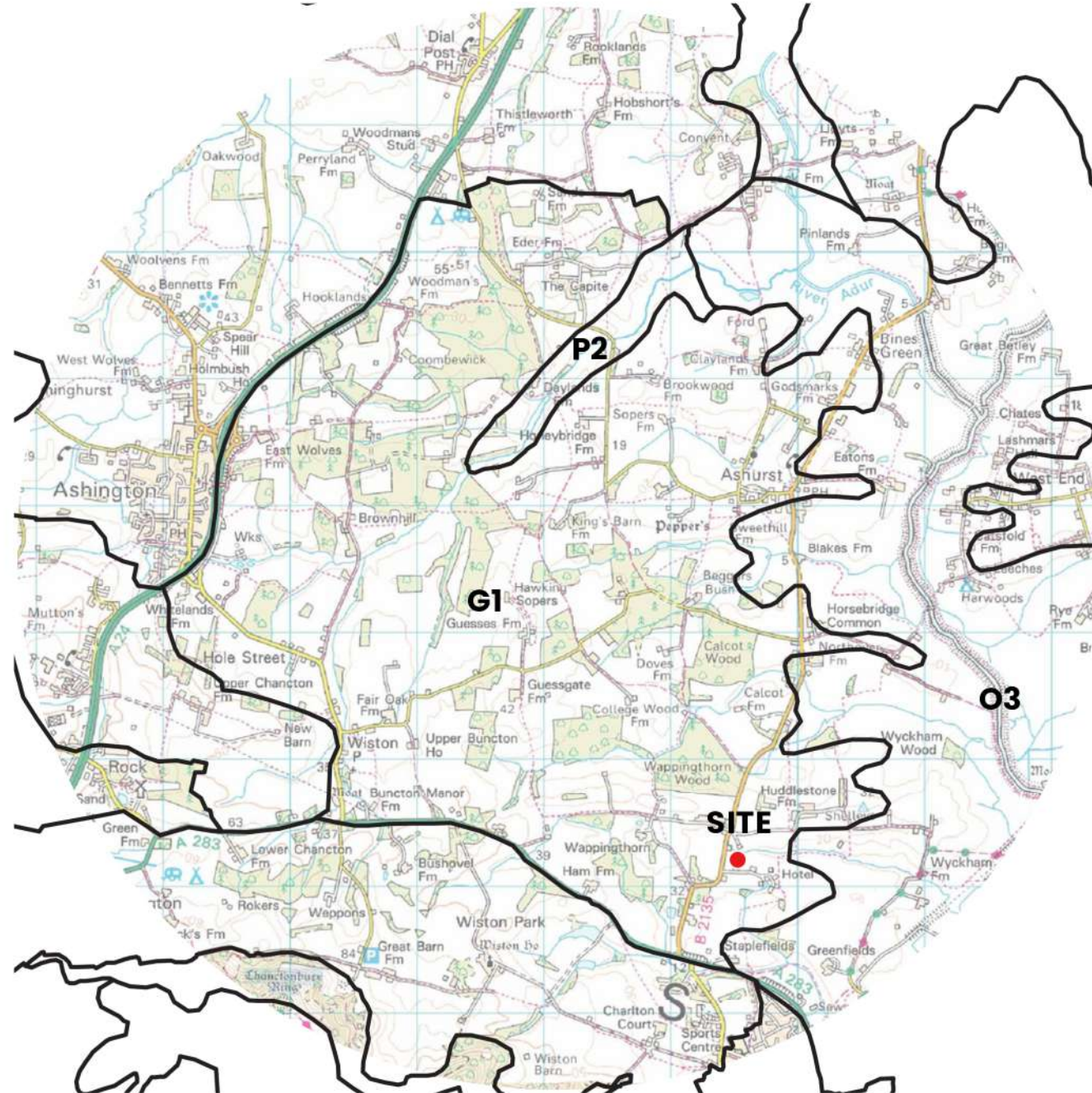
STAGE 2

KEY DESIGN DEVELOPMENT, BACKGROUND RESEARCH &
LANDSCAPE IMPACT VISUAL ASSESSMENTS



BACKGROUND RESEARCH

LOCAL CHARACTER



Horsham District Landscape Character Assessment
2003 G1: Ashurst and Wiston Wooded Farmlands

Fig.4- Horsham District Landscape Character Assessment

KEY CHARACTERISTICS:

- Gently undulating wooded farmland, drained by small streams
- Small to medium size pasture fields usually enclosed by hedgerows and shaws
- Occasional glimpsed views of the Downs
- Isolated farms and cottages on lanes and small tracks
- Varied local building materials of half timber, tile hanging, weatherboarding and some flint
- Winding lanes
- Rural, mostly remote and tranquil character

HORSHAM & SHAPING OF THE LANDSCAPE:

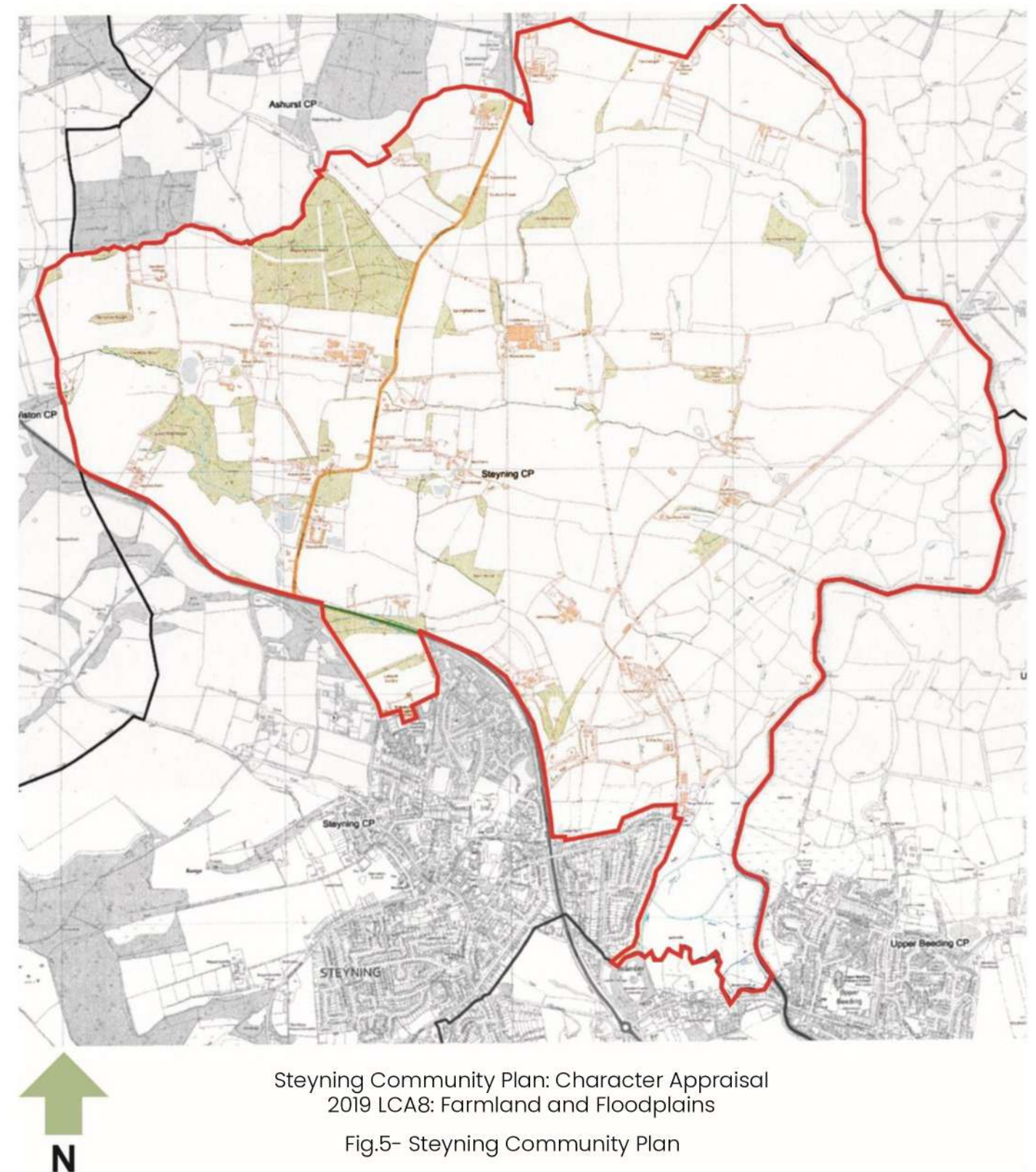
- The landscape has evolved as a result of an interaction of the physical structure of the landscape and the vegetation and land uses that cover it
- Due to the processes of weathering, erosion and deposition influence the shape and form of the landscape/drainage and soils - these influence the patterns of vegetation and land use
- In the far south (near the subject site), the chalk layer was tilted to form a ridge and eroded on its exposed northern face to create a distinctive steep escarpment. From this, the bed of upper chalk dips southwards. Forming smooth rolling downland cut by dry valleys
- North of the escarpment, is generally gentle undulating landform and formed on relatively weak clays. Here is where the group of flaggy sandstone is found (known as Horsham stone - commonly used in the past for roofing)
- Ecological character has been influenced by the geology and landform of the area
- Around the subject site, the steep north facing scarp supports some large ancient woodlands of beech/ash and hazel

BACKGROUND RESEARCH

LOCAL CHARACTER

KEY CHARACTERISTICS:

- Rural with many farms and only a few properties which are mainly farmhouses and associated farm buildings
- Small number of listed buildings such as Wappingthorn Manor and concrete farm silo buildings at Wappingthorn farm
- River Adur runs along the eastern edge of the land
- Gentle rise along Horsham Road travelling towards Ashurst and along the A283 towards Washington
- No consistent layout with the only main access road being the B2135, many farmhouses and larger properties have long access driveways and can hardly be seen from the road



SITE ANALYSIS

LOCAL MATERIALS



IMAGE OF SUNNINGDALE

Fig.6- Illustration of Local Materials

Within the local area and nearby Steyning the above materials have been used historically and are reflective of the character within the area.

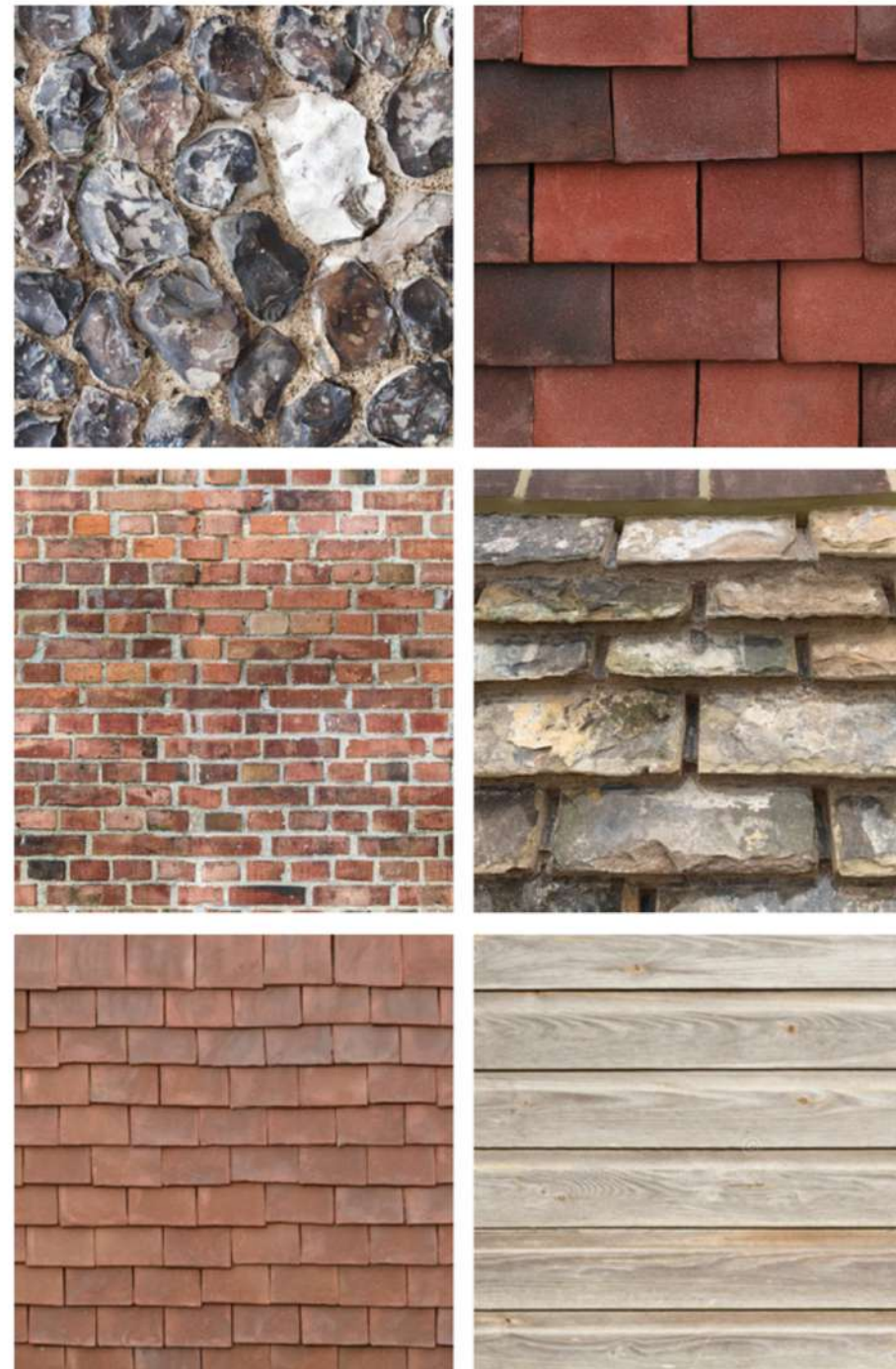
The predominant materials are:

Mathematical tile: used in C18 and early C19, laid externally on timber framed buildings as an alternative to brickwork to avoid the brick tax and were easier to lay.

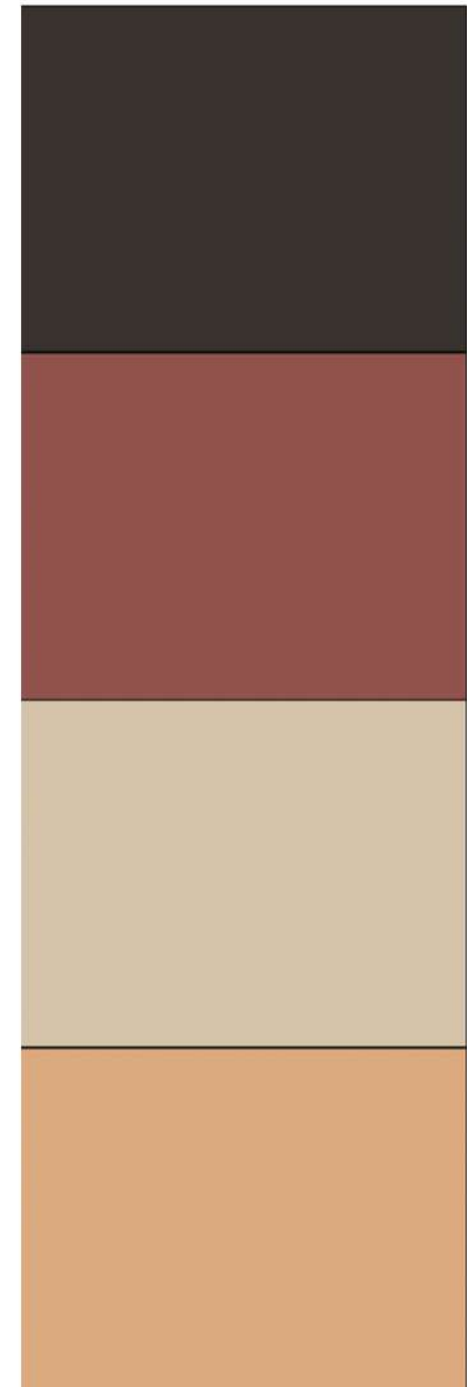
Rubble coursed flint with red brick dressings: commonly used for boundary walls, residential dwelling facades and outhouses. Red brick buildings were for the high status homes in the C20

Horsham slabs/clay peg tiles: often found covering hipped roofs and slate is confined to C19 buildings

Flint/knapped flint: used to refront houses in C18 and originated in the medieval period. Knapped flint is a type of hand-worked flint which is struck to expose its dark, smooth & glossy interior. These can be formed into different shapes such as irregular or rectangular. The Chancontbury ring was used in the medieval period as a mine for flint.



Top left to bottom right: flint, clay hung tile, red brick, horsham stone roof tile, clay roof tile, treated weatherboard.



Earthy & warm colour palette - reflecting historically local material choices

SITE ANALYSIS

EXAMPLES OF LOCAL MATERIALS

Sunningdale



Rubble coursed flint with red brick dressings & stained brown timber

134 & 136 High Street, Steyning



Rubble coursed flint and red brick dressings

75 High Street, Steyning



Knapped flint and red brick dressings on a rough flint base

Norfolk Arms/Model Bakery, Steyning



Timber framed building faced with knapped flint and red brick string courses and quoins

St. Andrews and St. Cuthman's Church



West tower built of flint and stone chequer

Police station, Steyning



Flint with red brick dressings

36 High Street, Steyning



Painted brick to the front, flint faced on the side, clay tile hung

51 & 53 Church Street, Steyning



Red brick and grey headers alternately, hipped roof of Horsham stone slab

SITE ANALYSIS

LOCAL BUILDING FORM AND PATTERN

Development in the immediate setting is characterised by buffer zones of woodland between isolated residential dwellings & combined clusters of both agricultural & residential forms. Development follows a linear form in proximity to the roads & lanes.

A - Wappingthorn Dairy Farm: Example of combined typology cluster

B - Example of characteristically isolated dwelling surrounded by trees

C - Example of characteristic woodland band separating our site from adjacent neighbours

Aerial photography courtesy of Axiom Planning

KEY

- Agricultural development
- Residential development
- Main Road
- Lane
- Red line boundary - As initially proposed

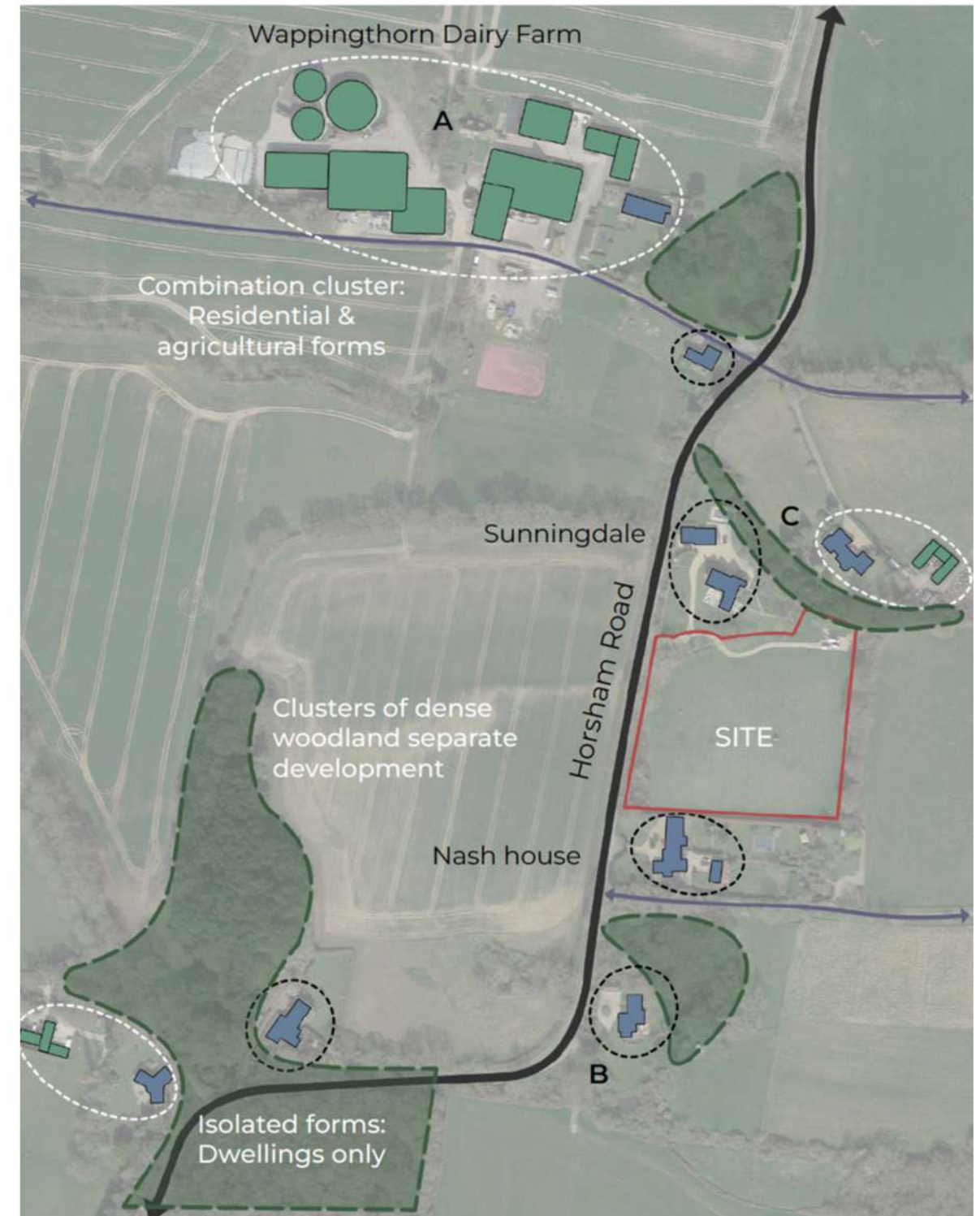


Diagram of landscape & development pattern of immediate setting

SITE ANALYSIS

LOCAL AREA & CHARACTER ANALYSIS – PHOTOGRAPHIC SITE SURVEY



Aerial view of site looking north-east. Aerial photography courtesy of Axiom Planning

INSIGHTS

The site has a domesticated feeling associated with Sunningdale, but it's attachment to the site is visually broken by the gravel driveway. The site has been utilised as garden land for some years. The following key features and considerations have been identified through a photographic survey of the site:

A – Sunningdale:
Constructed in 2013, but has a distinctive material palette to reflect the local area.

B – Poly-tunnel: A small area of the site has been marked as a small 'allotment' type use associated with the main house.

C – Neighbours: Nash House sits quite close to the boundary hedge, but has no windows that look onto the site.

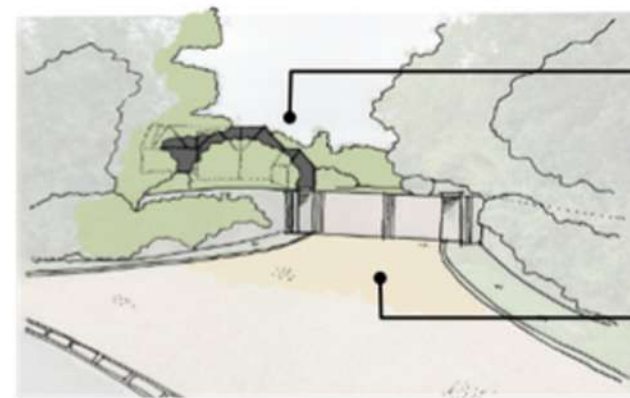
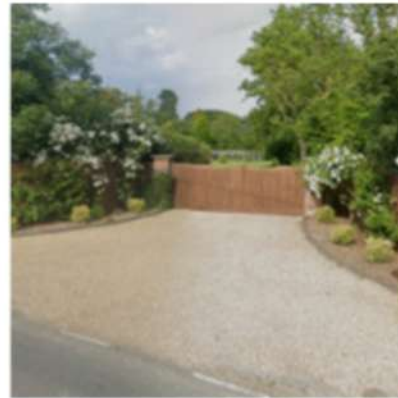
D – A culvert along the previous line of boundary vegetation. This drains into the adjacent land.

E – A working well, discovered & restored to working order by the clients since their purchase of Sunningdale 7+ years ago.

SITE ANALYSIS

LOCAL AREA & CHARACTER ANALYSIS – LOCAL STREET-SCAPE CHARACTER

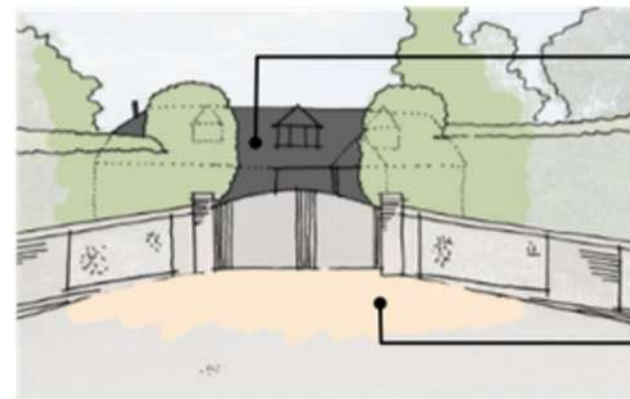
Sunningdale (0.07km north of site)



Partial roof form peaking above dense & high boundary

Wide sweeping drive (existing access to Sunningdale)

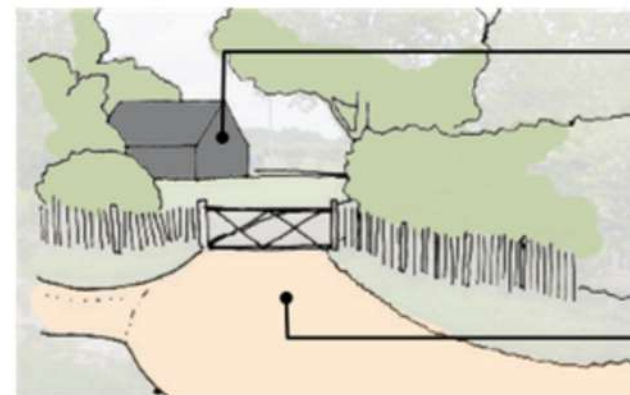
Nash house (0.1km south of site)



Linear roof form & principle elevation framed by formal planting

Wide sweeping driveway character

Nash vineyard (0.23km east of site)



Lower hierarchy outbuilding most visible from road – house hidden

Hierarchy in driveway with second access branching off with material change

INSIGHTS

The site sits between two existing dwellings. Their characters have similar street-scape relationships & a similar material palette (the more contemporary Sunningdale reflects local materials).

The dense & tall boundary vegetation along the road side seems to be a characteristic feature, ensuring that little of the dwellings are seen, unless in a more formal context, where Nash House to the south is an exception of this example as its entrance is directly aligned with the main elevation.

Fig.8- Sketch existing entrance arrangement diagrams

SITE ANALYSIS

IDENTIFIED BUILDING FORMS IN THE LOCAL LANDSCAPE

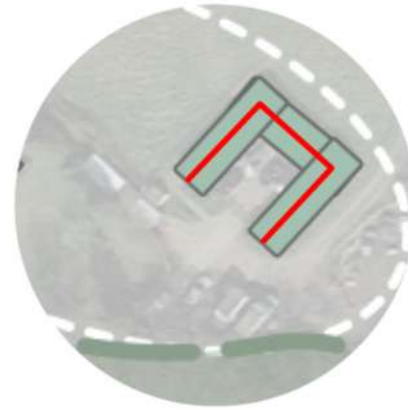
LOCAL AREA & CHARACTER ANALYSIS – TYPOLOGIES

From exploring the aerial maps of the local built forms, it is apparent that the use of three main components (Y-shaped wings or T-shaped rectilinear forms) tend to be the most common identified in our early analysis of the wider landscape.

For example, Nash Manor utilises the typical U-shaped agricultural form in contrast to the more irregular forms identified south-west of the proposed site represented in the images labelled ISOLATED (SW).

Further analysis confirmed this three pronged typology of various forms has been used repeatedly in residential dwellings locally. These shapes allow for the formation of protected courtyards and intimate areas that afford privacy, shelter from prevailing winds as well as opening up key view points to the landscape beyond.

The orientation of the dwellings are individual to their location and their specific criteria. Similarly our further optioneering of a proposed footprint has been defined by the lands topography, key views and orientation.



Milindy

(0.12 km north-east of site)

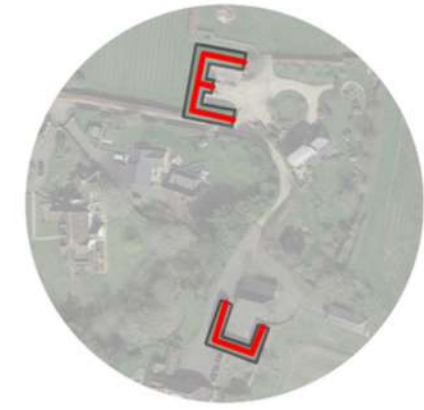
U-shaped agricultural
building with courtyard



Sunningdale

(north of site)

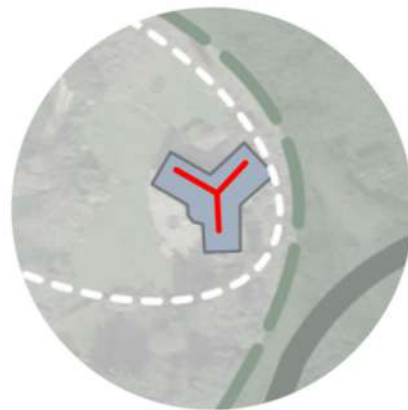
L shaped
residential building



Nash Manor

(0.4km south-east of site)

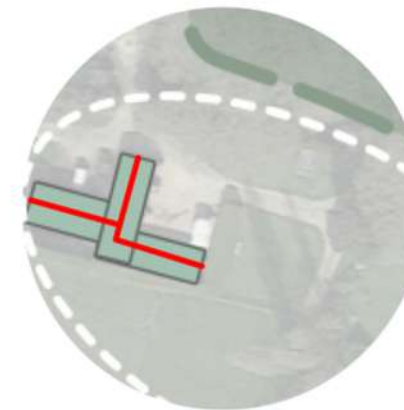
E & U shaped
agricultural buildings



Wappingthorn Lodge

(0.4km south-west of site)

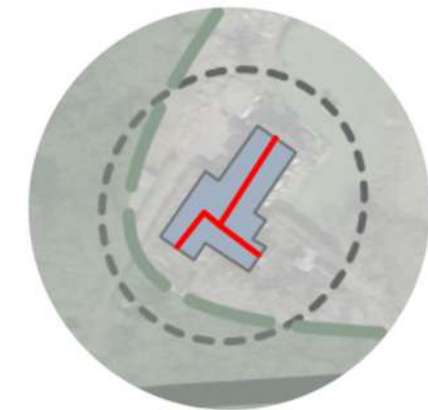
Y-shaped (boomerang)
residential building



ISOLATED (SW)

(0.4km south-west of site)

T shaped
agricultural building



ISOLATED (SW)

(0.3km south-west of site)

Irregular T shaped
residential building

EXISTING LOCATION PLAN

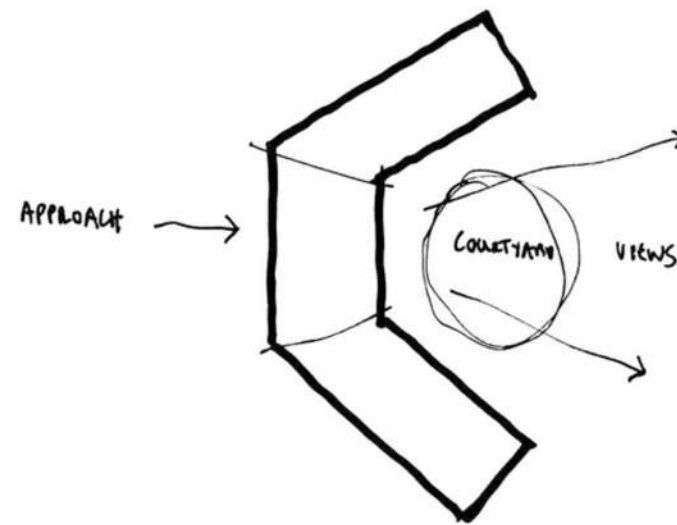


FORM ANALYSIS

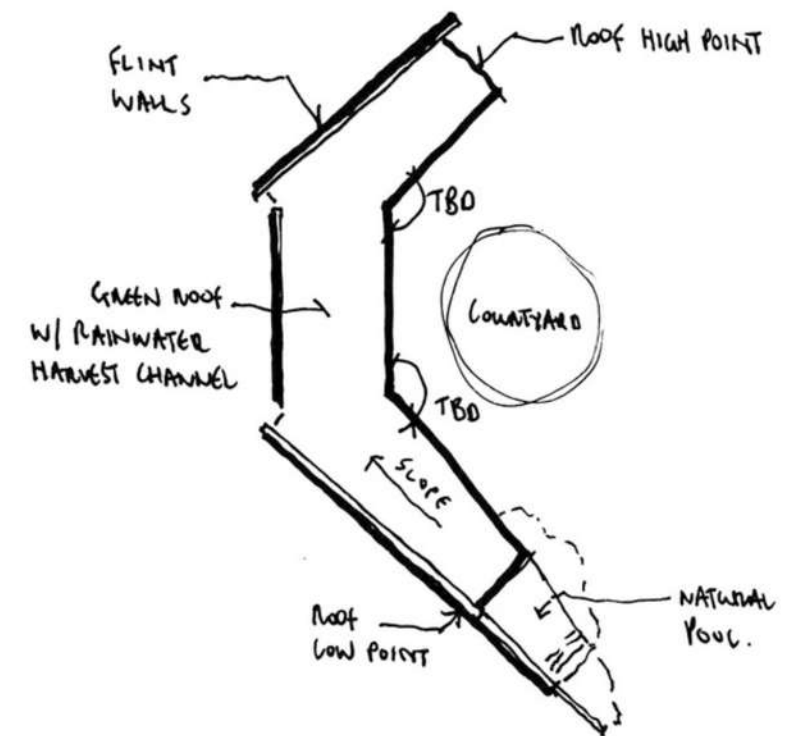
EXPLORING COURTYARD FORM AND GEOMETRY



1. COURTYARD TYPOLOGY



2. GEOMETRY + PURPOSE



3. ARTICULATION

SITE ANALYSIS

DESIGN CONCEPTS & EVALUATION:
POSSIBLE LOCATIONS OF A NEW DWELLING ON THE SITE
& UTILISING EXISTING ENTRY AS A SHARED ACCESS.

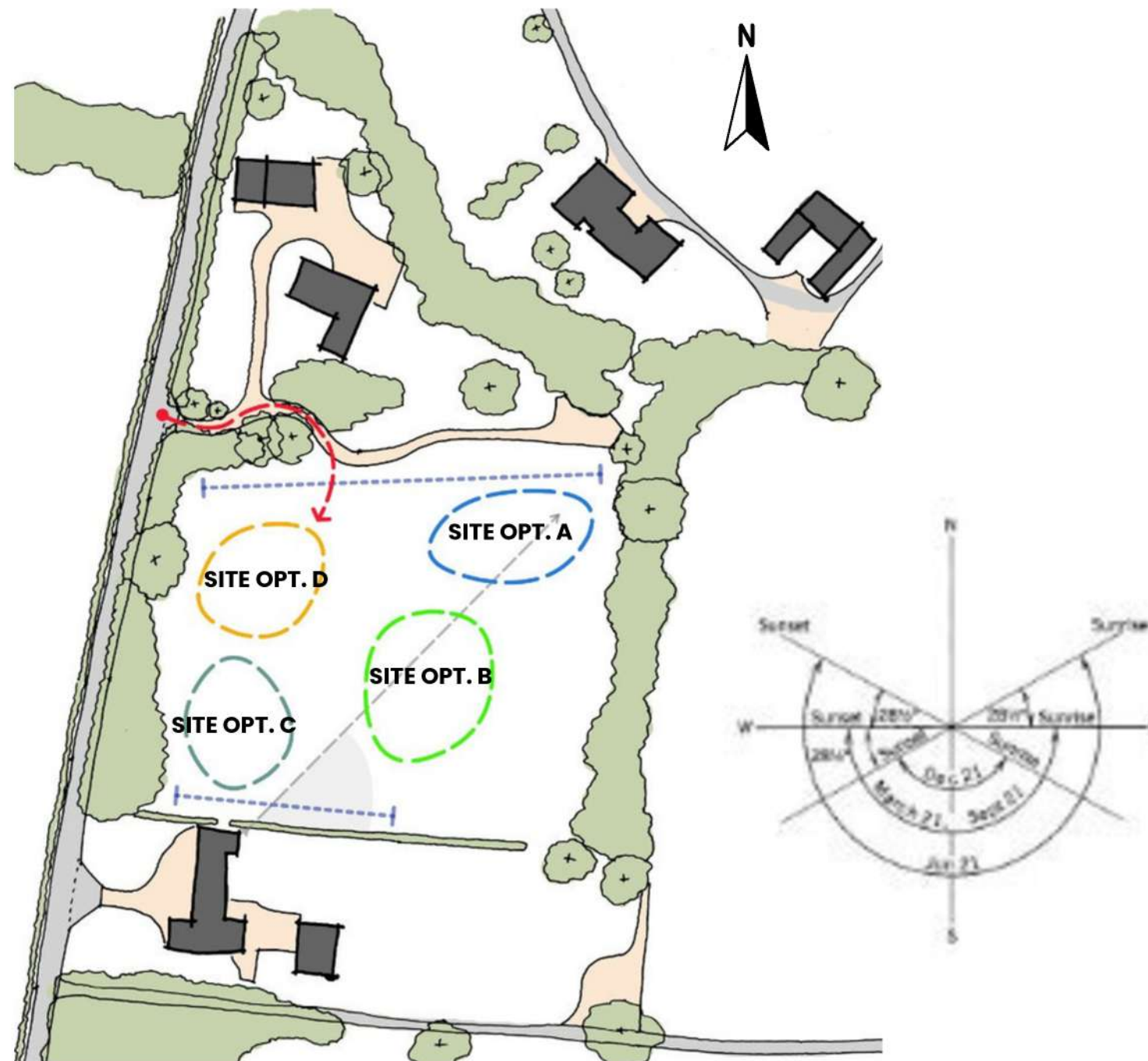


Fig.10 - Dwelling location option diagram - utilising existing entrance.

SITE LOCATION A:

- ✓ Close to existing drive
- ✓ Open to south
- ✗ Overseen by neighbour
- ✗ Lowest ground level

SITE LOCATION B:

- ✓ Open in all directions
- ✓ Distant from road
- ✗ Lacks privacy
- ✗ Overseen by neighbour

SITE LOCATION C:

- ✓ Buffered with neighbour
- ✓ Highest ground level
- ✗ Northern exposure
- ✗ Distant from existing drive

SITE LOCATION D:

- ✓ Close to existing drive
- ✓ Existing privacy
- ✓ Buffered with neighbour
- ✓ Higher ground level
- ✓ Open to south

KEY

- Existing development
- Existing vegetation
- Desired visual buffer
- 45 degree overlook angle
- Access Option 1

PREFERRED SITE - D

This location benefits from proximity to existing infrastructure & mature vegetation that would naturally create site zoning opportunities characteristic of the local area. This option for development also opens up the majority of the southern portion of the site to landscape enhancements as well as a natural buffer zone to the neighbouring dwelling.

DESIGN DEVELOPMENT

CONCEPT DESIGN & ACCESS ARRANGEMENTS – PRESUMPTION IN FAVOUR OF NEW ACCESS

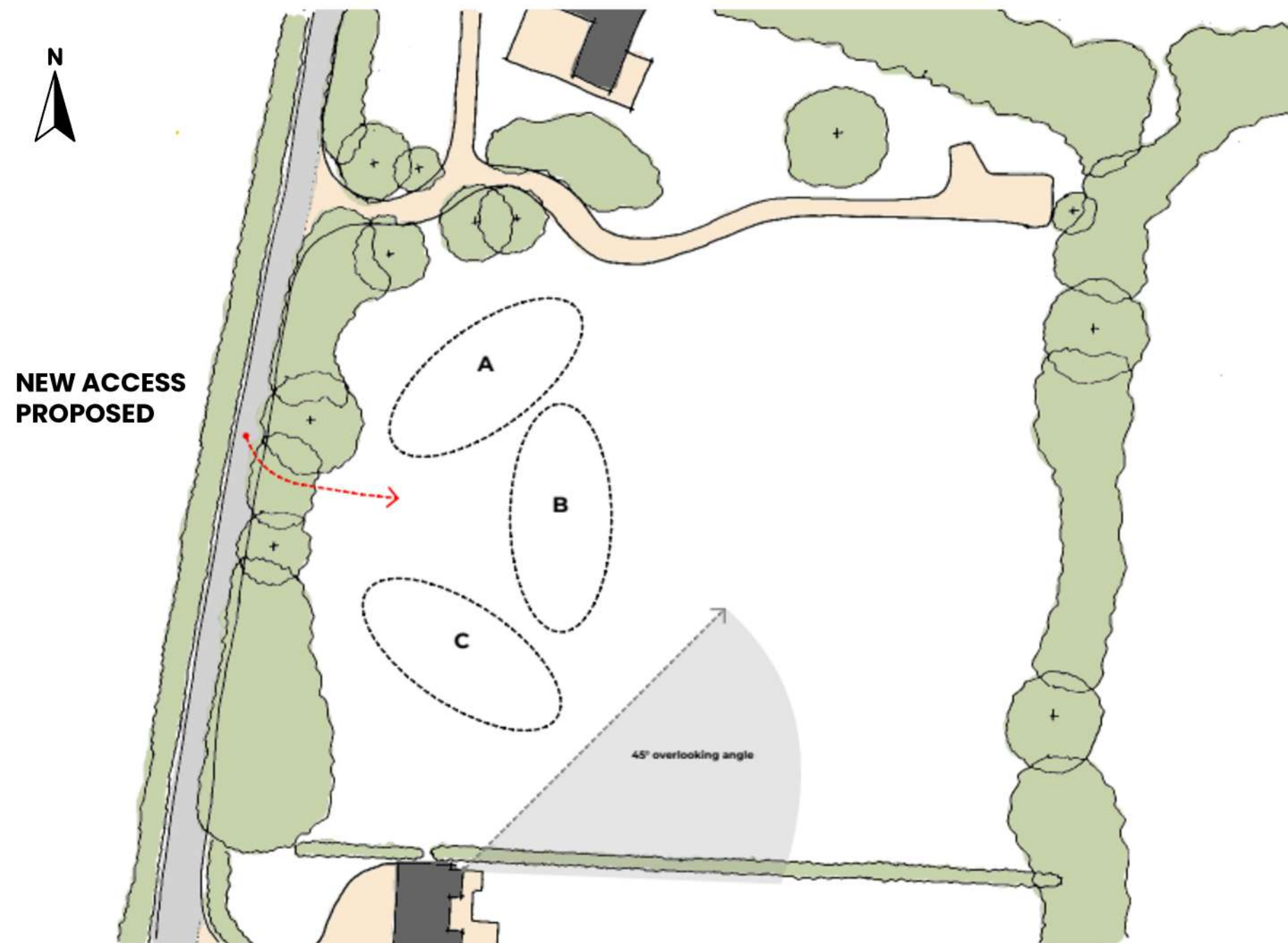


Fig.11 – Site diagram proposing preferred independent access point for Scarp House.

SITE LOCATION A:

- ✓ Close to potential entrance
- ✓ Open to south
- ✗ Overseen by neighbour
- ✗ Close to potential RPA's and hedgerow

SITE LOCATION B:

- ✓ Central to potential entrance
- ✓ Aligns with neighbouring houses
- ✓ Open to south
- ✓ No overlooking

SITE LOCATION C:

- ✗ Exposed to Sunningdale
- ✗ Garden to be blocked by built form
- ✗ Too close to neighbour
- ✓ Tucked from view from the road

PREFERRED LOCATION – B

SITE ANALYSIS

SITE PLAN – OWNERSHIP AND SITE BOUNDARIES



Proposed red line boundary
to maintain Sunningdale's connection
with the views beyond.



STAGE 2

KEY SUMMARY OF LVIA & DESIGN DEVELOPMENT /
BACKGROUND RESEARCH



DESIGN DEVELOPMENT

DESIGN CONCEPTS & EVALUATION – THE SCARP CONCEPT

Visible in the distance, from the main road which leads to the site are the steep chalk cliffs of the nearby South Downs which loom above **the scarp foot slopes** offering a dramatic view point and a unique contrast to the gentler landscape that surround the site itself.

Geologically the scarp foot slope marks the transition from exposed chalk cliffs to nutrient-rich clay lowlands.

Further research and detailed analysis of the wider landscape identified the upper slopes of the South Downs as one of the sites key views and confirmed the visual relationship that linked the site to the wider topography of interest that was identified nearby.

The steeper upper sections of the Downs that transition into scarps of variable gradients reveal the underlying geological structures that support diverse ecological habitats.

The more gently undulating terrain of the scarp itself with it's **recognisable concave form at the base** is often **punctuated by springs and streams**, which allow seasonal rainwater to penetrate the upper layers of green sand, chalk and stone as well as naturally seeded vegetation of the scarp slope . This natural process of water transfer leads to the erosion of the **steeper facades mainly composed of chalk and flint**. Creating natures funnel , the water ultimately runs to the base of the scarp **creating pools in the clay rich soils at the lowest point**.

The lowest points of the slopes; where the pools and ponds occur also support another diverse habitat, and are mainly characterised by arable productive soils which are known to historically support Spring-line settlements. These early settlements were often clustered around these natural springs, with mill ponds and historic mills and other structures **marking water's role in shaping habitation and agriculture in the region**.

Scarp House is the design teams intuitive response to the natural rhythm, movement and transitions identified within the nearby landscape. Through the further study and 3d modelling of natural scarp formations the proposed shape and volume of the dwelling has been conceptualised as a structure that reads as a sloped form which merges with the more gentle topography of the existing grassland.

Collaboration with the wider professional team; identifying potential landscape and bio-diversity enhancements as well as working closely with the appointed energy consultants to develop a fabric-first home which responds to its specific enviroment and setting has led to the evolution of the scarp house concept.

The drama of the transition from the steeper upper slope into the gentler scarp has been captured in the sloping roof form of Scarp House and the dramatic external flint facades, take their inspiration from the eroded sections . This natural process inspired the team to include rain water harvesting channels within the roof form, utilising the the gravity of the proposed sloping roof to move the water to the end of the form where it merges with the lowland of the site and thereby incorporate ponds and a pool within the overall landscape of the proposed.

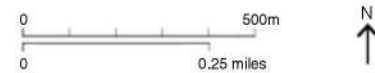
DESIGN DEVELOPMENT

VISUAL AMENITY BASELINE

VIEW 1 - Public Footpath STE-2600



Panoramic Image: EXISTING VIEW



- Receptor Viewpoint
- Site Boundary
- Proposed Dwelling Location

Reference , (LVIA pg 24)

Viewpoint Data
Date: 03.09.2025
Time: 14:22
Bearing to PDL: 235°
Distance to PDL: 549m
Viewpoint Elevation: 26m
Camera Height: Grid 1.5m
Reference: TQ 17947 13554

Camera Settings
Device: Canon EOS 6D
Lens: EF50mm f/1.4
Aperture: f/22
Exposure Time: 1/800
Focal Length: 50mm
ISO Speed: 2000

Image Information
HFOV: 88°
Projection: Planar

Receptor Susceptibility
This view would be gained by pedestrians using the footpath for a few minutes. Susceptibility is considered to be High.

Features
The view consists of arable land in the foreground with scattered woodland and trees in the middle distance. Some dispersed dwellings are visible. The South Downs are clearly visible forming a dramatic backdrop in the distance. The value of the view is considered to be High.

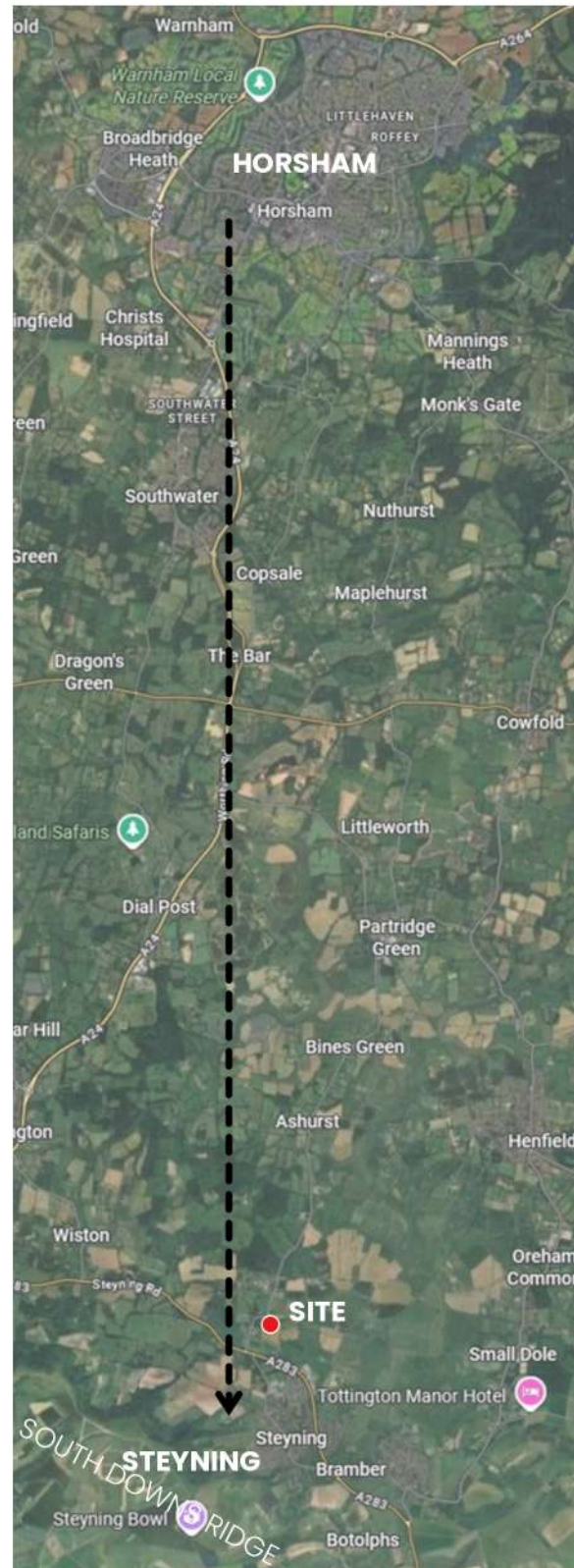
Sensitivity
The sensitivity of the view is assessed as **High**.

SENSITIVITY OF VIEW			
SUSCEPTIBILITY	HIGH	MEDIUM	MEDIUM to HIGH
	MEDIUM	MEDIUM to HIGH	HIGH
	LOW to MEDIUM	MEDIUM	MEDIUM to HIGH
	LOW	LOW to MEDIUM	MEDIUM
VALUE			
LOW MODERATE HIGH			



DESIGN DEVELOPMENT

SCARP FOOTSLOPES



The ridge just outside of Steyning which is visible from the site, is known as a South Downs Ridge and is itself a scarp foot slope. A Scarp foot slope is categorised by the point where land falls vertically away from the escarpment and quickly becomes horizontal. This is best shown on the sketch above.

The area numbered 2 is the scarp and number 4 is the footslope. This shape is formed by erosional undercutting of the softer Gault clay and the Upper Greensand which in turn exposes the chalk underneath.

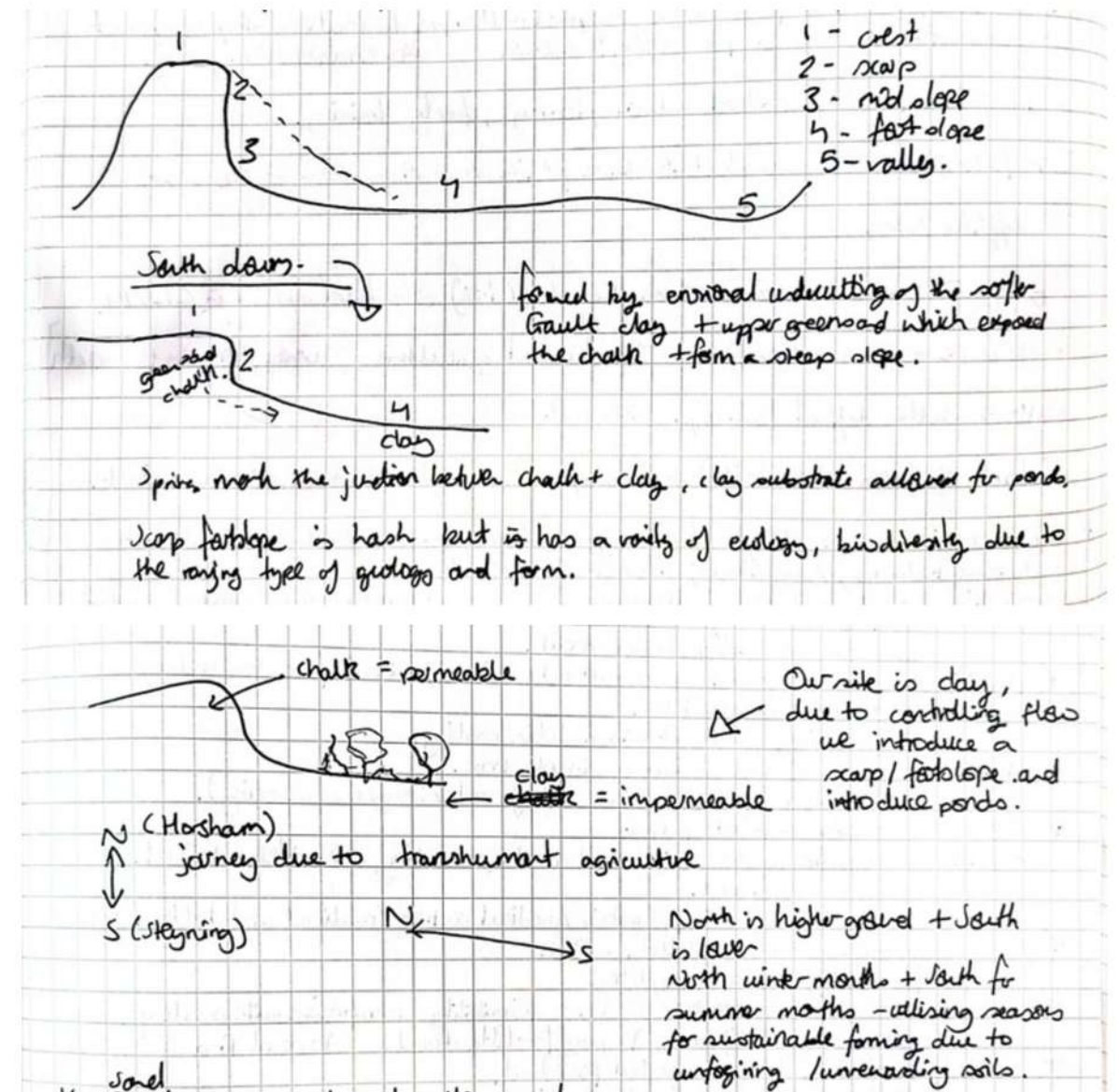
With this natural erosion process, the permeable chalk at the top of the scarp allows rainwater to filter through and travel down to the footslope where the ground is mainly clay and therefore impermeable. This enables the formation of ponds at the bases of these Scarps and supports successful farming and the formation of natural ponds and streams to appear within the landscape.

This has been used historically to promote "transhumant agriculture" which by definition makes best use of the land and its produce for a sustainable way of farming.

This type of farming was possible historically by travelling between Horsham and Steyning which can be seen from the roads and drovers paths formed between the two. In winter, the farmers would move north and in the summer down to the south towards more fertile ground and this cycle of sustainable farming would continue through the seasons.

Using some of these themes as a conceptual starting point and further discovering during our early research that our site's soil was in fact clay, **the building could naturally become the scarp and regulator by controlling rainwater** flow. The logical introduction of a rainwater harvesting system and ponds at the base of the proposed structure as well as elsewhere on the site reflecting the footslope nearby as well as connecting the site to the nearby topography and landscape.

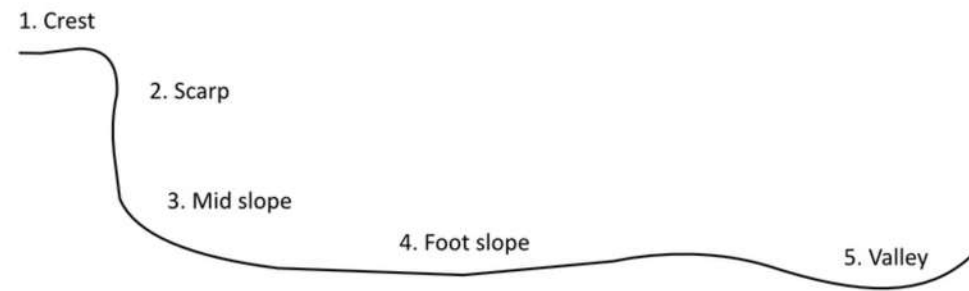
This proposed dwelling through its form and function could reflect how the South Downs Ridge supplies water to the luscious fertile footslopes and the proposed dwelling would mark a transition from exposed chalk cliffs to the nutrient rich caly soils of the lowland site.



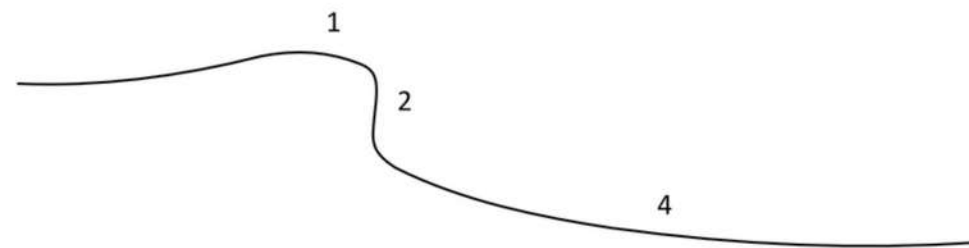
Initial notes assessing Scarp footslope formations

DESIGN DEVELOPMENT

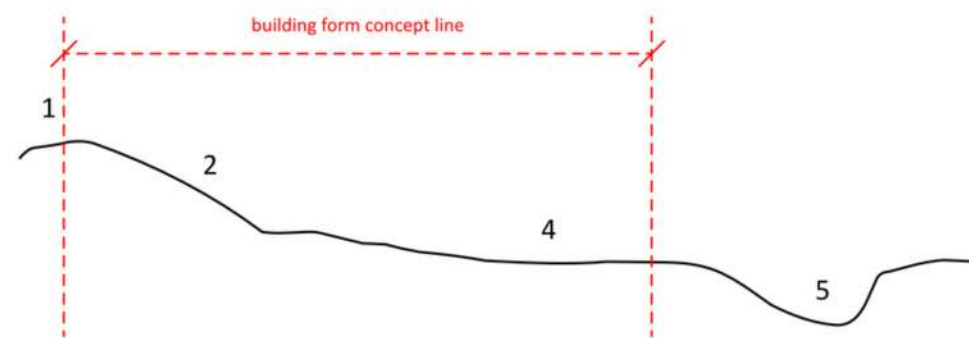
SCARP FOOTSLOPES AS A 3D FORM



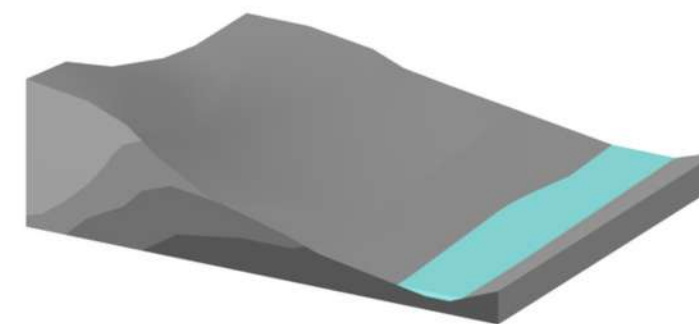
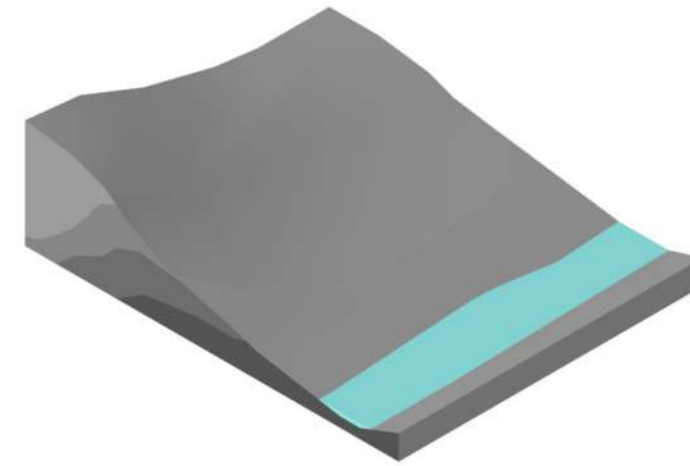
Types of landscape forms



South Downs Concept Form



South Downs - Google Earth elevation profile extract

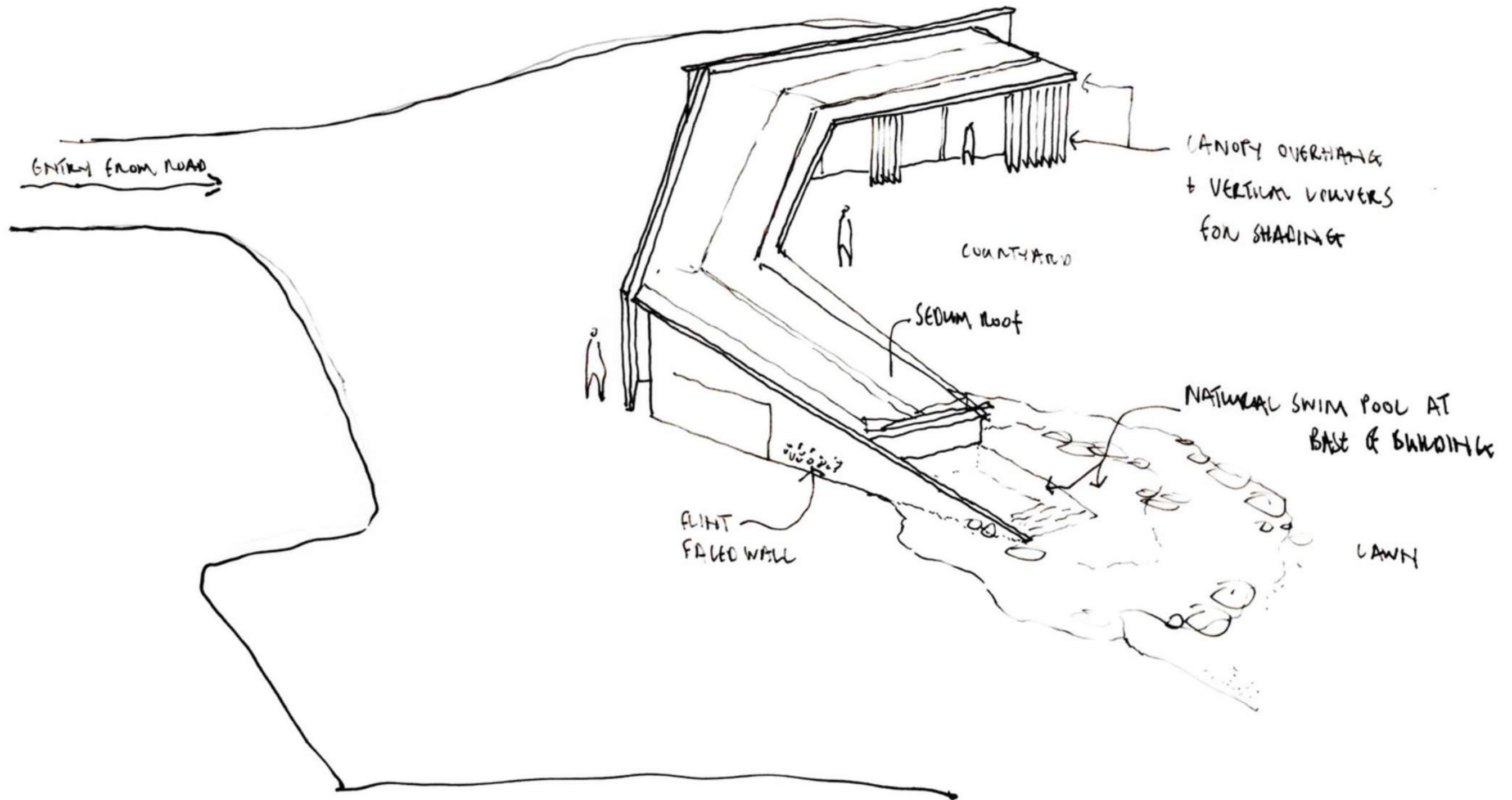


Concept massing: land/building form

KEY CONCEPT IMAGE

A SCARP FOOTSLOPE DEVELOPED INTO AN ARCHITECTURAL FORM

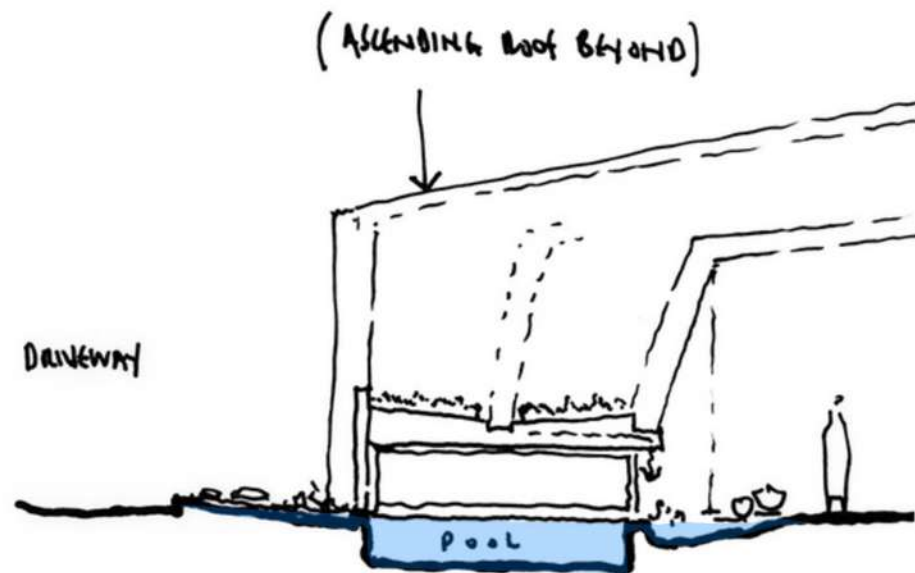
Aerial Concept View (from South)



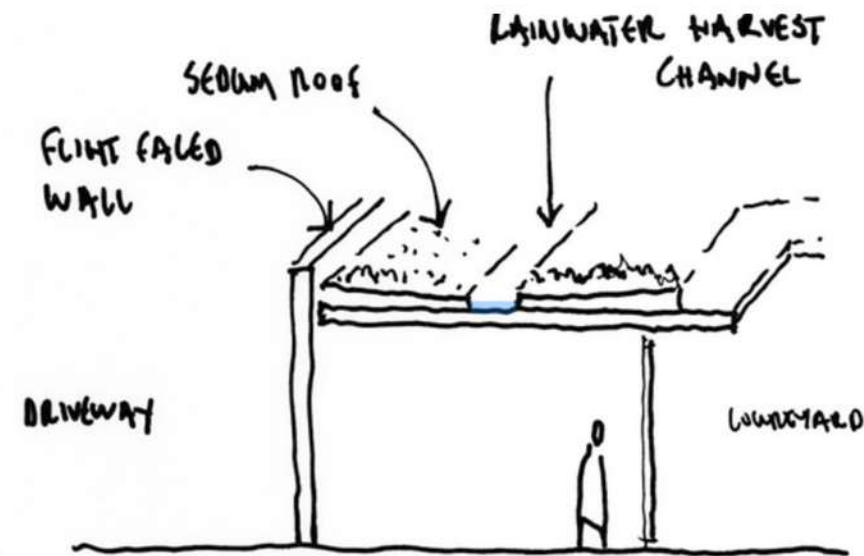
CONCEPT SECTIONS

RAIN WATER HARVESTING POTENTIAL IDENTIFIED

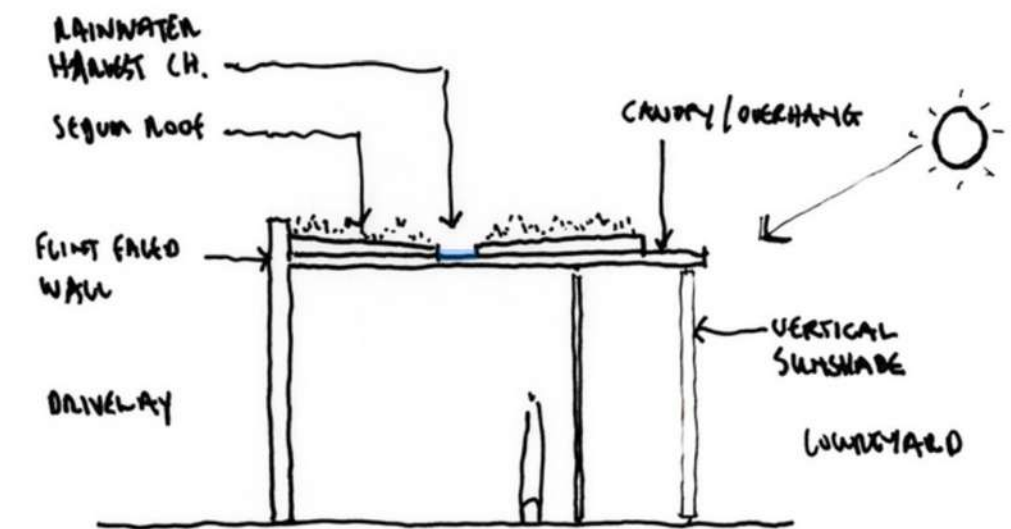
Integrating rainwater harvesting with a green roof system is a sustainable way of managing stormwater, reducing runoff and improving a building's efficiency. It combines vegetation, drainage layers and water storage and management into an eco-friendly solution.



Low Point



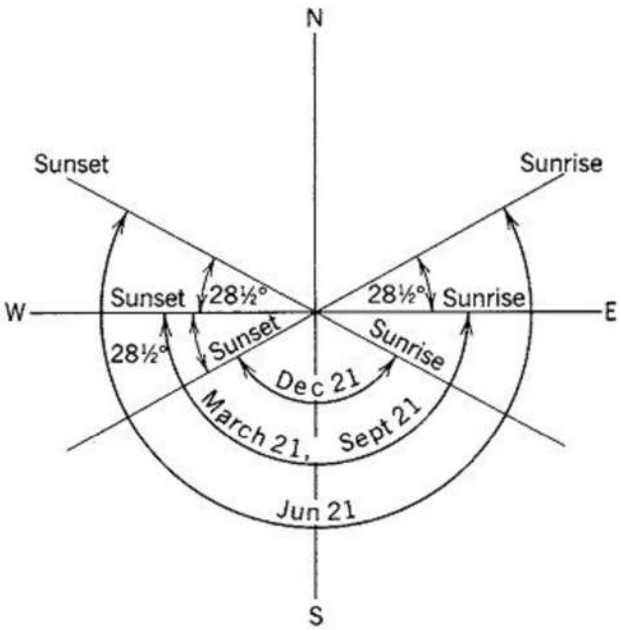
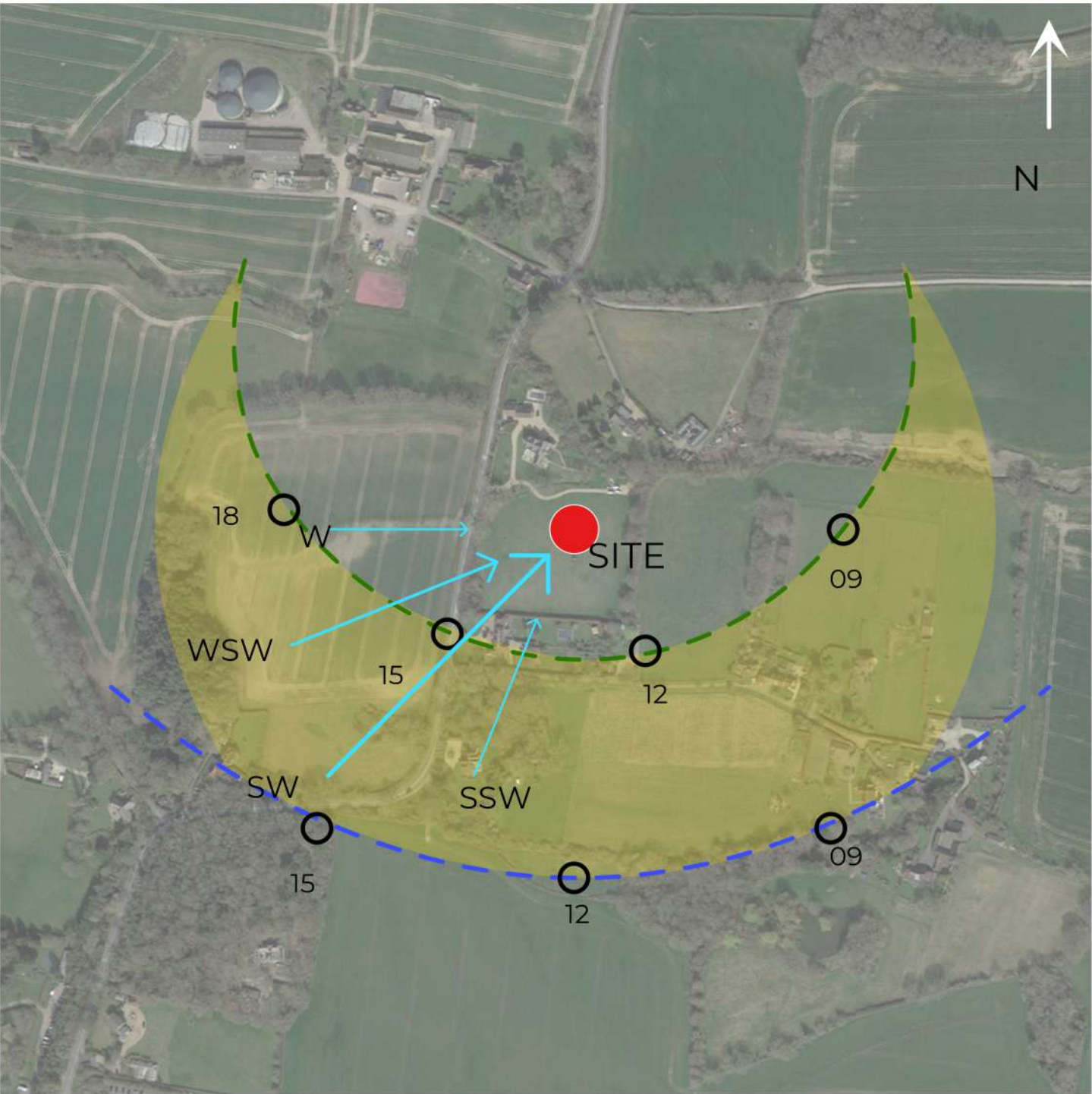
Mid Point



High Point

DESIGN DEVELOPMENT

SOLAR AND WIND DIRECTION CONSIDERATIONS



KEY

- December solstice
- June solstice
- Yellow box Sun path
- O Time of the day
- Blue arrow Prevailing winds

DESIGN DEVELOPMENT

KEY CONSIDERATIONS

ORIENTATION & VISUAL DISCRETION

OVERALL FORM & VOLUME

FABRIC-FIRST APPROACH

SUSTAINABILITY

ENERGY EFFICIENCY, PASSIVE SOLAR GAIN & CARBON NETT ZERO

UTILISING KEY PASSIVE PRINCIPLES

BIO-DIVERSE ROOFING

INTEGRATION & CONNECTION WITH THE WIDER LANDSCAPE

MINIMISING CONSTRUCTION WASTE AND SPOIL

RAINWATER HARVESTING & COLLECTION PONDS

A FOCUS ON HOW A HOME CAN IMPROVE LIFESTYLE AND WELLNESS
AND CONNECT THE INHABITANTS TO ITS LAND

PRIVACY & BOUNDARY SCREENING



The site is largely exposed to the elements and so therefore determining the ideal location within the site whilst considering other key factors were critical in early development of the scarp concept.

Initial options for the location and orientation of Scarp House were all thoroughly tested by the wider design team during Stage 2 of the design process.

The appointed **Energy Consultants** reviewed the sites specific constraints and evaluated whether the proposed facades of the scarp form would be susceptible to overheating in its suggested orientation.

As a direct response to the early data and initial energy modelling , some form of **overhang** was proposed to the Southern facing facade.

With regards to potential solar gain, a portion of the building could cast shade but also shelter an inner courtyard. For the secluded garden space, the building should be kept as low as possible to allow for the afternoon/evening sun during the June solstice, which is reflected in the gentle slope of the roof form descending into the smallest of the three geometries.

The orientation of the dwelling favours being parallel to the existing road and not to have all elevations exposed to the sun path.

Since all key viewpoints identified by the LVIA and landscape design team were directed to the existing tree line along the eastern boundary and the wider landscape and landforms beyond to the South-East, an assumption was made that the living areas and key zones would likely be orientated along this key facade to enable a clear connection with the grassland beyond, as well as optimise the energy efficiency of the buildings envelope itself through the addition of solar glazing.

It was further identified that an **external system of dynamic louvres or shutters** could be considered to limit overheating during peak sun hours.

The overhang which was visualised as a cantilever was both to assist in shielding the South facing elevation from excessive solar gain in the Summer months as well as create comfortable internal living environment for Scarp houses' future residents. Both providing shade during the height of the Summer Solstice whilst maintaining a clear visual connection with the landscape beyond.

The ideal depth of the cantilevered overhang to the covered terrace was determined by the sun/daylight modelling prepared by Achieve Green. This data allowed us to extend the sloping roof form that enclosed the terrace below with the practical benefit of limiting solar gain into the first floor zones.

This covered terrace would also serve to connect key living spaces both internally and externally with the landscape beyond.

Whilst the final orientation was being locked in, other important criteria such as **prevailing wind directions** and **overall landscape topography** were being considered. It was clear that to allow the building's structure to also benefit from natural cross ventilation the design team now focussed on looking at key structural openings and the mechanical aspects of the buildings envelope. In the SW corner of the central geometry of our scarp model we inserted an opening point that would draw air into the structure and then redistribute it along angled internal walls through the ground and upper floor. On the opposing facade an exit point was plotted as a large double volume space with structural openings to the garden beyond.

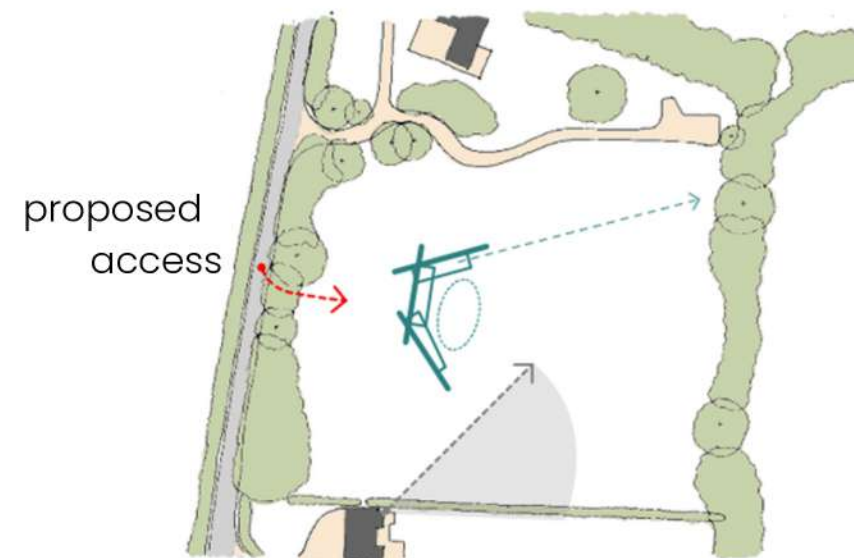
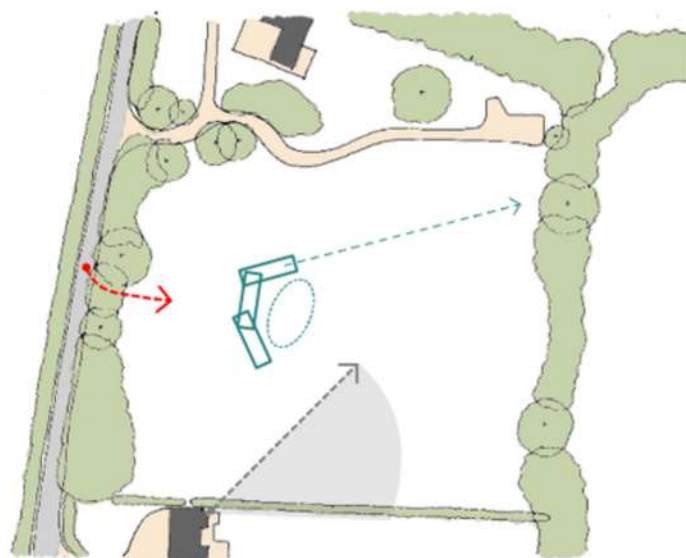
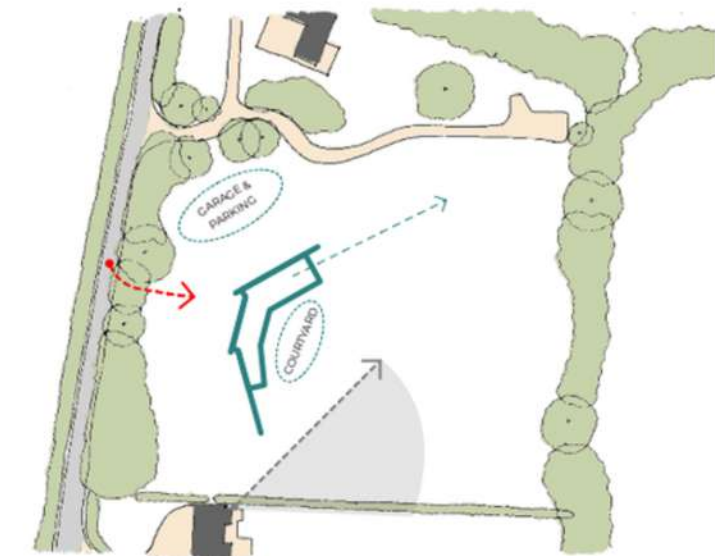
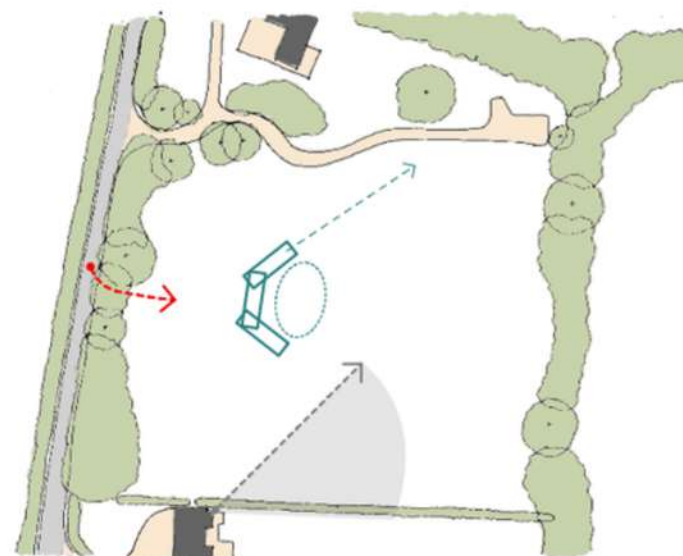
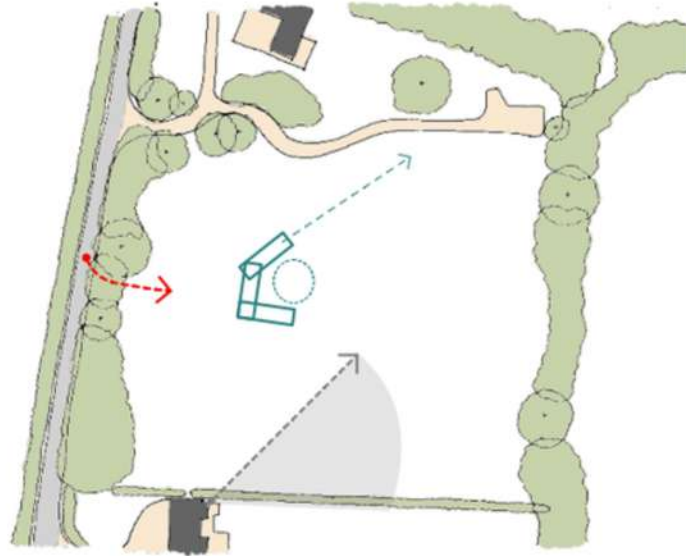
This would allow **natural air cross ventilation** from the South-West corner to Eastern facade.

Natural Ventilation organically utilises the variable internal and external air temperatures at key facades to pull hot air out of buildings or move air through a space by simulating a draft. This has long been utilised as a tool kit in architecture in the Southern Hemisphere and other hotter climates.

As our local architecture in the UK is adapting to global climate change and responding to record highs in recorded temperatures year on year, unpredictable weather patterns and overheating of our homes, the design team were keen to draw on the specific experience we have with this type of architecture internationally to design a house for the future that could be naturally **ventilated independent of technology** if required.

CONCEPT DESIGN

DESIGN DEVELOPMENT



proposed
access

Using the three wings as a starting point and then adapting the angles to take advantage of the views of the nearby trees and local vistas.

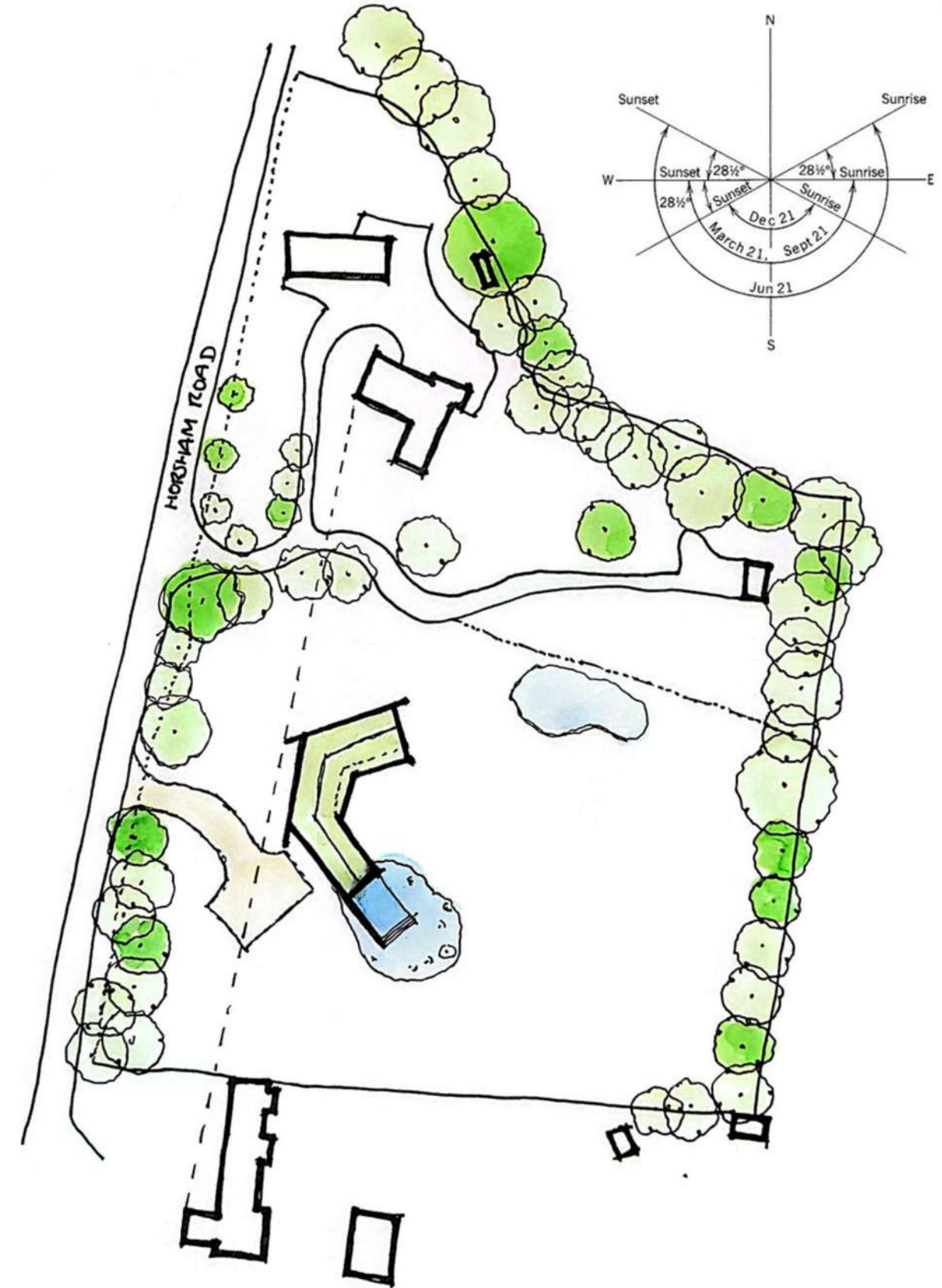
The arrival point is defined by the main geometries or spine walls forming the angles of the three wings. Each spine wall is either providing shading, views towards the landscape or forming the entrance.

The three rectilinear forms are to vary in internal elevation and scales to allow for dynamic internal spaces. The highest end of the sloping scarp form lends itself to be a kitchen/dining/living space.

DESIGN DEVELOPMENT

FABRIC FIRST APPROACH – KEY DELIVERABLES

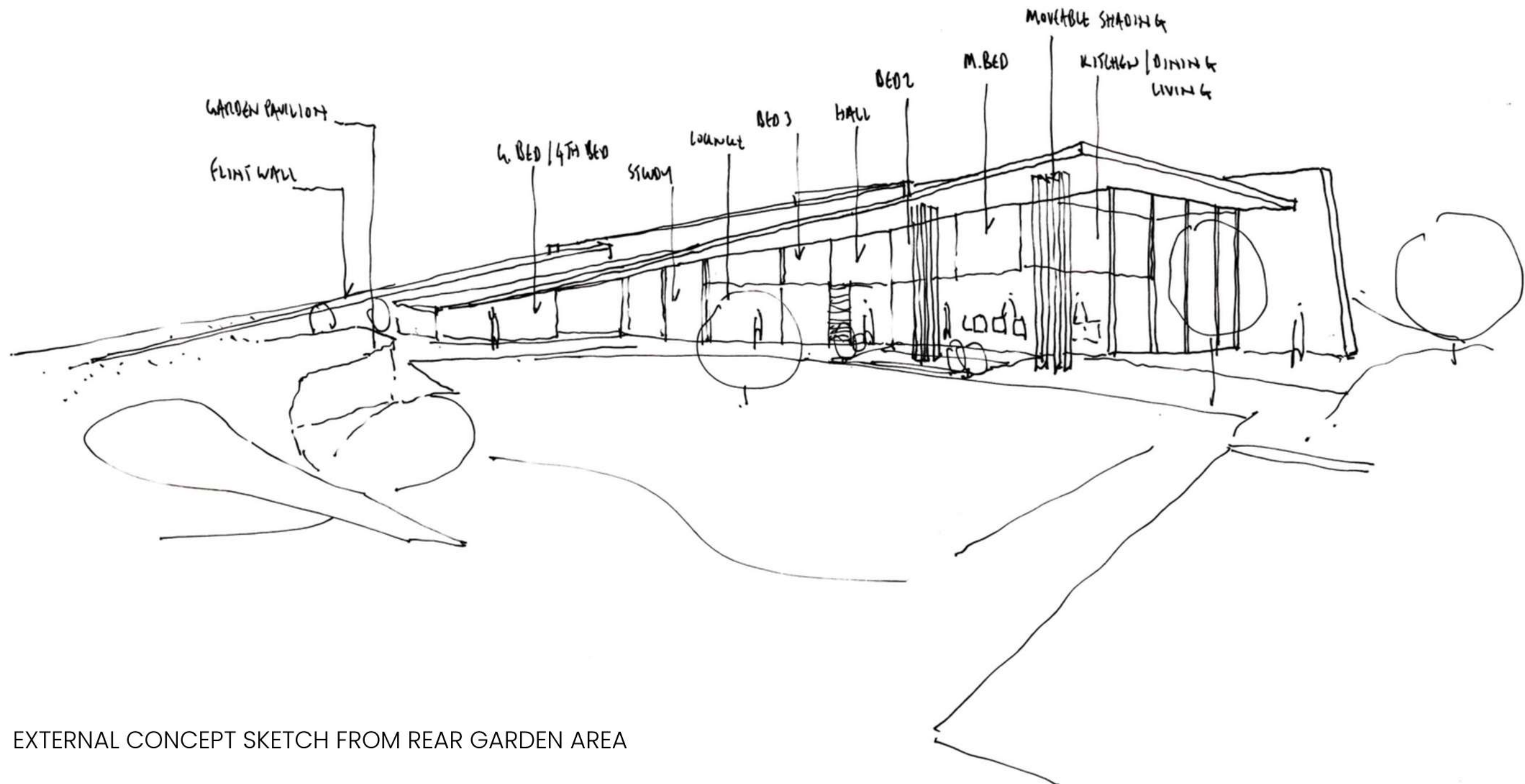
- Integrated photovoltaics (PV's) and solar thermal systems to capture heat.
- Heat pumps in internal plant room and power storage batteries.
- GR-PV Systems for year around efficiency integrated into the building's sedum roof build up and structural fabric.
- Exemplory levels of insulation, allowing for a 0.12 average u-values across floors, walls and roofs.
- Triple Glazed systems with low u-value's (aiming at 0.7 for triple glazed) and the integration of solar controlled glass on South facing elevations.
- MVHR to enable a comfortable internal living enviroment without the need for added cooling.
- Rain Water harvesting integrated into Green Roof build up and design.



DESIGN DEVELOPMENT

ACCESS:

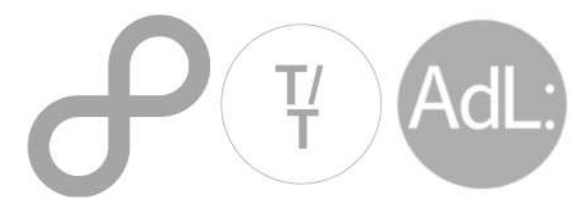
The proposed dwelling has been designed to provide safe, convenient, and inclusive access for residents and visitors. Pedestrian and vehicular access will be taken from the existing Horsham Road access point, with clear routes connecting driveway and parking areas to the main entrance. The principal entrance is designed to be easily identifiable and accessible, with level or gently graded approaches where practicable. The internal layout has been developed to ensure ease of movement throughout the building and the wider landscaped garden area, while maintaining a high-quality contemporary architectural design and a safe environment for all users.



EXTERNAL CONCEPT SKETCH FROM REAR GARDEN AREA

STAGE 3

LANDSCAPE DESIGN DEVELOPMENT



LVIA AND LANDSCAPE CHARACTER SUMMARY

G1: ASHURST & WISTON WOODED FARMLAND AND WISTON LOW WEALD

KEY CHARACTERISTICS

- **Gently undulating wooded farmland, drained by small streams.**
- Small to medium pasture fields typically enclosed by hedgerows and shaws.
- Isolated farms and cottages on lanes and small tracks.
- Varied local building materials of half timber, tile hanging, weatherboarding and some flint.
- River Adur runs along the eastern edge of Steyning
- Winding lanes.
- Rural, mostly remote and tranquil character.
- Dense cover of ancient broadleaved woodlands and conifer plantations.

HISTORIC FEATURES

- Scattered farmsteads, many of which are Listed.
- Small and large irregular fields carved out of woodlands.
- Ancient woodland.
- Linear patterns associated with old droveways.
- Prehistoric occupation and Roman Road
- Scattered brickworks and brickyards.

BIODIVERSITY

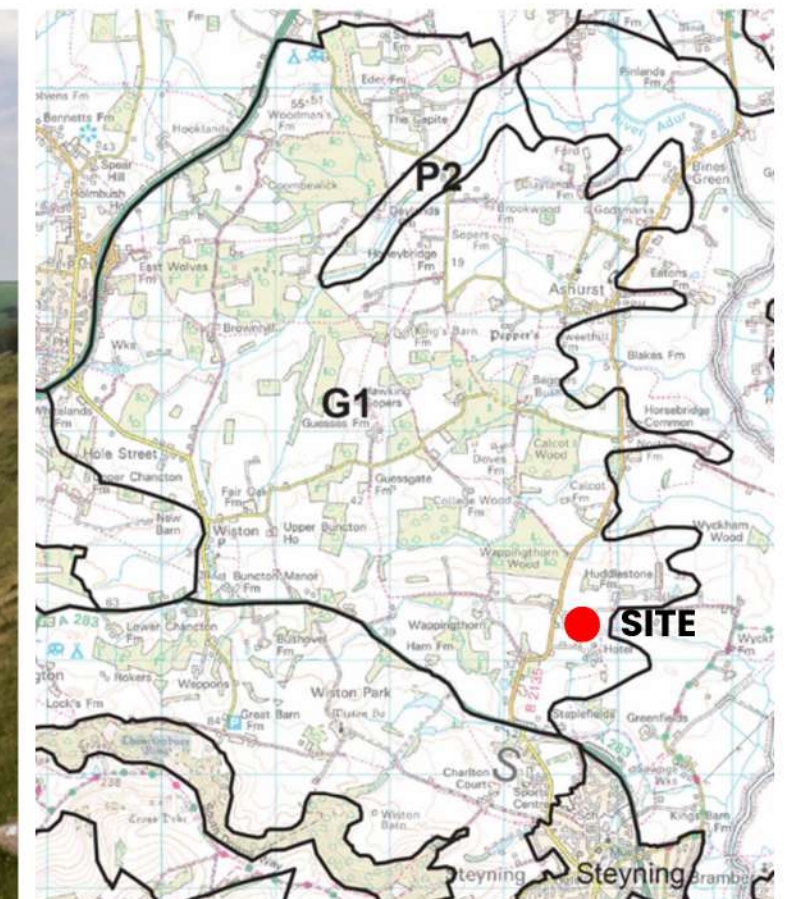
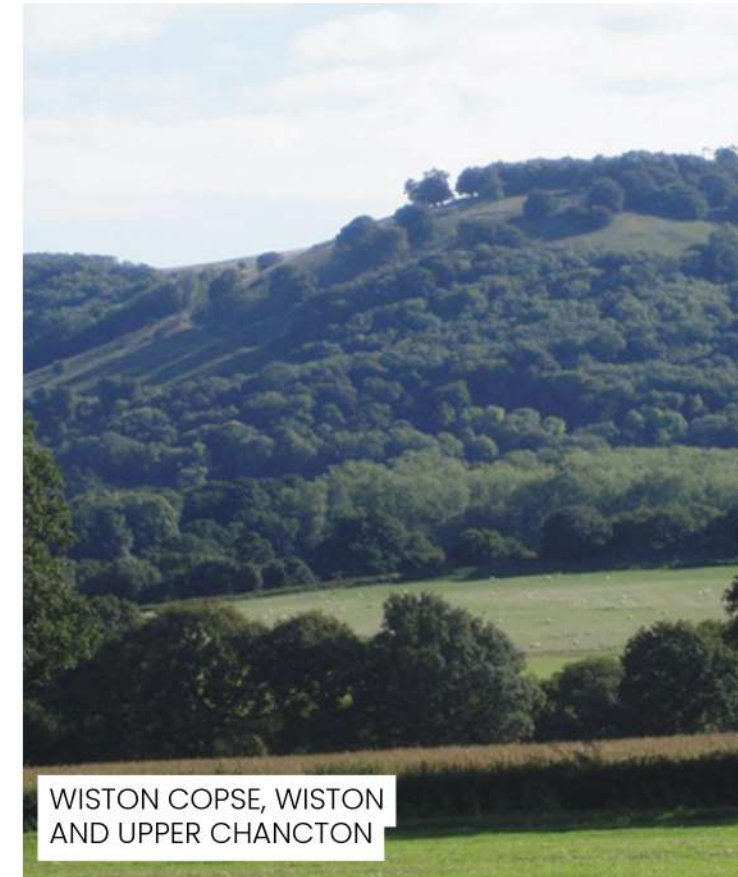
- **Many ancient and semi-natural coppice with standards woods.**
- Some large conifer plantations.
- Large isolated trees in pasture.
- **Rich hedgerows with high density and good connectivity.**
- **Field corner ponds.**
- Marginal vegetation and small patches of wet woodland, including willow and alder woodlands on wet grounds along streams.
- Small number of unimproved neutral grasslands.

KEY ISSUES

- Possible decline in traditional land management.
- Poor hedgerow and woodland management.
- Visual intrusion of the A24 near Ashington.
- Increased traffic and use of rights of way network.
- Increased rural development.

LANDSCAPE MANAGEMENT GUIDES

- Conserve the rural and remote character of the area.
- Respect traditional historic settlement pattern, local design and materials.
- Avoid creation of new farm access tracks.
- Encourage coppice management and replanting where appropriate.
- Conserve and enhance existing hedgerows.



LVIA AND LANDSCAPE CHARACTER KEY CONCEPT LEADERS

LVIA EXECUTIVE SUMMARY AND BASELINE ASSESSMENT – NOTED AND IMPLEMENTED IN COLLABORATION AND AS EXTRACTS FROM DAVID PARFITT'S LVIA

Woodland is an important characteristic of the landscape and opportunities for planting of some woodland would support landscape character.

Veteran trees in pasture are a valued characteristic feature of the landscape. Opportunities for veteran trees to become established with appropriate space for full crown growth should be sought.

Conserve the existing rural character of the lane **without introducing suburban styles and materials.**

Restore and expand characteristic woodland shaws, interlinking with hedgerows and copses to enhance landscape, cultural heritage and biodiversity.

Re-introduce **appropriate and traditional woodland management techniques**, preserving both fallen and standing deadwood where appropriate for biodiversity value. **Introduce short rotation coppice** to link fragmented habitats and provide a source of fuel.

Considering **appropriate species** for new plantings to maintain landscape structure, character and biodiversity in response to the impacts of climate change.

Plant trees that can become future veteran trees in parklands, hedgerows and fields.

Designed parkland landscape is considered a valuable resource. Consider its integration within the landscape.

Maintain and restore wetland landscapes associated with the streams and the Adur including maintenance and restoration of **waterside pollards, lines of riparian trees, wet pasture and wet woodland.**

Establish ponds as those that are **characteristic of the area** for the benefit of wildlife and water management

Buffer watercourses and restore natural river geomorphology to improve water quality and reduce flood risk in settlements by regulating water flow.

Re-link fragmented landscape by restoring hedgerows and shaws and creating corridors using field margins.

LVIA AND LANDSCAPE CHARACTER SUMMARY

LANDSCAPE CHARACTER BASELINE ASSESSMENT

LANDSCAPE CHARACTER BASELINE ASSESSMENT

LAND ADJ. SUNNINGDALE, STEYNING

LANDSCAPE & VISUAL IMPACT ASSESSMENT DPLC/471/LVIA

conifer plantations.

- Small stream valleys draining to the Adur.
- Scattered country houses, some suburban in character.
- Network of rights of way, green lanes and droveways.
- Scattered, traditional Wealden farmsteads, cottages and a few linear villages.
- Many small farms and cottages are concentrated along lanes with the few historic linear villages located at crossroads or road junctions.
- Low density of winding rural lanes.

Historic Features

- 42 The area contains scattered farmsteads, some of which are listed buildings. Old droveways form connective routes and a Roman Road is identified a short distance to the north of the proposal site. Small and medium-sized assarts are found at locations distant from the proposal site. There are linear patterns associated with droveways and irregular fields radiating out from settlements.

Biodiversity

- 43 Overall biodiversity is reduced by intensive arable fields, concentrations of horse paddocks and plantation woodlands. There are many small to medium-sized broadleaved semi-natural woodlands; Wappingthorn Wood is partly identified as ancient woodland.
- 44 Large isolated trees can be found in pasture, although there are none within the proposal site.
- 45 Marginal vegetation and small patches of wet woodland, including willow and alder woodlands occur on wet grounds and along streams. There are examples of such adjacent to the proposal site. Some field corner ponds are found yet not within the proposal site.
- 46 The area is rich in hedgerows, with high density and good connectivity. Hedgerows around the west, south and east of the proposal site are mature and densely planted with some mature trees present on the eastern site boundary.

Key Issues

- 47 Generally there is poor hedgerow and woodland management. Hedgerows can be fragmented with ageing and loss of hedgerow and pasture or field trees. Ponds can be neglected.
- 48 Horse paddocks are seen as detractors in the landscape.

Landscape and Visual Sensitivities

- 49 Key sensitivities are considered to be unsympathetic development, changes in settlement pattern and addition of suburban features, and unsympathetic or major road improvements.
- 50 Loss of woodland cover or diversity of woodland due to plantation planting or lack of management has harmed the landscape. Changes in farming practices leading to expansion or addition of modern farm buildings and changes in land management practices has led to a change in field sizes, and loss of hedgerows and isolated pasture trees.
- 51 Tranquillity should be conserved.

Guidelines

- 52 The following guidance is provided within the landscape character assessment, which may be applicable in developing proposals for the application site:
- Conserve existing tranquil rural and predominantly wooded character of the area.
 - Conserve and encourage sound management of all woodlands. Support and promote woodland industries.
 - Link hedgerows through new planting and encourage the development of hedgerow trees through tagging, especially on roadsides.
 - Create new woodlands, linking in with existing field boundaries to extend and link existing woodland areas. Encourage wooded linkage through land parcels where there are gaps in the network.
 - Maintain the historic character of the area, including the pattern of small fields and the network of green lanes and droveways. Conserve and reinstate small scale hedgerow and pasture wherever possible.
 - Maintain and restore hedgerow patterns and shaws.
 - Replant and manage isolated trees in pasture.
 - Conserve and manage streamside vegetation and ponds. Encourage appropriate management to perpetuate conservation and landscape interests.
 - Seek to reduce the extent, intensity and impact of horse grazing. Encourage the planting of tree belts and hedgerows around horse paddocks.
 - Encourage landscape enhancements to existing village edges and road approaches. Plant amenity trees in villages.
 - Consider the cumulative impact on landscape character of small developments and land use change.

Avoid the introduction of suburban styles and materials.

- Encourage management of existing ponds.
- Encourage sound management of rights of way network.

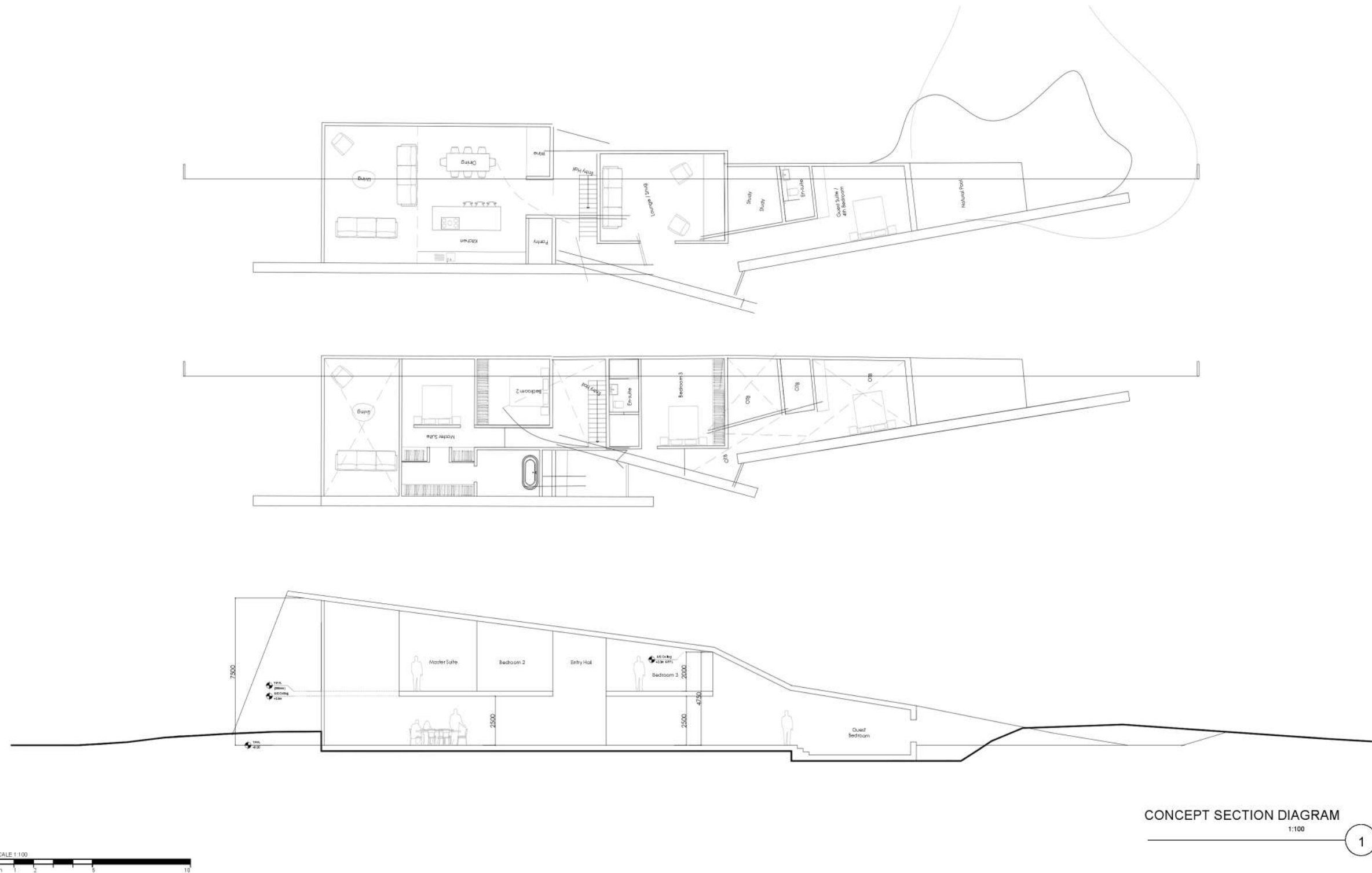
Reference (LVIA pg 36)

13



DESIGN DEVELOPMENT

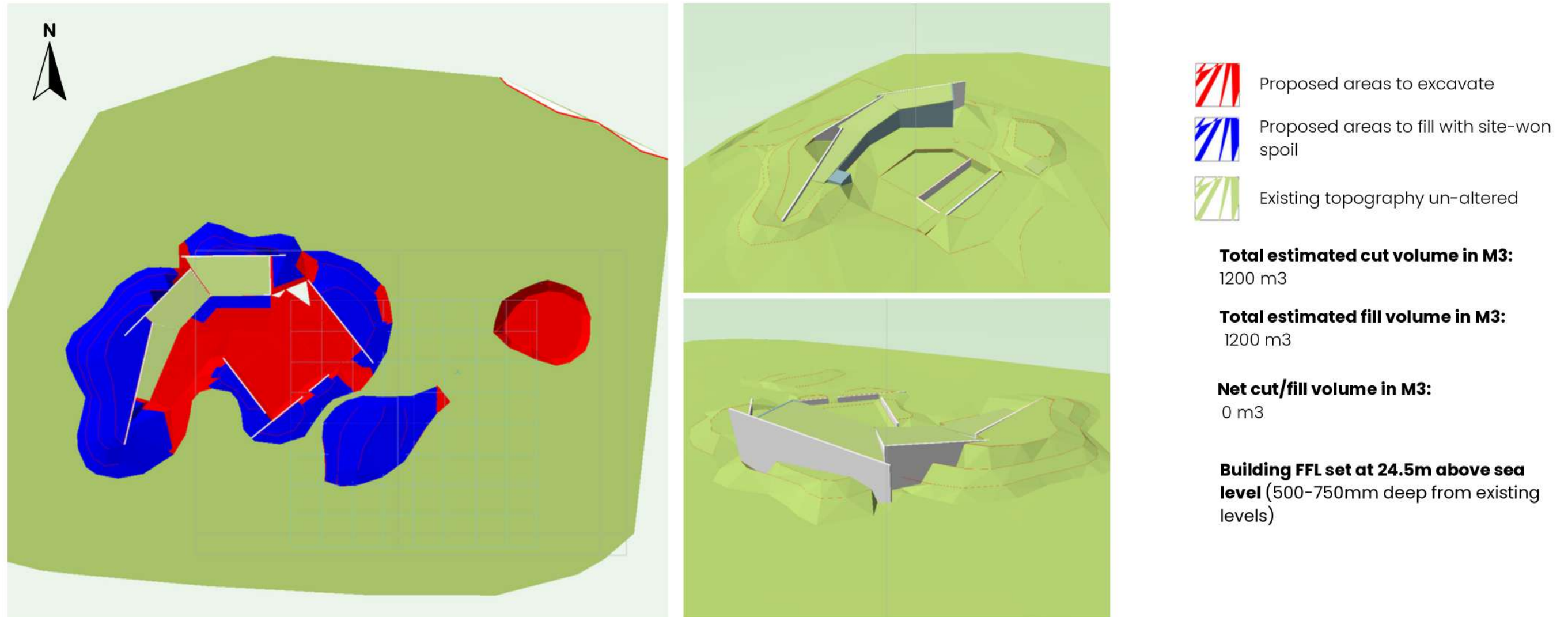
INITIAL CONCEPT SECTION TO STUDY ROOF GRADIENT AND RELATIONSHIP TO INTERNAL SPACES



DESIGN DEVELOPMENT & SUSTAINABILITY CONSIDERATIONS OR OVERALL EXTENT OF PROPOSED BASEMENT TO ALLOW LANDSCAPE DESIGNERS TO CALCULATE VOLUME OF SPOIL FROM DIG ZONES & CONSIDER HOW TO RETAIN THIS SOIL ON SITE WITHIN THE LANDSCAPE DESIGN.

PROPOSED CUT & FILL

EXPLORING THE IMPACT OF INITIAL CONCEPT LAYOUTS AND THE POTENTIAL DIG ZONES TO ALLOW THE STRUCTURE ENOUGH FLOOR SPACE TO SEAMLESSLY INCORPORATE SUSTAINABLE TECHNOLOGIES. PLANT ZONES WITHIN THE BUILDING FABRIC HAVE BEEN DEVELOPED, WORKING CLOSELY WITH ENERGY CONSULTANTS AND LANDSCAPE DESIGNERS TO MINIMISE DIG ZONES. EXCAVATED SPOIL WITHIN THE WIDER LANDSCAPE DESIGNS WILL BE UTILISED WITHIN THE SITE DURING CONSTRUCTION.

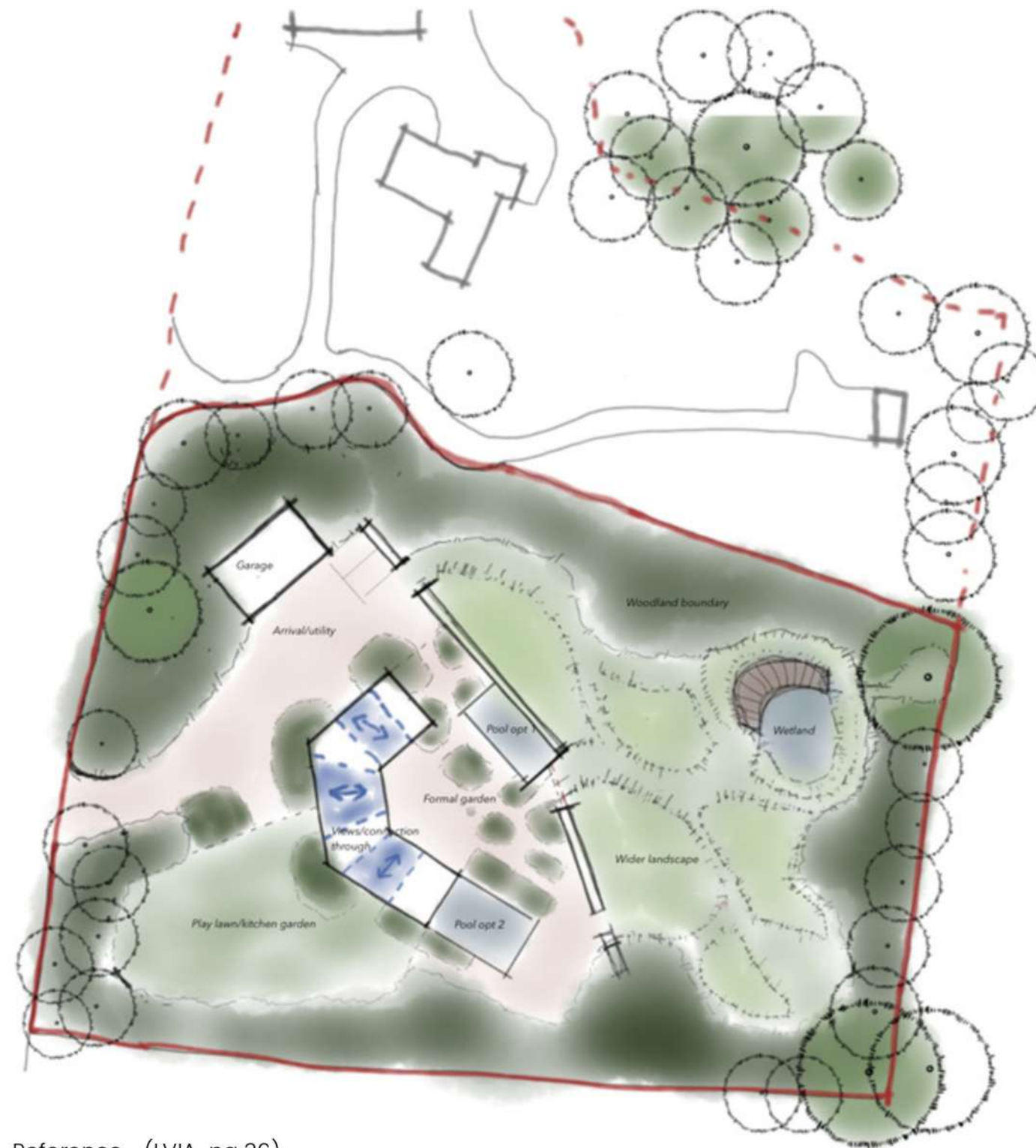


PROPOSED CUT AND FILL SCHEMATICS & DATA

Precise calculations confirmed that it is feasible to achieve a net zero cut and fill at a building FFL of 24.5m above sea level. This enabled the design team to confirm and agree the extent of the basement for a plant, gym and media room.

CONCEPT DESIGN

DRIVEWAY, OFF STREET PARKING & EXTERNAL WALKWAYS & PROPOSED LANDSCAPE DESIGN



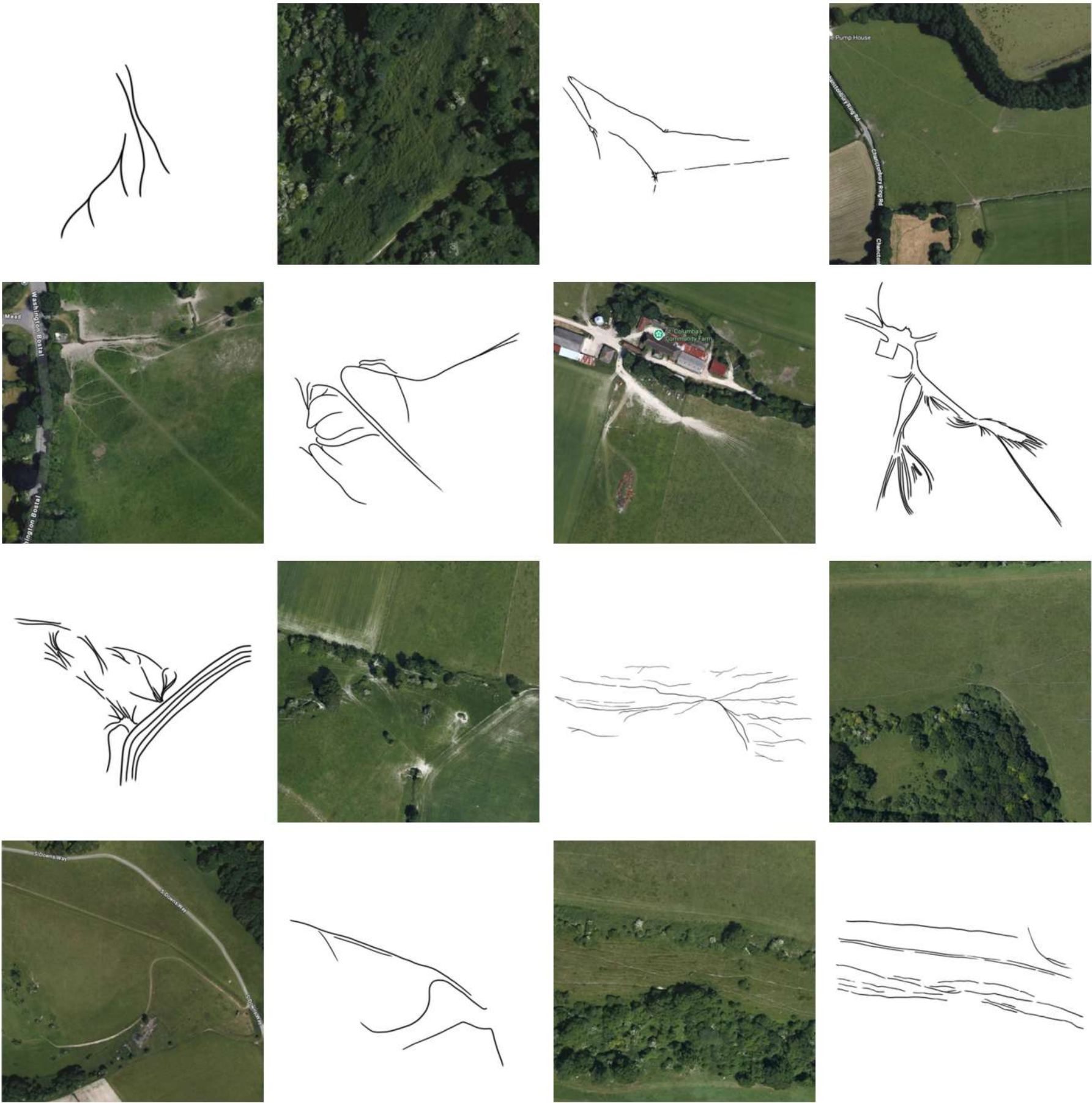
Reference , (LVIA pg 36)

DESIGN DEVELOPMENT

EXTERNAL WALKWAYS

The pathways across the South Downs demonstrate the organic way in which movement shapes the local landscape.

These sketches have given insight into the way in which pathways are carved and influenced by the shape of the landscape, and the natural forms and obstacles that dictate where pathways contract and expand.



DESIGN DEVELOPMENT

EXTERNAL WALKWAYS, MEETING POINTS AND MOUNDS



From the initial sketches, and overlay sketch then draws on the natural contours of the site. Much like the livestock paths that cut across steep footslopes. It was noted that many livestock paths intersect at gates, allowing movement from one field to another. These gateways are reflected in 3 locations in the above sketches, and can be enhanced using planting or natural forms such as boulders. To then accentuate the existing contours, and reflect the undulating surrounding landscape of the South Downs, natural grass mounds can further influence the shape and direction of these pathways.

RESIDENTIAL CURTILAGE

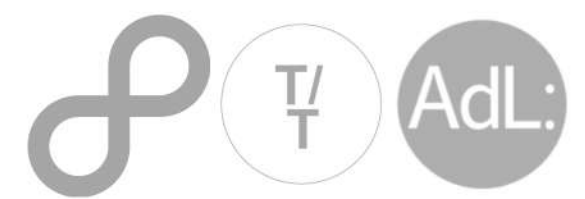
LOCATION AND ORIENTATION DEFINED BY DESIGN TEAM

A key driver of the scheme is **ecological regeneration**. To further embed the dwelling within its landscape context, a **residential curtilage** is established around the house, delineating the boundary between domestic amenity and ecological enhancement. This curtilage is defined by the immediate garden, pathways and soft landscaping, and serves as a transitional zone by sensitively balancing private use and the project's commitment to biodiversity and visual discretion. By clearly separating the residential curtilage from the **Biodiversity Net gain Area (BNG Area)**, the proposal builds in ecological enhancements, such as hedgerow restoration, woodland expansion and wetland creation, while the curtilage itself is maintained as a resilient and sustainable residential garden.



STAGE 3

ARCHITECTURAL DESIGN DEVELOPMENT



CONCEPT MODEL

EXPANSION ON INITIAL ARCHITECTURAL FORMS EXPLORED

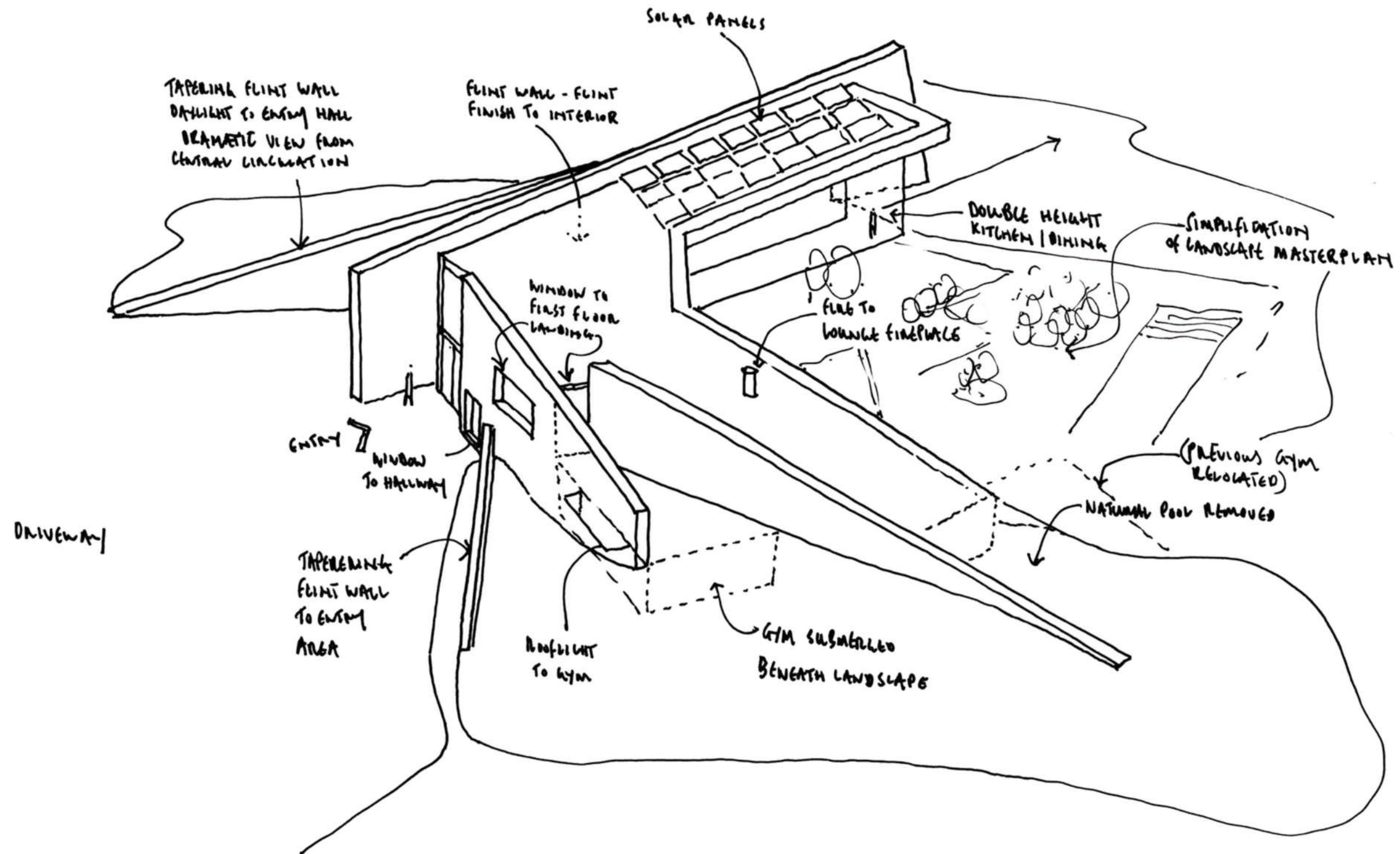


- **Fabric first** design form achieved through critical collaboration with the wider team and energy consultants.
- Polite entrance conceptualised and represents as visually discreet from the public highway.
- Sloping green roof with integrated rain water harvesting allowing for seasonal swales within the landscape to transfer water collected on the sloping roof to the wider landscape.
- The proposed geometric external flint faced walls forming the western and northern facades respond to locally sourced and used materials.
- The proposed formation of a series of gentle banks sloping up to these more dramatic flint facades to the west, south and north aspects would soften the main elevation upon arrival, as well as limit the visual impact of the proposal on Sunningdale whilst the boundary woodland buffer establishes over time.
- The exposed flint walls also serve as a representation of the eroded aspects of the scarp foot slopes visible in the nearby landscape.
- The structural fabric of the main building enclosed by the western and northern facades is proposed as a sustainable timber frame construction.
- A stand alone garage proposed on the North-West corner of the site sits comfortably within the landscape mounds, it is the preferred location for the PV panels , EV charging point and all bin storage requirements.

DESIGN DEVELOPMENT

ARCHITECTURAL & LANDSCAPE CONCEPT INTEGRATION -

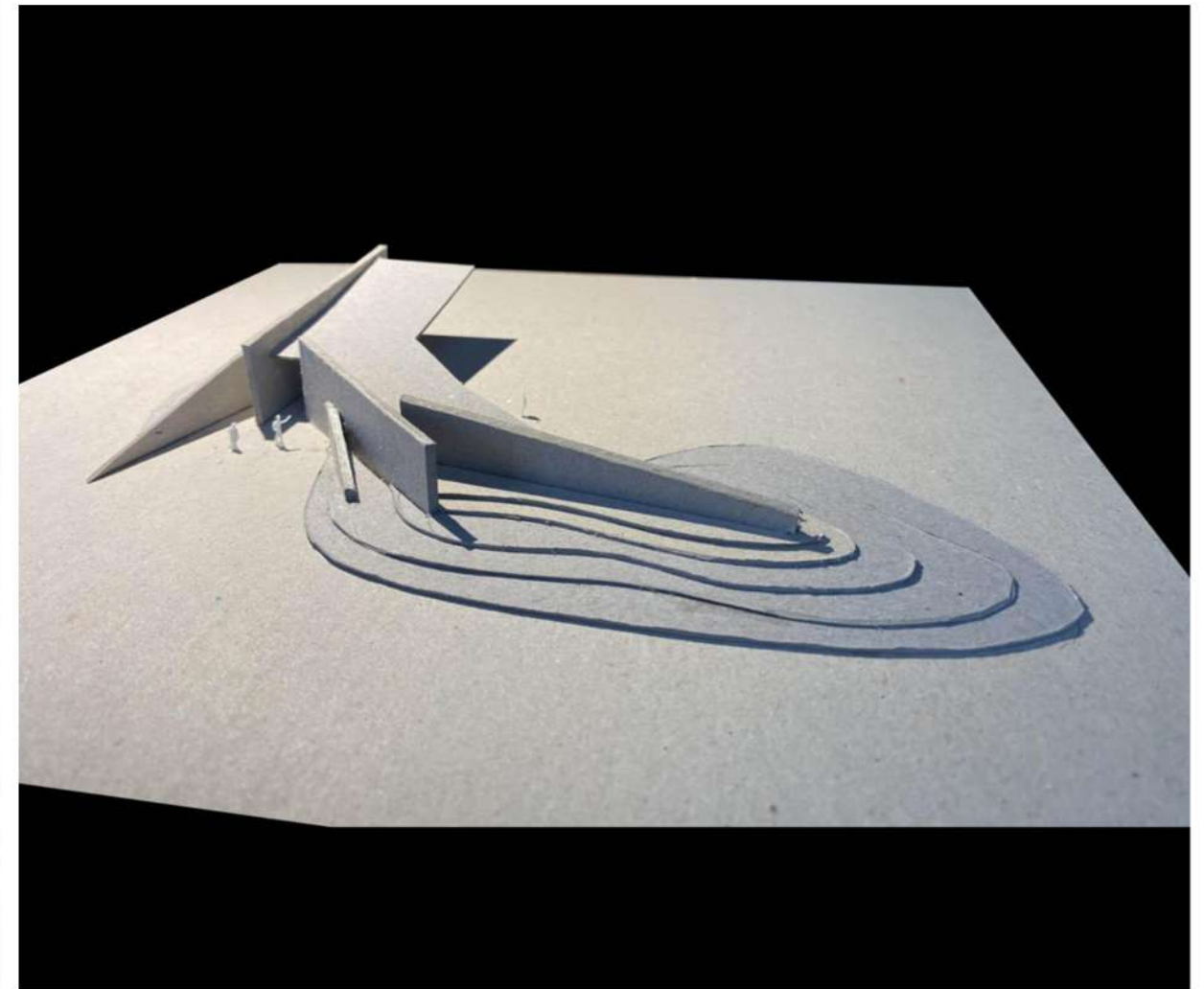
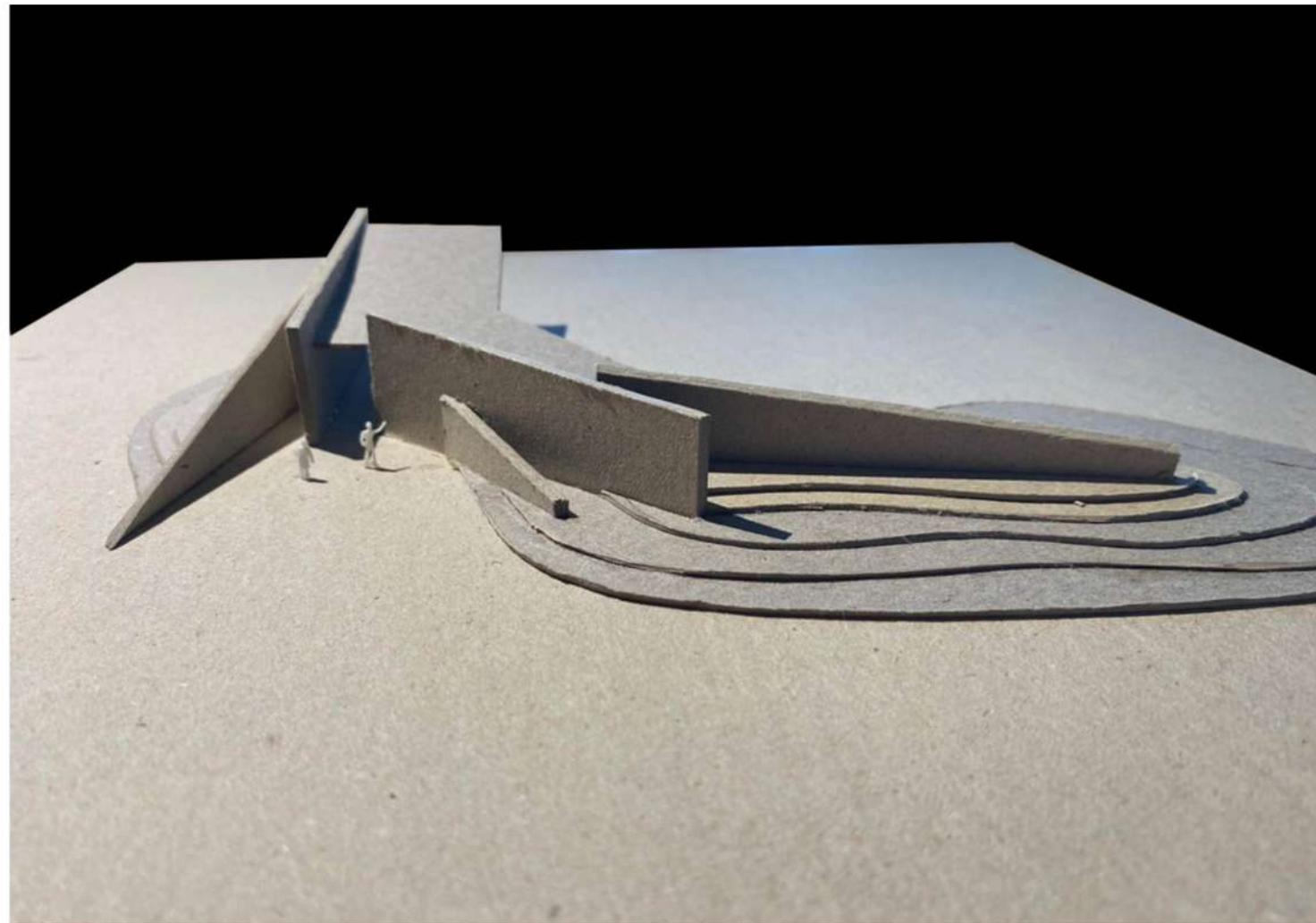
EARLY COORDINATION OF THE SCARP FORM WITH LANDSCAPE DESIGNS, CONSIDERING LOCATIONS FOR ALL PROPOSED SUSTAINABLE TECHNOLOGIES, SEASONAL RAIN WATER HARVESTING, INTERNAL AND EXTERNAL PLANT, AND OVERALL CONNECTION OF THE PROPOSED DWELLING TO THE RESIDENTIAL GARDEN SPACE.



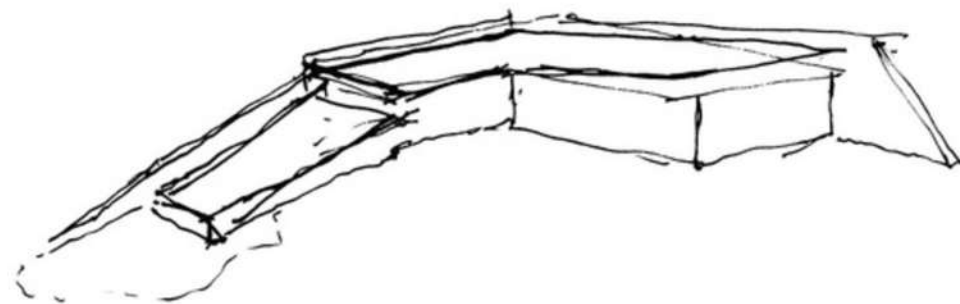
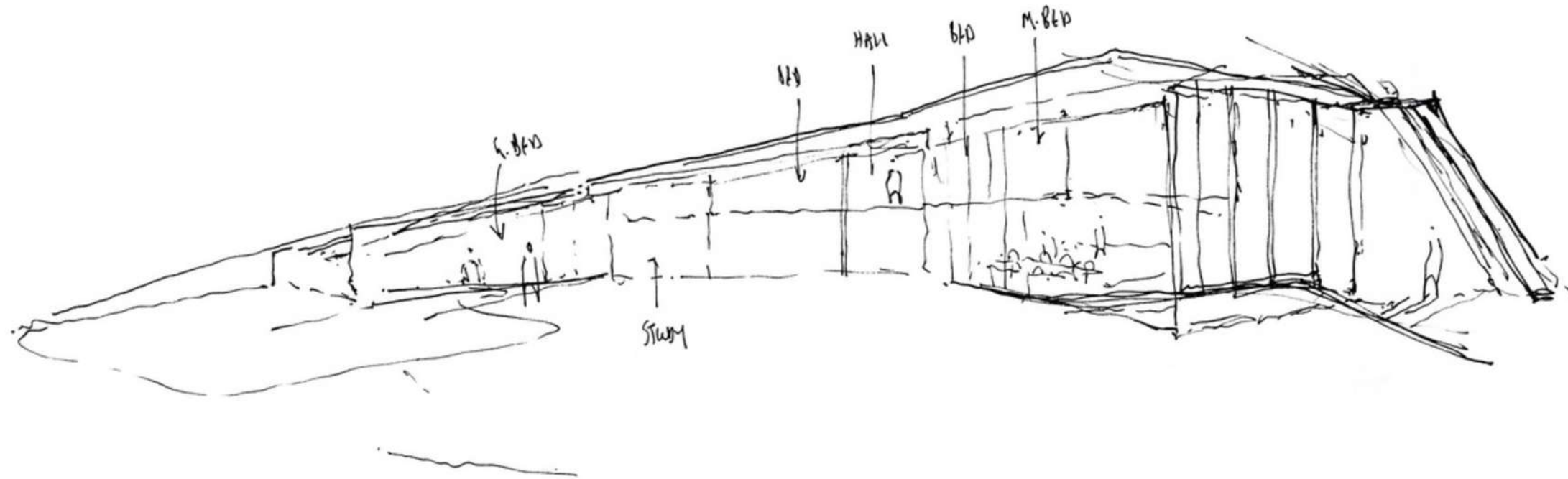
CONCEPT MODEL

GEOMETRICAL FLINT FACADES – FORMING AND FRAMING THE DISCREET ENTRANCE

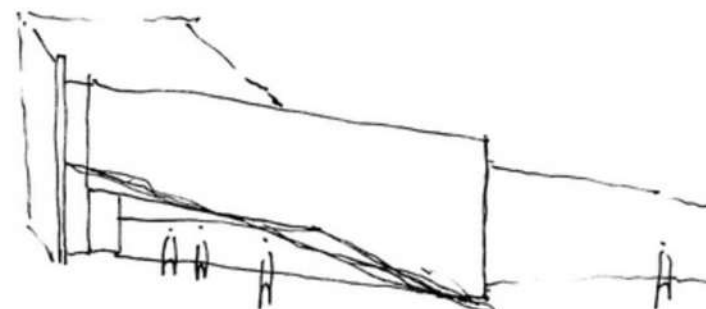
As part of our previous design development, we produced key 3D views of the discreet entrance and the buildings overall form. This shape which informed the buildings orientation within the landscape also defined the key structural intersections of Scarp House. To assist the design team in resolving considerations such as overall scale, massing and cantilever depths, a more traditional approach was employed. A physical model was constructed to assist in refining massing.



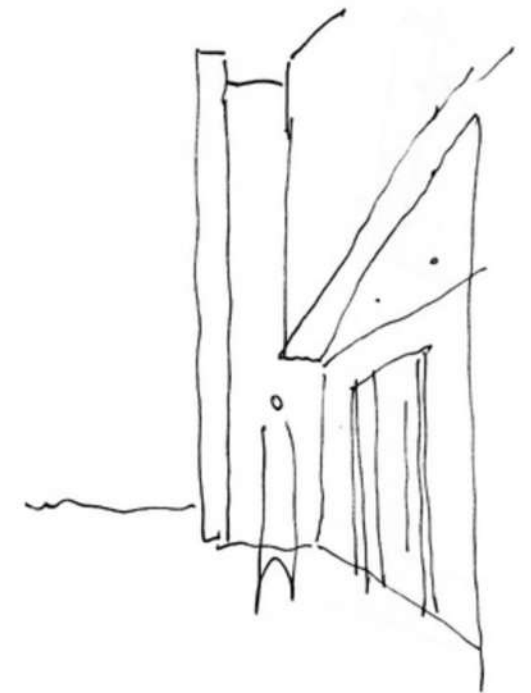
CONCEPT DEVELOPMENT



3 GEOMETRIES



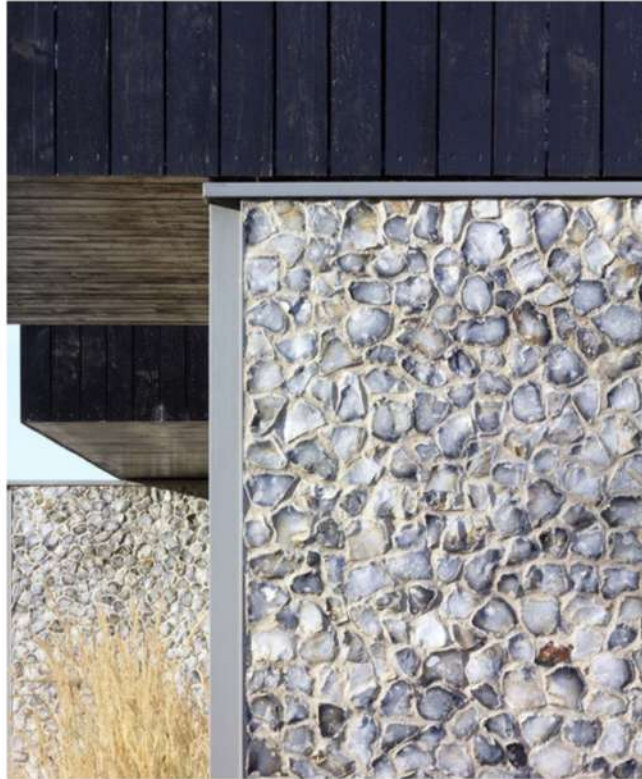
A POLITE ARRIVAL BETWEEN FLINT
WALL FRACTURE POINTS



MATERIALITY

ARCHITECTURAL PALETTE

⌘ KNAPPED FLINT



⌘ TIMBER FRAMING + CLADDING



⌘ GREEN ROOF SYSTEM



⌘ ALUMINIUM FASCIAS, LOUVRES + SUNSHADING



CONCEPT PROPOSAL OF A POLITE ARRIVAL & MATERIALITY TESTING

EXPOSED KNAPPED FLINT WALLS FORM KEY ELEVATIONS OF THE DWELLING. MOUNDED LANDSCAPED BANKS ARE MOULDED BETWEEN AND AGAINST FLINT WALLS.



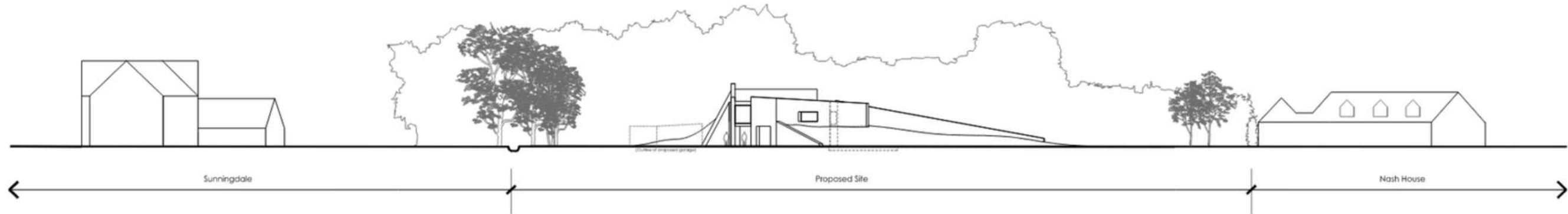
As part of our early design development, we produced key 3D views of the driveway and entrance elevations to visualise the proposed forms adjacency to the garage and its relationship with the proposed landscape design that was emerging. The buildings overall form and orientation within the landscape was fixed through a series of design team meetings, considering various factors like prevailing wind directions, summer and winter sun tracking studies and energy studies looking at overheating and solar gain metrics. Key Stage 1 energy efficiency data and research enabled the design team to orientate the building in a way that would achieve optimum energy efficiency as well as consider the privacy of neighbouring properties and maximising key views. .

PROPOSED SITE PLAN

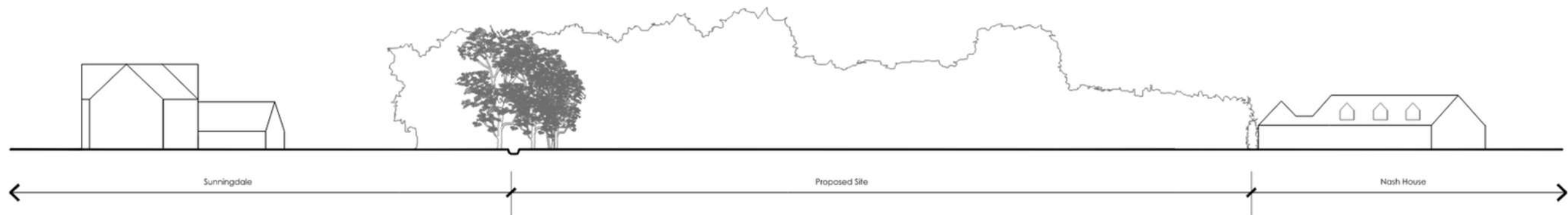


- Ownership Boundary
- Site Boundary
- - - Residential Curtilage Boundary

SITE CONTEXT SECTIONS & ADJACENCY RELATIONSHIPS



PROPOSED SITE CONTEXT SECTION 2
1:500



EXISTING SITE CONTEXT SECTION 2
1:500

SCALE 1:500
0m 5 10 25 50